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9. EXPOSURE ASSESSMENT

9.0.1 Overview of exposure scenarios

The following table summarizes all exposure scenarios that are assessed in this CSR. The summary lists use volumes, life cycle stage and use descriptors only. For details on use conditions and exposure calculation results please refer to the corresponding subchapters 9.x and 10.x.

Exposure scenarios 9.1 to 9.144 have been calculated using EasyTRA 3.5. EasyTRA uses algorithms on the basis of the latest versions of the ECHA REACH Guidance chapters R12, R14, R15, and R16 (as of March 2010) and EUSES®. EasyTRA works in compliance with ECETOC® Targeted Risk Assessment 3 (as of July 2012) for the calculation of worker and consumer exposure and complies with EU TGD 2003 Risk Assessment Spreadsheet Model 1.24a for the environmental exposure (see ECHA REACH Guidance chapter R16.6.2).

The format of this CSR follows the current ECHA template for CSRs.

Overview on exposure scenarios and coverage of substance life cycle

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.1	Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (large scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.2	Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (medium scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.3	Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (small scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.4	Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (large scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.5	Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (medium scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.6	Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (small scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.7	Formulation of liqud Detergents/Maintenance Products: Low Viscosity (large scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.8	Formulation of liqud Detergents/Maintenance Products: Low Viscosity (medium scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.9	Formulation of liqud Detergents/Maintenance Products: Low Viscosity (small scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.10	Formulation of liqud Detergents/Maintenance Products: High Viscosity (large scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.11	Formulation of liqud Detergents/Maintenance Products: High Low Viscosity (medium scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.12	Formulation of liqud Detergents/Maintenance Products: High Viscosity (small scale)		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 9, 14, 15			2	2500
9.13	Industrial use of Laundry products			x				3, 22, 21	8B, 2			4	9

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.14	Industrial use of Laundry products (Reactive)			x				3, 22, 21	8B, 2			6B	20
9.15	Industrial use of Laundry products (WDU)			x				3, 22, 21	8B, 2			8A	2500
9.16	Industrial use of Vehicle cleaning Products			x				3, 22, 21	8A, 4, 7, 10			4	9
9.17	Industrial use of Food beverage and pharmacos products			x				3, 22, 21	8B, 1, 4, 8A, 7, 13, 10			4	9
9.18	Industrial Use of Façade/surface Cleaning Products			x				3, 22, 21	8A, 7			4	9
9.19	Industrial use of Water treatment Products			x				3, 22, 21	8B, 4, 8A, 17, 24A, 10, 2			4	9
9.20	Industrial use of Quality control			x				3, 22, 21	15			4	2500
9.21	Professional Use of Laundry products				x			3, 22, 21	8A, 1, 11			8A	2500
9.22	Professional Use of Laundry products (Reactive)				x			3, 22, 21	8A, 1			8B	2500

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.23	Professional Use of Dishwash products				x			3, 22, 21	8A, 10, 8B, 2, 1			8A	2500
9.24	Professional Use of General surface cleaning products				x			3, 22, 21	8A, 10, 11, 13			8A	2500
9.25	Professional Use of Floor care products				x			3, 22, 21	8A, 10, 11			8A	2500
9.26	Professional Use of Maintenance Products				x			3, 22, 21	10, 11, 8A, 2			8A	2500
9.27	Professional Use of Vehicle cleaning Products				x			3, 22, 21	8A, 4, 11, 10			8A	2500
9.28	Professional Use of Food beverage and pharmacos products				x			3, 22, 21	8A, 10			8A	2500
9.29	Professional Use of Façade/surface Cleaning Products				x			3, 22, 21	8A, 11			8D	2500
9.30	Professional Use of Medical Devices				x			3, 22, 21	8A, 13, 10, 11			8A	2500
9.31	Laboratory Use				x			3, 22, 21	15			8A	2500
9.32	Professional Use of Hand Cleaners				x			3, 22, 21	19			8A	2500

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.33	Consumer use of washing and cleaning products					x		3, 22, 21		35		8A	2500
9.34	Consumer use of washing and cleaning products (Reactive)					x		3, 22, 21		35		8B	2500
9.35	Consumer use of washing and cleaning products (Sprays)					x		3, 22, 21		35		8A	2500
9.36	Consumer use of air freshener products					x		3, 22, 21		3		8A	2500
9.37	Consumer use of pest control products							3, 22, 21				8A	2500
9.38	Consumer use of polishes					x		3, 22, 21		31		8A	2500
9.39	Industrial Use of Me-salts in conversion coating - Nickel			x				3, 22, 21	8B, 2, 8A, 10			5	2500
9.40	Industrial Use of Me-salts in conversion coating - Zinc, Chromium, Copper, Manganese			x				3, 22, 21	8B, 2, 8A, 10			5	2500
9.41	Industrial formulation of fuel additives and fuel blends		x	x				3, 22, 21	1, 2, 3, 4, 5, 8B, 8A, 9, 15			2	25
9.42	Industrial use of fuel additives and additised fuels			x				3, 22, 21	8B, 8A, 16			7	20

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.43	Professional use of fuel additives and additised fuels				x			3, 22, 21	8B, 8A, 16			7	20
9.44	Professional use of fuel additives and additised fuels				x			3, 22, 21	8B, 8A, 17			9A	50
9.45	Professional use of fuel additives and additised fuels				x			3, 22, 21	8B, 8A, 18			9B	50
9.46	Consumer use of fuel additives and additised fuels					x		3, 22, 21		13		7	20
9.47	Consumer use of fuel additives and additised fuels					x		3, 22, 21		13		9A	50
9.48	Consumer use of fuel additives and additised fuels					x		3, 22, 21		13		9B	50
9.49	Formulation of Organic Solvent Borne Coatings and Inks - Solids		x	x				3, 22, 21	8B, 3, 1, 2, 5, 9, 8A			2	100
9.50	Formulation of Water Borne Coatings and Inks - Solids		x	x				3, 22, 21	8B, 3, 1, 2, 5, 9, 8A			2	100
9.51	Formulation of Liquid Coatings and Inks (where specific use not known) - Solids		x	x				3, 22, 21	8B, 3, 1, 2, 5, 9, 8A			2	100

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.52	Formulation of Powder Coatings and Inks - Solids		x	x				3, 22, 21	8B, 3, 1, 2, 5, 9			2	100
9.53	Industrial coatings and inks application			x				3, 22, 21	8B, 3, 1, 2, 5, 8A, 10, 7, 13, 4			5	2
9.54	Professional coatings and inks application (Indoor)				x			3, 22, 21	3, 5, 8A, 2, 11, 10, 19, 4			8C	100
9.55	Professional coatings and inks application (Outdoor)				x			3, 22, 21	8A, 3, 5, 11, 10, 4			8F	100
9.56	Consumer coatings and inks application (Indoor)					x		3, 22, 21		9a, 9b, 9c		8C	100
9.57	Consumer coatings and inks application (Outdoor)					x		3, 22, 21		9a, 9b, 9c		8F	100
9.58	Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (large scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.59	Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (medium scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.60	Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (small scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.61	Formulation of Fine Fragrances - Cleaning with Water (medium scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	800
9.62	Formulation of Fine Fragrances - Cleaning with Water (small scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.63	Formulation of Medium Viscosity Body Care Products (medium scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.64	Formulation of Medium Viscosity Body Care Products (Small scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.65	Formulation of Non-liquid Creams, high viscosity Products (large scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.66	Formulation of Non-liquid Creams, high viscosity Products (medium scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	600
9.67	Formulation of Non-liquid Creams, high viscosity Products (small scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.68	Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (large scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.69	Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (medium scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.70	Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (small scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.71	Formulation of body care soap (large scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.72	Formulation of body care soap (medium scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000
9.73	Formulation of body care soap (small scale)		x	x				3, 22, 21	1, 2, 3, 5, 8A, 8B, 9, 14, 15			2	1000

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.74	Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products							3, 22, 21				8A	1000
9.75	Wide Dispersive Use of Aerosol products for hair and skin care (Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products							3, 22, 21				8A	1000
9.76	Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products							3, 22, 21				8A	1000
9.77	Bulk loading (including marine vessel/barge, rail car and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals)			x				3, 22, 21	1, 2, 3, 4, 8A, 8B, 9, 15			6A	50
9.78	Use as a isolated intermediate not under stricitly controlled conditions			x				3, 22, 21	1, 2, 3, 4, 8A, 8B, 15			6A	50

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.79	Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance		x	x				3, 22, 21	1, 2, 3, 4, 8A, 8B, 9, 14, 15			2	50
9.80	Use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials transfer from bulk and semi-bulk and spraying, brushing and other manual application tasks); and equipment cleaning			x				3, 22, 21	1, 2, 3, 4, 5, 7, 8A, 8B, 10, 13, 15			4	50
9.81	Use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials transfer and spraying, brushing and other manual application tasks); and equipment cleaning				x			3, 22, 21	1, 2, 3, 4, 5, 11, 8A, 8B, 10, 13, 15, 19			8A	50
9.82	Use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and spraying, brushing, aerosol and other manual application tasks); and equipment cleaning					x		3, 22, 21		1, 9a, 9b, 9c, 24, 31		8A	50

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.83	Use as a component of cleaning products for industrial use including transfer from storage; pouring/unloading from drums or containers; exposures during cleaning activities (automated and by hand); and related maintenance			x				3, 22, 21	1, 2, 3, 4, 7, 8A, 8B, 10, 13			4	50
9.84	Use as a component of cleaning products for professional use including pouring/unloading from drums or containers; and exposures during cleaning activities (automated and by hand)				x			3, 22, 21	1, 2, 3, 4, 8A, 8B, 10, 11, 13			8A	50
9.85	General exposures to consumers arising from the use household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products					x		3, 22, 21		3, 9a, 24, 35		8A	50
9.86	Industrial oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.			x				3, 22, 21	1, 2, 3, 4, 8A, 8B			4	3

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.87	Professional oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.				x			3, 22, 21	1, 2, 3, 4, 8A, 8B			8D	50
9.88	Industrial use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/ reject articles, recycling and disposal of waste oils.			x				3, 22, 21	1, 2, 3, 4, 5, 7, 8A, 8B, 9, 10, 13, 17			4	50
9.89	Professional use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/ reject articles, recycling and disposal of waste oils.				x			3, 22, 21	1, 2, 3, 4, 5, 8A, 8B, 9, 10, 11, 13, 17			8A	50

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.90	Use as a blowing agent, including material transfers, curing, storage and maintenance			x				3, 22, 21	1, 2, 3, 8B, 9, 12			4	50
9.91	Use as binders and release agents in industrial settings, including material transfers, mixing, application and disposal			x				3, 22, 21	1, 2, 3, 4, 6, 7, 8B, 10, 13, 14			4	50
9.92	Use as binders and release agents in professional settings, including material transfers, mixing, application and disposal				x			3, 22, 21	1, 2, 3, 4, 6, 8A, 8B, 10, 11, 14			8A	50
9.93	Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging.				x			3, 22, 21	1, 2, 4, 8A, 8B, 11, 13			8A	50
9.94	Use as an agrochemical excipient for application by manual spraying and aerosols					x		3, 22, 21		12		8A	50
9.95	Application of surface coatings and binders in road and construction activities, including material transfers and procut disposal				x			3, 22, 21	8A, 8B, 9, 10, 11, 13			8D	50

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.96	Manufacture of rubber articles, including processing of raw rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing.			x				3, 22, 21	1, 2, 3, 4, 5, 6, 7, 8A, 8B, 9, 13, 14, 15, 21			4	50
9.97	Processing of formulated polymers including material transfers, additives handling, moulding, curing and forming activities, material re-works and associated maintenance.			x				3, 22, 21	1, 2, 3, 4, 5, 6, 8A, 8B, 9, 13, 14, 21			4	50
9.98	Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.				x			3, 22, 21	1, 2, 6, 8A, 8B, 14, 21			8A	50
9.99	Use as a fuel including incineration of wastes and use as a solvent in fuel additives, covers refueling and evaporative losses			x				3, 22, 21	1, 2, 3, 8A, 8B, 16			7	50
9.100	Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses				x			3, 22, 21	1, 2, 3, 8A, 8B, 16			9A	50

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.10 1	Consumer use as a fuel including use as a solvent in fuel additives, covers refueling and evaporative losses					x		3, 22, 21		13		9A	50
9.10 2	Industrial use of formulated lubricants in closed and open systems including transfer operations, operation of engines and similar articles, maintenance and disposal of waste oil			x				3, 22, 21	1, 2, 3, 4, 7, 8A, 8B, 9, 10, 13, 17, 18			4	50
9.10 3	Professional use of formulated lubricants in closed systems including transfer operations, operation of engines and similar articles, recycling and disposal of waste oil				x			3, 22, 21	1, 2, 3, 4, 8A, 8B, 9, 10, 11, 13, 17, 18			9A	50
9.10 4	Professional use of formulated lubricants in open systems including transfer operations, operation of engines and similar articles, recycling and disposal of waste oil				x			3, 22, 21	1, 2, 3, 4, 8A, 8B, 9, 10, 11, 13, 17, 18			8A	50

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.105	Consumer use of formulated lubricants in closed systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil.					x		3, 22, 21		1, 24, 31		9A	50
9.106	Consumer use of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil.					x		3, 22, 21		1, 24, 31		8A	50
9.107	De-icing of vehicles, aircraft and other equipment by spraying				x			3, 22, 21	1, 2, 8A, 8B, 11			8D	50
9.108	De-icing of vehicles and similar equipment by spraying							3, 22, 21				8D	50
9.109	Use of substances within Laboratory settings, Including material transfer and equipment cleaning		x	x				3, 22, 21	10, 15			2	20
9.110	Use of substances within Laboratory settings, within enclosed or contained systems, including incidental exposures during material transfers and equipment cleaning		x	x				3, 22, 21	10, 15			2	20

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.11 1	Use of small quantities within laboratory settings				x			3, 22, 21	10, 15			8A	50
9.11 2	Use of the substance in extraction processes at mining operations, including material transfers, winning and separation activities, and substance recovery and disposal.			x				3, 22, 21	1, 2, 3, 4, 5, 8A, 8B, 9			4	2
9.11 3	Use of the substance for the treatment of water at industrial facilities in open and closed systems			x				3, 22, 21	1, 2, 3, 4, 8A, 8B, 13			4	10
9.11 4	Use of the substance for the treatment of water in open and closed systems				x			3, 22, 21	1, 2, 3, 4, 8A, 8B, 13			8F	50
9.11 5	Consumer use of the substance for the treatment of water in open and closed systems							3, 22, 21				8F	50
9.11 6	Covers exposure arising from the manufacturing and use of slurry explosives				x			3, 22, 21	1, 3, 5, 8A, 8B			8E	50
9.11 7	Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment including maintenance and related material transfers			x				3, 22, 21	1, 2, 3, 4, 8A, 8B, 9			7	50

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.118	Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment including maintenance				x			3, 22, 21	1, 2, 3, 8A, 9, 20			9A	50
9.119	Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids							3, 22, 21				9A	50
9.120	Other Consumer Uses: Consumer							3, 22, 21				8A	50
9.121	Co-formulants used in crop protection products (seed treatments and granules, Outdoor).							3, 22, 21				8A	100
9.122	Co-formulants used in crop protection products (seed treatments and granules, Indoor).							3, 22, 21				8D	100
9.123	Co-formulants used in crop protection products (sprays, Outdoor).							3, 22, 21				8A	100
9.124	Co-formulants used in crop protection products (sprays, Indoor).							3, 22, 21				8D	100
9.125	Applying treatment to seed (on-farm, Outdoor)							3, 22, 21				8C	100
9.126	Applying treatment to seed (on-farm, Indoor)							3, 22, 21				8F	100
9.127	Non-Volatile substances for the Formulation of Construction Chemicals		x	x				3, 22, 21	3, 5, 8B, 9			2	100

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.128	Industrial use of non-volatile substances in Construction Chemicals			x				3, 22, 21	7, 8B, 10, 13, 14			5	100
9.129	Wide dispersive use of non-volatile substances in Construction Chemicals, indoor				x	x		3, 22, 21	8A, 10, 11, 13	1, 9a, 9b		8C	100
9.130	Wide dispersive use of non-volatile substances in Construction Chemicals, outdoor				x	x		3, 22, 21	10, 11, 13	1, 9a, 9b		8F	100
9.131	Service Life of Construction Chemicals (Indoor)						x	3, 22, 21			13	11A	100
9.132	Service Life of Construction Chemicals (Outdoor)						x	3, 22, 21			13	10A	100
9.133	Manufacturing / Formulation of Fertilizers		x	x	x			3, 22, 21	5, 2, 3, 9, 8B, 13, 1	12		2	60
9.134	Manufacturing / Formulation of Fertilizers (Intermediates)		x	x				3, 22, 21	2, 3, 5			6A	50
9.135	Professional Use of Fertilizers (Outdoor, Open System)				x			3, 22, 21	8A, 13			8E	100
9.136	Professional Use of Fertilizers (Indoor, Open System)				x			3, 22, 21	8B			8B	100
9.137	Professional Use of Fertilizers (Outdoor, Closed System)				x			3, 22, 21	2			9B	100

ES number	Short description of exposure scenario	Resulting life cycle stage						Sector of use (SU)	Process Category (PROC)	Product Category (PC)	Article Category (AC)	Environmental Release Category (ERC)	Volume (tonnes)
		Manufacture	Formulation	End use			Service life (for articles)						
				Industrial	Professional	Consumer							
9.138	Consumer Use of Fertilizers (Outdoor, Open System)					x		3, 22, 21		12		8E	100
9.139	Consumer Use of Fertilizers					x		3, 22, 21		12		8B	100
9.140	Manufacture of aqueous polymer dispersions and dispersion powders - Formulation of Preparations		x	x				3, 22, 21	1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15			2	60
9.141	Manufacture of aqueous polymer dispersions and dispersion powders - Use of Processing Aids		x	x				3, 22, 21	1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15			4	1
9.142	Manufacture of aqueous polymer dispersions and dispersion powders - Use of Intermediates		x	x				3, 22, 21	1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15			6A	50
9.143	Manufacture of aqueous polymer dispersions and dispersion powders - Use of Monomers		x	x				3, 22, 21	1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15			6C	20
9.144	Manufacture of aqueous polymer dispersions and dispersion powders - Use of Process Regulators for Polymerisation		x	x				3, 22, 21	1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15			6D	100

9.1 Scenario 1: Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (large scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (large scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.1 ff.

Description of ES 1

Free short title	Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (large scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.1.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1.14E4 kg/day
Release times per year	220 days/year

Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.020 %
Release fraction to wastewater from process	0.010 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.a.v1 - Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (large scale)
9.1.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.1.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.1.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.1.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises

Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.1.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.1.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.1.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.1.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.1.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.2 Scenario 2: Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (medium scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.2 ff.

Description of ES 2

Free short title	Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.2.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	4,500 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.020 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	39.6 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.b.v1 - Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (medium scale)
9.2.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.2.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.2.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.2.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.2.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.2.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.2.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.2.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.2.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.3 Scenario 3: Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (small scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.3 ff.

Description of ES 3

Free short title	Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.3.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	1 %
Release fraction to wastewater from process	0.200 %
Release fraction to soil from process	0 %

Fraction tonnage to region	100 %
Fraction used at main source	0.800 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.c.v1 - Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (small scale)
9.3.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.3.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.3.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.3.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.3.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.3.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.3.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.3.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.3.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.4 Scenario 4: Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (large scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (large scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.4 ff.

Description of ES 4

Free short title	Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (large scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.4.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1.14E4 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.020 %
Release fraction to wastewater from process	0.010 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.a.v1 - Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (large scale)
9.4.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.4.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.4.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.4.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.4.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.4.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.4.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.4.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.4.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.5 Scenario 5: Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (medium scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.5 ff.

Description of ES 5

Free short title	Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.5.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	4,500 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.020 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0 %

Fraction tonnage to region	100 %
Fraction used at main source	39.6 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.b.v1 - Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (medium scale)
9.5.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.5.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.5.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.5.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.5.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.5.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.5.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.5.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.5.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.6 Scenario 6: Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (small scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.6 ff.

Description of ES 6

Free short title	Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.6.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	1 %
Release fraction to wastewater from process	0.200 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.800 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.c.v1 - Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (small scale)
9.6.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.6.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.6.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.6.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.6.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.6.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.6.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.6.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.6.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.7 Scenario 7: Formulation of liqud Detergents/Maintenance Products: Low Viscosity (large scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of liqud Detergents/Maintenance Products: Low Viscosity (large scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.7 ff.

Description of ES 7

Free short title	Formulation of liqud Detergents/Maintenance Products: Low Viscosity (large scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.7.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1.14E4 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.010 %
Release fraction to soil from process	0 %

Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.g.v1 - Formulation of liqud Detergents/Maintenance Products: Low Viscosity (large scale)
9.7.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.7.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.7.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.7.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.7.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.7.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.7.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.7.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.7.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.8 Scenario 8: Formulation of liqud Detergents/Maintenance Products: Low Viscosity (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of liqud Detergents/Maintenance Products: Low Viscosity (medium scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.8 ff.

Description of ES 8

Free short title	Formulation of liqud Detergents/Maintenance Products: Low Viscosity (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.8.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	4,500 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	39.6 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.h.v1 - Formulation of liqud Detergents/Maintenance Products: Low Viscosity (medium scale)
9.8.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.8.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.8.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.8.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.8.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.8.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.8.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.8.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.8.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.9 Scenario 9: Formulation of liqud Detergents/Maintenance Products: Low Viscosity (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of liqud Detergents/Maintenance Products: Low Viscosity (small scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.9 ff.

Description of ES 9

Free short title	Formulation of liqud Detergents/Maintenance Products: Low Viscosity (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.9.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.200 %
Release fraction to soil from process	0 %

Fraction tonnage to region	100 %
Fraction used at main source	0.800 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.i.v1 - Formulation of liqud Detergents/Maintenance Products: Low Viscosity (small scale)
9.9.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.9.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.9.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.9.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.9.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.9.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.9.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.9.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.9.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.10 Scenario 10: Formulation of liqud Detergents/Maintenance Products: High Viscosity (large scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of liqud Detergents/Maintenance Products: High Viscosity (large scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.10 ff.

Description of ES 10

Free short title	Formulation of liqud Detergents/Maintenance Products: High Viscosity (large scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.10.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1.14E4 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.j.v1 - Formulation of liqud Detergents/Maintenance Products: High Viscosity (large scale)
9.10.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.10.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.10.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.10.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.10.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.10.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.10.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.10.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.10.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.11 Scenario 11: Formulation of liqud Detergents/Maintenance Products: High Low Viscosity (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of liqud Detergents/Maintenance Products: High Low Viscosity (medium scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.11 ff.

Description of ES 11

Free short title	Formulation of liqud Detergents/Maintenance Products: High Low Viscosity (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.11.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	4,500 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.200 %
Release fraction to soil from process	0 %

Fraction tonnage to region	100 %
Fraction used at main source	39.6 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.k.v1 - Formulation of liqud Detergents/Maintenance Products: High Low Viscosity (medium scale)
9.11.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.11.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.11.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.11.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.11.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.11.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.11.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.11.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.11.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.12 Scenario 12: Formulation of liqud Detergents/Maintenance Products: High Viscosity (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of liqud Detergents/Maintenance Products: High Viscosity (small scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.12 ff.

Description of ES 12

Free short title	Formulation of liqud Detergents/Maintenance Products: High Viscosity (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.12.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.400 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.800 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 2.1.l.v1 - Formulation of liqud Detergents/Maintenance Products: High Viscosity (small scale)
9.12.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.12.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.12.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.12.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.12.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.12.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.12.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.12.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.12.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.13 Scenario 13: Industrial use of Laundry products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of Laundry products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.13 ff.

Description of ES 13

Free short title	Industrial use of Laundry products
Systematic title based on use descriptor	ERC 4; PROC 8B, 2
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure
9.13.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	9 to/year
Daily amount used at site	40.909 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 4.1.v1 - Industrial Use of Water Borne Processing Aids - no RMM
9.13.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Laundry detergent; Automatic process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.13.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 35)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Laundry detergent; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.13.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Conditioner (softner/starch); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.13.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 2 (PC 35)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Conditioner (softner/starch); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.14 Scenario 14: Industrial use of Laundry products (Reactive) (AISE-P107.1, AISE-P107.2)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of Laundry products (Reactive)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.14 ff.

Description of ES 14

Free short title	Industrial use of Laundry products (Reactive) (AISE-P107.1, AISE-P107.2)
Systematic title based on use descriptor	ERC 6B; PROC 8B, 2
Name of constributing environmental scenario and corresponding ERC	ERC 6b Industrial use of reactive processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure
9.14.1 Contributing Scenario (1) controlling environmental exposure for ERC 6B	
Operational conditions	
Annual site tonnage	20 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.100 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	0.025 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day

Risk management measures	
9.14.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Laundry aid (gasing); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.14.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 35)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Laundry aid (gasing); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.15 Scenario 15: Industrial use of Laundry products (WDU)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of Laundry products (WDU)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.15 ff.

Description of ES 15

Free short title	Industrial use of Laundry products (WDU)
Systematic title based on use descriptor	ERC 8A; PROC 8B, 2
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure
9.15.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day

Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.15.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Laundry aid (non-gasing); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.15.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 35)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Laundry aid (non-gasing); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.16 Scenario 16: Industrial use of Vehicle cleaning Products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of Vehicle cleaning Products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.16 ff.

Description of ES 16

Free short title	Industrial use of Vehicle cleaning Products
Systematic title based on use descriptor	ERC 4; PROC 8A, 4, 7, 10
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises

	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying
9.16.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	9 to/year
Daily amount used at site	40.909 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10

Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 4.1.v1 - Industrial Use of Water Borne Processing Aids - no RMM
9.16.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Train cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Train cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Train cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4 (PC 35)	

Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Train cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Aeroplane cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Aeroplane cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Aeroplane cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Aeroplane cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Car wash product; Semi-Automatic process
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Car wash product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 8A (PC 35)	

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Spray and rinse process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Spray and rinse process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Car wash product; Spray and rinse process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.16.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Car wash product; Spray and rinse process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.16.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Car wash product; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.16.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Dewaxing product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Dewaxing product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Dewaxing product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises

Further specifications	Dewaxing product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Boat cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Boat cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Boat cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.16.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Boat cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.17 Scenario 17: Industrial use of Food beverage and pharmacos products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of Food beverage and pharmacos products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.17 ff.

Description of ES 17

Free short title	Industrial use of Food beverage and pharmacos products
Systematic title based on use descriptor	ERC 4; PROC 8B, 1, 4, 8A, 7, 13, 10
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 13 - Treatment of articles by dipping and pouring PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying
9.17.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	9 to/year
Daily amount used at site	40.909 kg/day

Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 4.1.v1 - Industrial Use of Water Borne Processing Aids - no RMM
9.17.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Food process cleaner; Cleaning In place (CIP) process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.17.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure

Further specifications	Food process cleaner; Cleaning In place (CIP) process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.17.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Food process cleaner; Semi closed cleaning process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.17.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Food process cleaner; Semi closed cleaning process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.17.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Chain maintenance product; Automatic spray process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.17.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Chain maintenance product; Automatic spray process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.17.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Chain maintenance product; Automatic drip and brush process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.17.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 13 (PC 35)	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Chain maintenance product; Automatic drip and brush process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.17.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Defoaming product; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.17.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Defoaming product; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.17.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities

Further specifications	Foam cleaner; Semi-Automatic with venting process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.17.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Foam cleaner; Semi-Automatic with venting process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	no
9.17.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Foam cleaner; Semi-Automatic without venting process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.17.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Foam cleaner; Semi-Automatic without venting process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.17.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Animal housing care; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.17.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Animal housing care; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.17.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Disinfection product; Semi-automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.17.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Disinfection product; Semi-automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	240 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.17.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Disinfection product; Fogging and gassing Semi-automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.17.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Disinfection product; Fogging and gassing Semi-automatic process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.18 Scenario 18: Industrial Use of Façade/surface Cleaning Products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial Use of Façade/surface Cleaning Products.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.18 ff.

Description of ES 18

Free short title	Industrial Use of Façade/surface Cleaning Products
Systematic title based on use descriptor	ERC 4; PROC 8A, 7
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 7 - Industrial spraying

9.18.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	9 to/year
Daily amount used at site	40.909 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 4.1.v1 - Industrial Use of Water Borne Processing Aids - no RMM
9.18.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Façade/surface cleaner; High pressure process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	no
9.18.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Façade/surface cleaner; High pressure process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.18.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Façade/surface cleaner; Medium pressure process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.18.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 7 (PC 35)	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Façade/surface cleaner; Medium pressure process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.19 Scenario 19: Industrial use of Water treatment Products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of Water treatment Products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.19 ff.

Description of ES 19

Free short title	Industrial use of Water treatment Products
Systematic title based on use descriptor	ERC 4; PROC 8B, 4, 8A, 17, 24A, 10, 2

Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 17 - Lubrication at high energy conditions and in partly open process PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 24a - High (mechanical) energy work-up of substances bound in materials and/or articles - pt<mp - Low Fugacity PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8a - Transfer of chemicals from/to vessels/ large

	containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises
9.19.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	9 to/year
Daily amount used at site	40.909 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 4.1.v1 - Industrial Use of Water Borne Processing Aids - no RMM
9.19.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B (PC 37)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Preservation and sanitation agent ; Process water
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 4 (PC 37)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Preservation and sanitation agent ; Process water
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.19.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Preservation and sanitation agent ; Drink and pool water
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Preservation and sanitation agent ; Drink and pool water
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.19.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Sanitation agent; Wasre water
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Sanitation agent; Wasre water
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.19.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8B (PC 25)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Metal working fluid (rolling oils, lubricants); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 17 (PC 25)	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Metal working fluid (rolling oils, lubricants); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 8B (PC 25)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Hot metal working fluid; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 24A (PC 25)	
Name of contributing scenario	24a - High (mechanical) energy work-up of substances bound in materials and/or articles - pt<mp - Low Fugacity
Further specifications	Hot metal working fluid; Automatic process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	low
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 100 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 8B (PC 25)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Hot metal working fluid; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	no
9.19.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Metal cleaner (degreaser, descaler, etch); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Metal cleaner (degreaser, descaler, etch); Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Metal cleaner (degreaser, descaler, etch); Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Metal cleaner (degreaser, descaler, etch); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 2 (PC 35)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Metal cleaner (degreaser, descaler, etch); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 8B (PC 14)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Coating product (Paint, Filler, Putty, Thinner); Automatic process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 2 (PC 14)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Coating product (Paint, Filler, Putty, Thinner); Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.19.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 8A (PC 14)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Coating product (Paint, Filler, Putty, Thinner); Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 4 (PC 14)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Coating product (Paint, Filler, Putty, Thinner); Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 8A (PC 14)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Coating product (Paint, Filler, Putty, Thinner); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 10 (PC 14)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Coating product (Paint, Filler, Putty, Thinner); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 8A (PC 14)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Surface finishing product; Manual with no process water recycling process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 4 (PC 14)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Surface finishing product; Manual with no process water recycling process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.19.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 8A (PC 14)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Surface finishing product; Manual with water recycling process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.19.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 4 (PC 14)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Surface finishing product; Manual with water recycling process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.20 Scenario 20: Industrial use of Quality control

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of Quality control*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.20 ff.

Description of ES 20

Free short title	Industrial use of Quality control
Systematic title based on use descriptor	ERC 4; PROC 15
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 15 - Use of laboratory reagents in small scale laboratories

9.20.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	50 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.440 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 4.1.v1 - Industrial Use of Water Borne Processing Aids - no RMM
9.20.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 15 (PC 21)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory Reagents
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.21 Scenario 21: Professional Use of Laundry products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Laundry products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.21 ff.

Description of ES 21

Free short title	Professional Use of Laundry products
Systematic title based on use descriptor	ERC 8A; PROC 8A, 1, 11
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 11 - Non industrial spraying
9.21.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day

Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.21.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Laundry detergent; Semi automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.21.3 Contributing Scenario (3) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Laundry detergent; Semi automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.21.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Laundry detergent; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.21.5 Contributing Scenario (5) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Laundry detergent; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.21.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Conditioner (softner/starch); Semi automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.21.7 Contributing Scenario (7) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Conditioner (softner/starch); Semi automatic process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.21.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Conditioner (softner/starch); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.21.9 Contributing Scenario (9) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Conditioner (softner/starch); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.21.10 Contributing Scenario (10) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Laundry aid (non-gasing); Semi automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.21.11 Contributing Scenario (11) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Laundry aid (non-gasing); Semi automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.21.12 Contributing Scenario (12) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Laundry aid (non-gasing); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.21.13 Contributing Scenario (13) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Laundry aid (non-gasing); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.21.14 Contributing Scenario (14) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Prespotter/Stain remover; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	50 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.22 Scenario 22: Professional Use of Laundry products (Reactive)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Laundry products (Reactive)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.22 ff.

Description of ES 22

Free short title	Professional Use of Laundry products (Reactive)
Systematic title based on use descriptor	ERC 8B; PROC 8A, 1
Name of constributing environmental scenario and corresponding ERC	ERC 8b Wide dispersive indoor use of reactive substances in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure
9.22.1 Contributing Scenario (1) controlling environmental exposure for ERC 8B	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year

Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.22.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Laundry aid (gasing); Semi automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.22.3 Contributing Scenario (3) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Laundry aid (gasing); Semi automatic process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.22.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Laundry aid (gasing); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	no
9.22.5 Contributing Scenario (5) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Laundry aid (gasing); Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.23 Scenario 23: Professional Use of Dishwash products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Dishwash products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.23 ff.

Description of ES 23

Free short title	Professional Use of Dishwash products
Systematic title based on use descriptor	ERC 8A; PROC 8A, 10, 8B, 2, 1
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure
9.23.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.23.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Dishwash product; Manual process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	8 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.23.3 Contributing Scenario (3) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Dishwash product; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.23.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8B (PC 35)	

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Dishwash product; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.23.5 Contributing Scenario (5) controlling professional worker exposure for PROC 2 (PC 35)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Dishwash product; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.23.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Dishwash product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.23.7 Contributing Scenario (7) controlling professional worker exposure for PROC 1 (PC 35)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Dishwash product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.23.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8B (PC 35)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Rinse aid; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.23.9 Contributing Scenario (9) controlling professional worker exposure for PROC 2 (PC 35)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Rinse aid; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.24 Scenario 24: Professional Use of General surface cleaning products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of General surface cleaning products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.24 ff.

Description of ES 24

Free short title	Professional Use of General surface cleaning products
Systematic title based on use descriptor	ERC 8A; PROC 8A, 10, 11, 13
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying

	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 10 - Roller application or brushing
9.24.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year

Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.24.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	General purpose cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.3 Contributing Scenario (3) controlling professional worker exposure for PROC 10 (PC 35)	

Name of contributing scenario	10 - Roller application or brushing
Further specifications	General purpose cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.24.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	General purpose cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.5 Contributing Scenario (5) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	General purpose cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	8 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Kitchen cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	6 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.7 Contributing Scenario (7) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Kitchen cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	180 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Kitchen cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.9 Contributing Scenario (9) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Kitchen cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	3 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.10 Contributing Scenario (10) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Sanitary cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.11 Contributing Scenario (11) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Sanitary cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.24.12 Contributing Scenario (12) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities

Further specifications	Sanitary cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.13 Contributing Scenario (13) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Sanitary cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	8 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.24.14 Contributing Scenario (14) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Descaling agent; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.15 Contributing Scenario (15) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Descaling agent; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.24.16 Contributing Scenario (16) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Descaling agent; Spray and rinse manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.24.17 Contributing Scenario (17) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Descaling agent; Spray and rinse manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	8 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.24.18 Contributing Scenario (18) controlling professional worker exposure for PROC 13 (PC 35)	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Descaling agent; Dipping process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.24.19 Contributing Scenario (19) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Oven/Grill Cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.24.20 Contributing Scenario (20) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Oven/Grill Cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	60 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.24.21 Contributing Scenario (21) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Glass cleaner; Manual process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.22 Contributing Scenario (22) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Glass cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.24.23 Contributing Scenario (23) controlling professional worker exposure for PROC 8A (PC 35)	

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Glass cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.24 Contributing Scenario (24) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Glass cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	8 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.25 Contributing Scenario (25) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Surface disinfactant; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.24.26 Contributing Scenario (26) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Surface disinfactant; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.24.27 Contributing Scenario (27) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Surface disinfactant; Spray and rinse manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: less than 15 mins *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	no
9.24.28 Contributing Scenario (28) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Surface disinfactant; Spray and rinse manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	8 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.29 Contributing Scenario (29) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Metal cleaning agent; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.24.30 Contributing Scenario (30) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Metal cleaning agent; Manual process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.24.31 Contributing Scenario (31) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Wet wipe; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %

9.25 Scenario 25: Professional Use of Floor care products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Floor care products.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.25 ff.

Description of ES 25

Free short title	Professional Use of Floor care products
Systematic title based on use descriptor	ERC 8A; PROC 8A, 10, 11
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 10 - Roller application or brushing PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying
9.25.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100

Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.25.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Floor cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.25.3 Contributing Scenario (3) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Floor cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.25.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Floor cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: 15 mins to 1 hour *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	no

9.25.5 Contributing Scenario (5) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Floor cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: >4 hours (default) *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	90 %
9.25.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Floor cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: 15 mins to 1 hour *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	no
9.25.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Floor cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: 15 mins to 1 hour *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	no
9.25.8 Contributing Scenario (8) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Floor cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: >4 hours (default) *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	no
9.25.9 Contributing Scenario (9) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Floor cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: >4 hours (default) *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	90 %
9.25.10 Contributing Scenario (10) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Floor stripper; Manual process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: 15 mins to 1 hour *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	no
9.25.11 Contributing Scenario (11) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Floor stripper; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	360 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.25.12 Contributing Scenario (12) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Floor stripper; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	99 %, burst-time: 15 mins to 1 hour *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Respiratory protection	no
9.25.13 Contributing Scenario (13) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Floor stripper; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	360 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.25.14 Contributing Scenario (14) controlling professional worker exposure for PROC 10 (PC 31)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Polish / impregnating agent; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	360 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.25.15 Contributing Scenario (15) controlling professional worker exposure for PROC 10 (PC 31)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Polish / impregnating agent; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	360 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.25.16 Contributing Scenario (16) controlling professional worker exposure for PROC 11 (PC 31)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Polish / impregnating agent; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	360 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.25.17 Contributing Scenario (17) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Carpet cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.25.18 Contributing Scenario (18) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Carpet cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	360 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.25.19 Contributing Scenario (19) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Carpet cleaner; Semi-Automatic process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	20 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.25.20 Contributing Scenario (20) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Carpet cleaner; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	360 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.25.21 Contributing Scenario (21) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Carpet cleaner; Spray and brush manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	360 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %

9.26 Scenario 26: Professional Use of Maintenance Products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Maintenance Products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.26 ff.

Description of ES 26

Free short title	Professional Use of Maintenance Products
Systematic title based on use descriptor	ERC 8A; PROC 10, 11, 8A, 2
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying
9.26.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.26.2 Contributing Scenario (2) controlling professional worker exposure for PROC 10 (PC 31)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Furniture care product; Manual process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	90 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.26.3 Contributing Scenario (3) controlling professional worker exposure for PROC 11 (PC 31)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Furniture care product; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	90 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.26.4 Contributing Scenario (4) controlling professional worker exposure for PROC 10 (PC 31)	

Name of contributing scenario	10 - Roller application or brushing
Further specifications	Leather care product; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	90 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.26.5 Contributing Scenario (5) controlling professional worker exposure for PROC 11 (PC 31)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Leather care product; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	90 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.26.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A (PC 31)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Leather care product; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	1 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.26.7 Contributing Scenario (7) controlling professional worker exposure for PROC 2 (PC 31)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Leather care product; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.26.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8A (PC 31)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Drain unblocker; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	6 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.26.9 Contributing Scenario (9) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Drain cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	6 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.26.10 Contributing Scenario (10) controlling professional worker exposure for PROC 10 (PC 31)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Stainless steel care; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	180 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.26.11 Contributing Scenario (11) controlling professional worker exposure for PROC 11 (PC 31)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Stainless steel care; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	50 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.27 Scenario 27: Professional Use of Vehicle cleaning Products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Vehicle cleaning Products.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.27 ff.

Description of ES 27

Free short title	Professional Use of Vehicle cleaning Products
Systematic title based on use descriptor	ERC 8A; PROC 8A, 4, 11, 10
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying
9.27.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10

Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.27.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.3 Contributing Scenario (3) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Semi-Automatic process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.4 Contributing Scenario (4) controlling professional worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Car wash product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	no
9.27.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Car wash product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Spray and rinse process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Spray and rinse process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.8 Contributing Scenario (8) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Car wash product; Spray and rinse process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.27.9 Contributing Scenario (9) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Car wash product; Spray and rinse process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.27.10 Contributing Scenario (10) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Car wash product; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.11 Contributing Scenario (11) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Car wash product; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.27.12 Contributing Scenario (12) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Dewaxing product; Semi-Automatic process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.13 Contributing Scenario (13) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Dewaxing product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.27.14 Contributing Scenario (14) controlling professional worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Dewaxing product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.15 Contributing Scenario (15) controlling professional worker exposure for PROC 4 (PC 35)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Dewaxing product; Semi-Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.16 Contributing Scenario (16) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Boat cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.17 Contributing Scenario (17) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Boat cleaner; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2

Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.18 Contributing Scenario (18) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Boat cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	30 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.27.19 Contributing Scenario (19) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Boat cleaner; Spray and wipe manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.28 Scenario 28: Professional Use of Food beverage and pharmacos products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Food beverage and pharmacos products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.28 ff.

Description of ES 28

Free short title	Professional Use of Food beverage and pharmacos products
Systematic title based on use descriptor	ERC 8A; PROC 8A, 10
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing
9.28.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10

Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.28.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Animal housing care; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.28.3 Contributing Scenario (3) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Animal housing care; Manual process
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %

9.29 Scenario 29: Professional Use of Façade/surface Cleaning Products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Façade/surface Cleaning Products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.29 ff.

Description of ES 29

Free short title	Professional Use of Façade/surface Cleaning Products
Systematic title based on use descriptor	ERC 8D; PROC 8A, 11
Name of constributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying
9.29.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D	

Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	1.37 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	100 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	20 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.29.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Façade/surface cleaner; High pressure process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.29.3 Contributing Scenario (3) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying

Further specifications	Façade/surface cleaner; High pressure process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.29.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Façade/surface cleaner; Medium pressure process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	10 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.29.5 Contributing Scenario (5) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Façade/surface cleaner; Medium pressure process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.30 Scenario 30: Professional Use of Medical Devices

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Medical Devices*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.30 ff.

Description of ES 30

Free short title	Professional Use of Medical Devices
Systematic title based on use descriptor	ERC 8A; PROC 8A, 13, 10, 11
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 13 - Treatment of articles by dipping and pouring PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying
9.30.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.30.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Medical devices ; Dipping process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.30.3 Contributing Scenario (3) controlling professional worker exposure for PROC 13 (PC 35)	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Medical devices ; Dipping process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	150 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.30.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Medical devices ; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	16 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.30.5 Contributing Scenario (5) controlling professional worker exposure for PROC 10 (PC 35)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Medical devices ; Manual process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.30.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A (PC 35)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities

Further specifications	Medical devices ; Spray process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	5 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.30.7 Contributing Scenario (7) controlling professional worker exposure for PROC 11 (PC 35)	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Medical devices ; Spray process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	8 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no

9.31 Scenario 31: Laboratory Use

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Laboratory Use*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.31 ff.

Description of ES 31

Free short title	Laboratory Use
Systematic title based on use descriptor	ERC 8A; PROC 15
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 15 - Use of laboratory reagents in small scale laboratories
9.31.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.31.2 Contributing Scenario (2) controlling professional worker exposure for PROC 15 (PC 21)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories

Further specifications	Laboratory Reagents
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.32 Scenario 32: Professional Use of Hand Cleaners

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Hand Cleaners*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.32 ff.

Description of ES 32

Free short title	Professional Use of Hand Cleaners
Systematic title based on use descriptor	ERC 8A; PROC 19
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 19 - Hand-mixing with intimate contact (only PPE available
9.32.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day

Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.32.2 Contributing Scenario (2) controlling professional worker exposure for PROC 19 (PC 39)	
Name of contributing scenario	19 - Hand-mixing with intimate contact (only PPE available
Further specifications	Professional Hand Cleaner
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	40 min/day *(justification: Imported Scenario settings from file: AISE_Kondensierte_Szenarien_19072010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.33 Scenario 33: Consumer use of washing and cleaning products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of washing and cleaning products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.33 ff.

Description of ES 33

Free short title	Consumer use of washing and cleaning products
Systematic title based on use descriptor	ERC 8A; PC 35
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.33.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.33.2 Contributing Scenario (2) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Laundry and dish washing products
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	1 h
Product characteristics	

Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.3 Contributing Scenario (3) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Laundry and dish washing products
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	1 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.4 Contributing Scenario (4) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Laundry and dish washing products
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	1 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.5 Contributing Scenario (5) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Laundry and dish washing products
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	1 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.6 Contributing Scenario (6) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Laundry and dish washing products
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	1 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.7 Contributing Scenario (7) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Laundry and dish washing products
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	1 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.8 Contributing Scenario (8) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.9 Contributing Scenario (9) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.10 Contributing Scenario (10) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.11 Contributing Scenario (11) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.12 Contributing Scenario (12) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.13 Contributing Scenario (13) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Laundry and dish washing products
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	1 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.14 Contributing Scenario (14) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.15 Contributing Scenario (15) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.16 Contributing Scenario (16) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.17 Contributing Scenario (17) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.33.18 Contributing Scenario (18) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.34 Scenario 34: Consumer use of washing and cleaning products (Reactive)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of washing and cleaning products (Reactive)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.34 ff.

Description of ES 34

Free short title	Consumer use of washing and cleaning products (Reactive)
Systematic title based on use descriptor	ERC 8B; PC 35
Name of constributing environmental scenario and corresponding ERC	ERC 8b Wide dispersive indoor use of reactive substances in open systems
9.34.1 Contributing Scenario (1) controlling environmental exposure for ERC 8B	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %

Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.34.2 Contributing Scenario (2) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Laundry and dish washing products
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	1 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.34.3 Contributing Scenario (3) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, liquids (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	

Amounts used	250 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.34.4 Contributing Scenario (4) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, trigger sprays (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	52 times/year *(justification: Typical value taken from "Table of habits and practices for consumer products in Western Europe" by A.I.S.E. (1 time per week))*
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	35 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.35 Scenario 35: Consumer use of washing and cleaning products (Sprays)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of washing and cleaning products (Sprays)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.35 ff.

Description of ES 35

Free short title	Consumer use of washing and cleaning products (Sprays)
Systematic title based on use descriptor	ERC 8A; PC 35
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.35.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.b.v1 - AISE- Wide Dispersive Use in Aerosol products for cleaning and maintenance products (Non-Propellants) Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.35.2 Contributing Scenario (2) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, trigger sprays (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	104 times/year *(justification: Typical value taken from "Table of habits and practices for consumer products in Western Europe" by A.I.S.E. (2 times per week))*
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	35 g

Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.35.3 Contributing Scenario (3) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, trigger sprays (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	52 times/year *(justification: Typical value taken from "Table of habits and practices for consumer products in Western Europe" by A.I.S.E. (1 time per week))*
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	35 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.35.4 Contributing Scenario (4) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, trigger sprays (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	26 times/year *(justification: ConsExpo assumption (26 times per year))*
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %

Amounts used	
Amounts used	35 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.35.5 Contributing Scenario (5) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, trigger sprays (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	10 times/year *(justification: ConsExpo Assumption (Carpet spray spot remover; foam) (10 times per year))*
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	35 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.35.6 Contributing Scenario (6) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, trigger sprays (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %

Amounts used	
Amounts used	7 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.35.7 Contributing Scenario (7) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Product subcategory	Cleaners, trigger sprays (all purpose cleaners, etc.)
Frequency and duration of use	
Frequency of use	26 times/year *(justification: Typical value taken from "Table of habits and practices for consumer products in Western Europe" by A.I.S.E. (0.5 times per week))*
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	35 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.36 Scenario 36: Consumer use of air freshener products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of air freshener products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.36 ff.

Description of ES 36

Free short title	Consumer use of air freshener products
Systematic title based on use descriptor	ERC 8A; PC 3
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.36.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.36.2 Contributing Scenario (2) controlling consumer exposure for PC 3	
Calculation model	Ecetoc TRA
Product subcategory	Aircare, Instant action (aerosol sprays)
Frequency and duration of use	
Frequency of use	416 times/year *(justification: Typical value taken from "Table of habits and practices for consumer products in Western Europe" by A.I.S.E. (8 times per week))*
Exposure time	0.250 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Amounts used	
Amounts used	10 g
Human factors not influenced by risk management	

Skin surface area dermal	-
Skin surface area oral	-
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.36.3 Contributing Scenario (3) controlling consumer exposure for PC 3	
Calculation model	Ecetoc TRA
Product subcategory	Aircare, Continuous action (solid & liquid)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	8 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	50 g
Human factors not influenced by risk management	
Skin surface area dermal	fingertips
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.37 Scenario 37: Consumer use of pest control products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of pest control products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.37 ff.

Description of ES 37

Free short title	Consumer use of pest control products
Systematic title based on use descriptor	ERC 8A
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.37.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	

Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)

9.38 Scenario 38: Consumer use of polishes

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of polishes*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.38 ff.

Description of ES 38

Free short title	Consumer use of polishes
Systematic title based on use descriptor	ERC 8A; PC 31
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.38.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	0.513699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10

Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' cleaning and maintenance products (Consumers and Professionals) - Fraction of EU tonnage to region: 0.04 (default: 0.1)
9.38.2 Contributing Scenario (2) controlling consumer exposure for PC 31	
Calculation model	Ecetoc TRA
Product subcategory	Polishes, wax / cream (floor, furniture, shoes)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	550 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.38.3 Contributing Scenario (3) controlling consumer exposure for PC 31	
Calculation model	Ecetoc TRA
Product subcategory	Polishes spray (furniture, shoes)
Frequency and duration of use	
Frequency of use	26 times/year *(justification: Expert assumption (0.5 times per week))*
Exposure time	4 h

Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	135 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.39 Scenario 39: Industrial Use of Me-salts in conversion coating - Nickel

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial Use of Me-salts in conversion coating - Nickel*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.39 ff.

Description of ES 39

Free short title	Industrial Use of Me-salts in conversion coating - Nickel
Systematic title based on use descriptor	ERC 5; PROC 8B, 2, 8A, 10
Name of constributing environmental scenario and corresponding ERC	ERC 5 Industrial use resulting in inclusion into or onto a matrix
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing
9.39.1 Contributing Scenario (1) controlling environmental exposure for ERC 5	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	50 kg/day

Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.440 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 5.1a.v1 - Industrial Use of Me-salts in conversion coating - Nickel
9.39.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B (PC 14)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Conversion Layer agent; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Aggregiert_21-07-2010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.39.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 14)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Conversion Layer agent; Automatic process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Aggregiert_21-07-2010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.39.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 8A (PC 14)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Conversion Layer agent; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Aggregiert_21-07-2010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	no
9.39.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 10 (PC 14)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Conversion Layer agent; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Aggregiert_21-07-2010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.40 Scenario 40: Industrial Use of Me-salts in conversion coating - Zinc, Chromium, Copper, Manganese

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial Use of Me-salts in conversion coating - Zinc, Chromium, Copper, Manganese*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.40 ff.

Description of ES 40

Free short title	Industrial Use of Me-salts in conversion coating - Zinc, Chromium, Copper, Manganese
Systematic title based on use descriptor	ERC 5; PROC 8B, 2, 8A, 10
Name of constributing environmental scenario and corresponding ERC	ERC 5 Industrial use resulting in inclusion into or onto a matrix

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing
9.40.1 Contributing Scenario (1) controlling environmental exposure for ERC 5	
Operational conditions	
Annual site tonnage	2,500 to/year
Daily amount used at site	50 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.440 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	AISE SPERC 5.1b.v1 - Industrial Use of Me-salts in conversion coating - Zinc, Chromium, Copper, Manganese
9.40.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B (PC 14)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Conversion Layer agent; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Aggregiert_21-07-2010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.40.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 14)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Conversion Layer agent; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Aggregiert_21-07-2010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.40.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 8A (PC 14)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Conversion Layer agent; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	15 min/day *(justification: Imported Scenario settings from file: AISE_Aggregiert_21-07-2010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.40.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 10 (PC 14)	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Conversion Layer agent; Automatic process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	480 min/day *(justification: Imported Scenario settings from file: AISE_Aggregiert_21-07-2010.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.41 Scenario 41: Industrial formulation of fuel additives and fuel blends

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial formulation of fuel additives and fuel blends*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.41 ff.

Description of ES 41

Free short title	Industrial formulation of fuel additives and fuel blends
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 5, 8B, 8A, 9, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 15 - Use of laboratory reagents in small scale laboratories

9.41.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	25 to/year
Daily amount used at site	2,500 kg/day
Release times per year	10 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	2.5 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0.010 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.41.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 13, PC 19)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 13, PC 19)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure

Further specifications	Use in closed, continuous PROC ess with occasional controlled exposure (e.g. sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 13, PC 19)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Blending and Filling processes (closed / dedicated). Includes both bulk and small quantity additions
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.41.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4 (PC 13, PC 19)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch processes (synthesis or blending) where some opportunity for exposure exists during charging and sampling
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5 (PC 13, PC 19)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Use in batch processes (synthesis or blending) where some opportunity for exposure exists during charging and sampling
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 4 (PC 13, PC 19)	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Sample collection of formulation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 5 (PC 13, PC 19)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Sample collection of formulation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 8B (PC 13, PC 19)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Sample collection of incoming raw materials
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 8B (PC 13, PC 19)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Bulk transfers by fixed pipe or flexible hose
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 8B (PC 13, PC 19)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Small pack (drum/bag) transfers - dedicated facility.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 8A (PC 13, PC 19)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Small pack (drum/bag) transfers - non dedicated facility.
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 8B (PC 13, PC 19)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Maintenance & cleaning
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 8B (PC 13, PC 19)	

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Top filling of bulk containers (road cars etc)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.41.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 9 (PC 13, PC 19)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Filling of drums and small packages
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.41.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 15 (PC 13, PC 19)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	QC & Laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.42 Scenario 42: Industrial use of fuel additives and additised fuels

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of fuel additives and additised fuels*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.42 ff.

Description of ES 42

Free short title	Industrial use of fuel additives and additised fuels
Systematic title based on use descriptor	ERC 7; PROC 8B, 8A, 16
Name of constributing environmental scenario and corresponding ERC	ERC 7 Industrial use of substances in closed systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 16 - Using material as fuel sources, limited exposure to unburned product to be expected PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.42.1 Contributing Scenario (1) controlling environmental exposure for ERC 7	
Operational conditions	
Annual site tonnage	20 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.42.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.42.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 8A (PC 13)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.42.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 16 (PC 13)	
Name of contributing scenario	16 - Using material as fuel sources, limited exposure to unburned product to be expected
Further specifications	Use as fuel for heating or power
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.42.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Maintenance activities. General exposure during maintenance work including draining, refilling and testing.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.42.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Disposal of waste product & used containers

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.43 Scenario 43: Professional use of fuel additives and additised fuels

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional use of fuel additives and additised fuels*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.43 ff.

Description of ES 43

Free short title	Professional use of fuel additives and additised fuels
Systematic title based on use descriptor	ERC 7; PROC 8B, 8A, 16
Name of constributing environmental scenario and corresponding ERC	ERC 7 Industrial use of substances in closed systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 16 - Using material as fuel sources, limited exposure to unburned product to be expected PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.43.1 Contributing Scenario (1) controlling environmental exposure for ERC 7	
Operational conditions	
Annual site tonnage	20 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.43.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.43.3 Contributing Scenario (3) controlling professional worker exposure for PROC 8A (PC 13)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) between containers at non dedicated facilities i.e. filling of fuel tanks or addition of aftermarket additives.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.43.4 Contributing Scenario (4) controlling professional worker exposure for PROC 16 (PC 13)	
Name of contributing scenario	16 - Using material as fuel sources, limited exposure to unburned product to be expected
Further specifications	Use as fuel for heating or power
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.43.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Maintenance activities. General exposure during maintenance work including draining, refilling and testing.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.43.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Disposal of waste product & used containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.44 Scenario 44: Professional use of fuel additives and additised fuels (WDU, Indoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional use of fuel additives and additised fuels (WDU, Indoor).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.44 ff.

Description of ES 44

Free short title	Professional use of fuel additives and additised fuels (WDU, Indoor)
Systematic title based on use descriptor	ERC 9A; PROC 8B, 8A, 17
Name of constributing environmental scenario and corresponding ERC	ERC 9a Wide dispersive indoor use of substances in closed systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 17 - Lubrication at high energy conditions and in partly open process PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.44.1 Contributing Scenario (1) controlling environmental exposure for ERC 9A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.44.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.44.3 Contributing Scenario (3) controlling professional worker exposure for PROC 8A (PC 13)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) between containers at non dedicated facilities i.e. filling of fuel tanks or addition of aftermarket additives.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.44.4 Contributing Scenario (4) controlling professional worker exposure for PROC 17 (PC 13)	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Use as fuel for heating or power
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.44.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Maintenance activities. General exposure during maintenance work including draining, refilling and testing.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.44.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Disposal of waste product & used containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.45 Scenario 45: Professional use of fuel additives and additised fuels (WDU, Outdoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional use of fuel additives and additised fuels (WDU, Outdoor)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.45 ff.

Description of ES 45

Free short title	Professional use of fuel additives and additised fuels (WDU, Outdoor)
Systematic title based on use descriptor	ERC 9B; PROC 8B, 8A, 18
Name of constributing environmental scenario and corresponding ERC	ERC 9b Wide dispersive outdoor use of substances in closed systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 18 - Greasing at high energy conditions PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.45.1 Contributing Scenario (1) controlling environmental exposure for ERC 9B	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.45.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.45.3 Contributing Scenario (3) controlling professional worker exposure for PROC 8A (PC 13)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) between containers at non dedicated facilities i.e. filling of fuel tanks or addition of aftermarket additives.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.45.4 Contributing Scenario (4) controlling professional worker exposure for PROC 18 (PC 13)	
Name of contributing scenario	18 - Greasing at high energy conditions
Further specifications	Use as fuel for heating or power
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.45.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Maintenance activities. General exposure during maintenance work including draining, refilling and testing.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.45.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8B (PC 13)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Disposal of waste product & used containers

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.46 Scenario 46: Consumer use of fuel additives and additised fuels

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of fuel additives and additised fuels*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.46 ff.

Description of ES 46

Free short title	Consumer use of fuel additives and additised fuels
Systematic title based on use descriptor	ERC 7; PC 13
Name of constributing environmental scenario and corresponding ERC	ERC 7 Industrial use of substances in closed systems
9.46.1 Contributing Scenario (1) controlling environmental exposure for ERC 7	
Operational conditions	
Annual site tonnage	20 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100

Release fraction to air from process	5 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.46.2 Contributing Scenario (2) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.46.3 Contributing Scenario (3) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %

Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.46.4 Contributing Scenario (4) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.46.5 Contributing Scenario (5) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	

Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.46.6 Contributing Scenario (6) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.47 Scenario 47: Consumer use of fuel additives and additised fuels (WDU, Indoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of fuel additives and additised fuels (WDU, Indoor).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.47 ff.

Description of ES 47

Free short title	Consumer use of fuel additives and additised fuels (WDU, Indoor)
Systematic title based on use descriptor	ERC 9A; PC 13
Name of constributing environmental scenario and corresponding ERC	ERC 9a Wide dispersive indoor use of substances in closed systems
9.47.1 Contributing Scenario (1) controlling environmental exposure for ERC 9A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.47.2 Contributing Scenario (2) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	

Room volume	20 m^3
9.47.3 Contributing Scenario (3) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.47.4 Contributing Scenario (4) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.47.5 Contributing Scenario (5) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.47.6 Contributing Scenario (6) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.48 Scenario 48: Consumer use of fuel additives and additised fuels (WDU, Outdoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of fuel additives and additised fuels (WDU, Outdoor)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.48 ff.

Description of ES 48

Free short title	Consumer use of fuel additives and additised fuels (WDU, Outdoor)
Systematic title based on use descriptor	ERC 9B; PC 13
Name of constributing environmental scenario and corresponding ERC	ERC 9b Wide dispersive outdoor use of substances in closed systems
9.48.1 Contributing Scenario (1) controlling environmental exposure for ERC 9B	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.48.2 Contributing Scenario (2) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	

Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.48.3 Contributing Scenario (3) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.48.4 Contributing Scenario (4) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.48.5 Contributing Scenario (5) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.48.6 Contributing Scenario (6) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	5,000 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.49 Scenario 49: Formulation of Organic Solvent Borne Coatings and Inks - Solids

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Organic Solvent Borne Coatings and Inks - Solids.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.49 ff.

Description of ES 49

Free short title	Formulation of Organic Solvent Borne Coatings and Inks - Solids
Systematic title based on use descriptor	ERC 2; PROC 8B, 3, 1, 2, 5, 9, 8A
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of

	exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact)

	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact)
9.49.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	444.444 kg/day
Release times per year	225 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.0097 %
Release fraction to wastewater from process	0.005 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	CEPE SPERC 2.2a.v1 - Formulation of Organic Solvent Borne Coatings and Inks - Solids
9.49.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	bulk raw material delivery (e.g. solvents/resins) - outdoor
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.49.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	bulk raw material delivery (e.g. pigments/extenders) - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.49.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	packaged goods delivery - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.49.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	raw material storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.49.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	raw material storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.49.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of liquids via pipeline from bulk storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.49.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of liquids via pipeline from bulk storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.49.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of solids via pipeline from bulk storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.49.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of solids via pipeline from bulk storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.49.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of liquids manually from bulk storage or packaged goods - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of liquids manually from bulk storage or packaged goods - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of solids manually from bulk storage or packaged goods - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of solids manually from bulk storage or packaged goods - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure

Further specifications	mixing, milling, dispersing, completion - closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	mixing, milling, dispersing, completion - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	90 %
9.49.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	mixing, milling, dispersing, completion - open batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	mixing, milling, dispersing, completion - open batch process (additions)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	filtering or sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	filtering or sieving and filling – open dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	filtering or sieving and filling – enclosed non-dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	filtering or sieving and filling – open non-dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	enclosed in situ in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	enclosed off-line in workplace
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	open in situ in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)

Further specifications	open off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	transfer of process wastes to storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	90 %
9.49.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	storage of waste prior to removal for off-site management
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.49.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	solvent recovery using condensation or adsorption/ desorption processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	transfer of recovered solvent into bulk storage tanks or IBCs
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	opening of manufacturing equipment and pipework containing chemicals for repair
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	QC laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.49.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	R&D laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.50 Scenario 50: Formulation of Water Borne Coatings and Inks - Solids

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.

The following scenarios contribute to the scenario *Formulation of Water Borne Coatings and Inks - Solids*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.50 ff.

Description of ES 50

Free short title	Formulation of Water Borne Coatings and Inks - Solids
Systematic title based on use descriptor	ERC 2; PROC 8B, 3, 1, 2, 5, 9, 8A
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes

	(multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact)
9.50.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	444.444 kg/day

Release times per year	225 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.0097 %
Release fraction to wastewater from process	0.500 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	CEPE SPERC 2.1b4.v1 - Formulation of Water Borne Coatings and Inks - Solids
9.50.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	bulk raw material delivery (e.g. solvents/resins) - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.50.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	bulk raw material delivery (e.g. pigments/extenders) - outdoor

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.50.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	packaged goods delivery - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.50.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 3	

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	raw material storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.50.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	raw material storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.50.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of liquids via pipeline from bulk storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.50.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of liquids via pipeline from bulk storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.50.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of solids via pipeline from bulk storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.50.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of solids via pipeline from bulk storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	

Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.50.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of liquids manually from bulk storage or packaged goods - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of liquids manually from bulk storage or packaged goods - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of solids manually from bulk storage or packaged goods - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of solids manually from bulk storage or packaged goods - outdoor
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	mixing, milling, dispersing, completion - closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)

Further specifications	mixing, milling, dispersing, completion - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	mixing, milling, dispersing, completion - open batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	mixing, milling, dispersing, completion - open batch process (additions)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	filtering or sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	filtering or sieving and filling – open dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	filtering or sieving and filling – enclosed non-dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	filtering or sieving and filling – open non-dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	enclosed in situ in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	enclosed off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	open in situ in workplace
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	open off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 8B	

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	transfer of process wastes to storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	storage of waste prior to removal for off-site management
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.50.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	solvent recovery using condensation or adsorption/ desorption processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	transfer of recovered solvent into bulk storage tanks or IBCs
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	opening of manufacturing equipment and pipework containing chemicals for repair
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	QC laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.50.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	R&D laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.51 Scenario 51: Formulation of Liquid Coatings and Inks (where specific use not known) - Solids

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Liquid Coatings and Inks (where specific use not known) - Solids*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.51 ff.

Description of ES 51

Free short title	Formulation of Liquid Coatings and Inks (where specific use not known) - Solids
Systematic title based on use descriptor	ERC 2; PROC 8B, 3, 1, 2, 5, 9, 8A
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or

	formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact)

	PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact)
9.51.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	444.444 kg/day
Release times per year	225 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.0097 %
Release fraction to wastewater from process	0.500 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	CEPE SPERC 2.2a3.v1 - Formulation of Liquid Coatings and Inks (where specific use not known) - Solids
9.51.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	bulk raw material delivery (e.g. solvents/resins) - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.51.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	bulk raw material delivery (e.g. pigments/extenders) - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %

Respiratory protection	no
9.51.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	packaged goods delivery - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.51.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	raw material storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.51.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	raw material storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.51.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of liquids via pipeline from bulk storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.51.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of liquids via pipeline from bulk storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.51.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of solids via pipeline from bulk storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.51.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of solids via pipeline from bulk storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.51.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of liquids manually from bulk storage or packaged goods - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of liquids manually from bulk storage or packaged goods - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of solids manually from bulk storage or packaged goods - indoor
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of solids manually from bulk storage or packaged goods - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 2	

Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	mixing, milling, dispersing, completion - closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	mixing, milling, dispersing, completion - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	mixing, milling, dispersing, completion - open batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	mixing, milling, dispersing, completion - open batch process (additions)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	filtering or sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	filtering or sieving and filling – open dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	filtering or sieving and filling – enclosed non-dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	filtering or sieving and filling – open non-dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	enclosed in situ in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	enclosed off-line in workplace

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	open in situ in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 5	

Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	open off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	transfer of process wastes to storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	storage of waste prior to removal for off-site management
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.51.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	solvent recovery using condensation or adsorption/ desorption processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	transfer of recovered solvent into bulk storage tanks or IBCs
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	opening of manufacturing equipment and pipework containing chemicals for repair
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	QC laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.51.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	R&D laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.52 Scenario 52: Formulation of Powder Coatings and Inks - Solids

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Powder Coatings and Inks - Solids*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.52 ff.

Description of ES 52

Free short title	Formulation of Powder Coatings and Inks - Solids
Systematic title based on use descriptor	ERC 2; PROC 8B, 3, 1, 2, 5, 9
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 2 - Use in closed, continuous process with

	occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact)
9.52.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	444.444 kg/day
Release times per year	225 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.0097 %
Release fraction to wastewater from process	0.500 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	CEPE SPERC 2.1c.v1 - Formulation of Powder Coatings and Inks - Solids
9.52.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B	

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	bulk raw material delivery (e.g. pigments/extenders) - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.52.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	packaged goods delivery - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.52.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	raw material storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.52.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	raw material storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.52.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of solids via pipeline from bulk storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.52.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	raw material dispensing of solids via pipeline from bulk storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	

Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.52.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of liquids manually from bulk storage or packaged goods - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	raw material dispensing of solids manually from bulk storage or packaged goods - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	mixing, dispersing, grinding - closed continuous process (no sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.52.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	mixing, milling, dispersing, completion - closed continuous process (sampling)
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	mixing, milling, dispersing, completion - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)

Further specifications	mixing, milling, dispersing, completion - open batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	filtering or sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	90 %
9.52.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	filtering or sieving and filling – open dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	enclosed in situ in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.52.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	enclosed off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.52.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	open in situ in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	open off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	transfer of process wastes to storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	storage of waste prior to removal for off-site management
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.52.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	opening of manufacturing equipment and pipework containing chemicals for repair
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)

Further specifications	QC laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.52.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	R&D laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.53 Scenario 53: Industrial coatings and inks application

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial coatings and inks application.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.53 ff.

Description of ES 53

Free short title	Industrial coatings and inks application
Systematic title based on use descriptor	ERC 5; PROC 8B, 3, 1, 2, 5, 8A, 10, 7, 13, 4
Name of constributing environmental scenario and corresponding ERC	ERC 5 Industrial use resulting in inclusion into or onto a matrix
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 10 - Roller application or brushing PROC 10 - Roller application or brushing PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 7 - Industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 13 - Treatment of articles by dipping and pouring PROC 13 - Treatment of articles by dipping and pouring

	PROC 7 - Industrial spraying PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.53.1 Contributing Scenario (1) controlling environmental exposure for ERC 5	
Operational conditions	
Annual site tonnage	2 to/year
Daily amount used at site	100 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	50 %
Release fraction to wastewater from process	50 %
Release fraction to soil from process	1 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %

STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.53.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	product delivery/storage: bulk product delivery - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.53.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	product delivery/storage: packaged product delivery - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	

Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	product delivery/storage: product storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	product delivery/storage: product storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	preparation of material for application: liquid products - fully enclosed
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	preparation of material for application: powder products - fully enclosed
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	preparation of material for application: liquid products - continuous, closed
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	preparation of material for application: powder products - continuous, closed
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	preparation of material for application: liquid products - batch, indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 5	

Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	preparation of material for application: powder products - batch and indooor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	preparation of material for application: batch, outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.53.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	preparation of material for application: liquid coatings - transfer of material from one container to another
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	preparation of material for application: powder products - transfer of material from one container to another
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	loading of application equipment: liquid coatings - fully enclosed
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	loading of application equipment: powder products - fully enclosed
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 0 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	loading of application equipment: liquid products - continuous, closed
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	loading of application equipment: powder products - continuous, closed
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	loading of application equipment: liquid products - batch, indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	loading of application equipment: powder products - batch, indooor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	loading of application equipment: Liquid products - batch, outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.53.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	loading of application equipment: liquid products - transfer of material from one container to another
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	loading of application equipment: powder products - transfer of material from one container to another
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	application: on-line application by roller, spreader, flow coating or printing- large scale (open equipment) [e.g. metal packaging, coil coating, automotive OEM, flexible packaging, newspapers, wallcoverings]
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	application: on-line application by roller, spreader, flow coating or printing - large scale (enclosed equipment) [e.g. publication gravure]
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	application: on-line application by roller, spreader, flow coating or printing - small scale
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	application: on-line automatic/robotic spray coating or printing (enclosed)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	application: on-line automatic/robotic spray (enclosed) - powder
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	application: on-line manual spray application (open)
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	application: on-line manual spray application (open)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying

Further specifications	application: manual spray application (liquid products)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	application: manual spray application (liquid products)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.53.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	application: manual spray application (powder products)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	application: manual spray application (powder products)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.35 Contributing Scenario (35) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	application: on-line application by dipping
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.36 Contributing Scenario (36) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	application: fluidised-bed application (automatic/enclosed)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.37 Contributing Scenario (37) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	application: fluidised-bed application (manual/open)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.38 Contributing Scenario (38) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	application: coatings from aerosol dispensers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.39 Contributing Scenario (39) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	film formation: airdrying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.53.40 Contributing Scenario (40) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	film formation: force drying (50 - 100C)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.53.41 Contributing Scenario (41) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	film formation: stoving (>100°C)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.53.42 Contributing Scenario (42) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	film formation: UV/EB radiation curing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.53.43 Contributing Scenario (43) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	equipment cleaning: enclosed in situ - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.53.44 Contributing Scenario (44) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	equipment cleaning: enclosed off-line - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.53.45 Contributing Scenario (45) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	equipment cleaning: open in situ - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.46 Contributing Scenario (46) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	equipment cleaning: open in situ - outdoor

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.47 Contributing Scenario (47) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	equipment cleaning: open off-line - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.48 Contributing Scenario (48) controlling industrial worker exposure for PROC 5	

Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	equipment cleaning: open off-line - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.53.49 Contributing Scenario (49) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	laboratory use: QC laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.53.50 Contributing Scenario (50) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	waste management: storage of waste prior ro removal for off-site management
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.53.51 Contributing Scenario (51) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	waste management: transfer of process wastes to storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 95 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.54 Scenario 54: Professional coatings and inks application (Indoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional coatings and inks application (Indoor).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.54 ff.

Description of ES 54

Free short title	Professional coatings and inks application (Indoor)
Systematic title based on use descriptor	ERC 8C; PROC 3, 5, 8A, 2, 11, 10, 19, 4
Name of constributing environmental scenario and corresponding ERC	ERC 8c Wide dispersive indoor use resulting in inclusion into or onto a matrix

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 11 - Non industrial spraying PROC 10 - Roller application or brushing PROC 10 - Roller application or brushing PROC 19 - Hand-mixing with intimate contact (only PPE available PROC 19 - Hand-mixing with intimate contact (only PPE available PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact)

9.54.1 Contributing Scenario (1) controlling environmental exposure for ERC 8C	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	15 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.54.2 Contributing Scenario (2) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	product delivery/storage (Indoor): product storage - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.54.3 Contributing Scenario (3) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)

Further specifications	preparation of material for application (Indoor): closed, continuous
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.4 Contributing Scenario (4) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	preparation of material for application (Indoor): batch, indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	preparation of material for application (Indoor): transfer of material from one container to another - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.6 Contributing Scenario (6) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	loading of application equipment (Indoor): closed, continuous
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.54.7 Contributing Scenario (7) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	loading of application equipment (Indoor): batch, indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	loading of application equipment (Indoor): transfer of material from one container to another - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.9 Contributing Scenario (9) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	application (Indoor): manual spray application of coatings - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.10 Contributing Scenario (10) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	application (Indoor): manual spray application of coatings - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.11 Contributing Scenario (11) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	application (Indoor): manual brush, roller, spreader application of coatings - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.12 Contributing Scenario (12) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	application (Indoor): on-line roller, spreader, flow application of printing inks - indoor
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.13 Contributing Scenario (13) controlling professional worker exposure for PROC 19	
Name of contributing scenario	19 - Hand-mixing with intimate contact (only PPE available
Further specifications	application (Indoor): hand - paints, pastels, pigment powders - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.14 Contributing Scenario (14) controlling professional worker exposure for PROC 19	

Name of contributing scenario	19 - Hand-mixing with intimate contact (only PPE available
Further specifications	application (Indoor): hand - paints, pastels, pigment powders - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.15 Contributing Scenario (15) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	film formation (Indoor): airdrying - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.16 Contributing Scenario (16) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	film formation (Indoor): force drying (50 - 100C)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.54.17 Contributing Scenario (17) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	film formation (Indoor): stoving (>100°C)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.54.18 Contributing Scenario (18) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	film formation (Indoor): UV/EB radiation curing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	90 %
9.54.19 Contributing Scenario (19) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	equipment cleaning (Indoor): open in situ - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.20 Contributing Scenario (20) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	equipment cleaning (Indoor): open off-line - indoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.21 Contributing Scenario (21) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	equipment cleaning (Indoor): transfer of process wastes to storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.54.22 Contributing Scenario (22) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	laboratory use: QC laboratory
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 80 %)
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %

9.55 Scenario 55: Professional coatings and inks application (Outdoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional coatings and inks application (Outdoor)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.55 ff.

Description of ES 55

Free short title	Professional coatings and inks application (Outdoor)
Systematic title based on use descriptor	ERC 8F; PROC 8A, 3, 5, 11, 10, 4
Name of constributing environmental scenario and corresponding ERC	ERC 8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 3 - Use in closed batch process (synthesis or formulation) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 11 - Non industrial spraying PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
9.55.1 Contributing Scenario (1) controlling environmental exposure for ERC 8F	

Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	15 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0.500 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.55.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	product delivery/storage (Outdoor): bulk product delivery - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.55.3 Contributing Scenario (3) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)

Further specifications	product delivery/storage (Outdoor): packaged product delivery - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.55.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	product delivery/storage (Outdoor): product storage - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.55.5 Contributing Scenario (5) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	preparation of material for application (Outdoor): batch, outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.55.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	preparation of material for application (Outdoor): transfer of material from one container to another - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.55.7 Contributing Scenario (7) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	loading of application equipment (Outdoor): batch, outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.55.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	loading of application equipment (Outdoor): transfer of material from one container to another - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.55.9 Contributing Scenario (9) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	application (Outdoor): manual spray application of coatings - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.55.10 Contributing Scenario (10) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	application (Outdoor): manual brush, roller, spreader application of coatings - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.55.11 Contributing Scenario (11) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	application (Outdoor): coatings from aerosol dispensers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	90 %
9.55.12 Contributing Scenario (12) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	film formation (Outdoor): airdrying - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.55.13 Contributing Scenario (13) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	equipment cleaning (Outdoor): open in situ - outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.55.14 Contributing Scenario (14) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	equipment cleaning (Outdoor): open off-line - outdoor

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.55.15 Contributing Scenario (15) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	waste management (Outdoor): storage of waste prior to removal for off-site management
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.55.16 Contributing Scenario (16) controlling professional worker exposure for PROC 8A	

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	waste management (Outdoor): transfer of process wastes to storage containers: off-line outside
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.56 Scenario 56: Consumer coatings and inks application (Indoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer coatings and inks application (Indoor)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.56 ff.

Description of ES 56

Free short title	Consumer coatings and inks application (Indoor)
Systematic title based on use descriptor	ERC 8C; PC 9a, 9b, 9c
Name of constributing environmental scenario and corresponding ERC	ERC 8c Wide dispersive indoor use resulting in inclusion into or onto a matrix
9.56.1 Contributing Scenario (1) controlling environmental exposure for ERC 8C	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day

Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	15 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.56.2 Contributing Scenario (2) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.3 Contributing Scenario (3) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	2 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Mixing and Loading; 1.5 times per year))*
Exposure time	2 h

Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.4 Contributing Scenario (4) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.56.5 Contributing Scenario (5) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.6 Contributing Scenario (6) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	2 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Mixing and Loading; 1.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.7 Contributing Scenario (7) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no

Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.56.8 Contributing Scenario (8) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.9 Contributing Scenario (9) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	2 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Mixing and Loading; 1.5 times per year))*
Exposure time	2 h
Product characteristics	

Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.10 Contributing Scenario (10) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.56.11 Contributing Scenario (11) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.12 Contributing Scenario (12) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	2 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Mixing and Loading; 1.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.13 Contributing Scenario (13) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no

Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.56.14 Contributing Scenario (14) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.15 Contributing Scenario (15) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	

Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.16 Contributing Scenario (16) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Aerosol spray can
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Coatings/General coating; 0.33 times per year))*
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	-
Skin surface area oral	-
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.17 Contributing Scenario (17) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	yes

Product ingredient fraction by weight (inhalation)	100 %
Product ingredient fraction by weight (dermal)	100 %
Product ingredient fraction by weight (oral)	10 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.18 Contributing Scenario (18) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Aerosol spray can
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Coatings/General coating; 0.33 times per year))*
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	-
Skin surface area oral	-
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.19 Contributing Scenario (19) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %

Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.56.20 Contributing Scenario (20) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Coatings/General coating; 0.33 times per year))*
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	90 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.21 Contributing Scenario (21) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	100 %
Product ingredient fraction by weight (dermal)	100 %
Product ingredient fraction by weight (oral)	10 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.22 Contributing Scenario (22) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.56.23 Contributing Scenario (23) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Coatings/General coating; 0.33 times per year))*
Exposure time	0.330 h
Product characteristics	

Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	90 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.24 Contributing Scenario (24) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	100 %
Product ingredient fraction by weight (dermal)	100 %
Product ingredient fraction by weight (oral)	10 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.25 Contributing Scenario (25) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day

Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.56.26 Contributing Scenario (26) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.27 Contributing Scenario (27) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*

Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.28 Contributing Scenario (28) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.56.29 Contributing Scenario (29) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	

Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.30 Contributing Scenario (30) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.56.31 Contributing Scenario (31) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	

Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-

9.57 Scenario 57: Consumer coatings and inks application (Outdoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer coatings and inks application (Outdoor)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.57 ff.

Description of ES 57

Free short title	Consumer coatings and inks application (Outdoor)
Systematic title based on use descriptor	ERC 8F; PC 9a, 9b, 9c
Name of constributing environmental scenario and corresponding ERC	ERC 8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix
9.57.1 Contributing Scenario (1) controlling environmental exposure for ERC 8F	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	15 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0.500 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %

STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.57.2 Contributing Scenario (2) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.3 Contributing Scenario (3) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	

Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.4 Contributing Scenario (4) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.57.5 Contributing Scenario (5) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-

Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.6 Contributing Scenario (6) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.7 Contributing Scenario (7) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %

Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.57.8 Contributing Scenario (8) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.9 Contributing Scenario (9) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands

Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.10 Contributing Scenario (10) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.57.11 Contributing Scenario (11) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %

Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.12 Contributing Scenario (12) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.13 Contributing Scenario (13) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %

Other given operational conditions affecting consumers exposure	
Room volume	-
9.57.14 Contributing Scenario (14) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.15 Contributing Scenario (15) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-

Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.16 Contributing Scenario (16) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Aerosol spray can
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Coatings/General coating; 0.33 times per year))*
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	-
Skin surface area oral	-
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.17 Contributing Scenario (17) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	yes
Product ingredient fraction by weight (inhalation)	100 %
Product ingredient fraction by weight (dermal)	100 %
Product ingredient fraction by weight (oral)	10 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-

Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.18 Contributing Scenario (18) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Coatings/General coating; 0.33 times per year))*
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	90 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.19 Contributing Scenario (19) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	100 %
Product ingredient fraction by weight (dermal)	100 %
Product ingredient fraction by weight (oral)	10 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	

Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.20 Contributing Scenario (20) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.57.21 Contributing Scenario (21) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Waterborne latex wall paint
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2.2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	3,750 g
Human factors not influenced by risk management	
Skin surface area dermal	inside hands / one hand / palm of hands

Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.22 Contributing Scenario (22) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (DIY Products/Plaster-Equalizer/Floor equalizer/Application; 0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.57.23 Contributing Scenario (23) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	20 %
Product ingredient fraction by weight (oral)	20 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-

Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-

9.58 Scenario 58: Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (large scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (large scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.58 ff.

Description of ES 58

Free short title	Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (large scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories

9.58.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	4,545.455 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.1.a.v1 - Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (large scale)
9.58.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.58.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.58.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.58.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.58.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.58.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.58.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.58.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.58.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.59 Scenario 59: Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (medium scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.59 ff.

Description of ES 59

Free short title	Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.59.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	4,500 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.200 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	99 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.1.b.v1 - Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (medium scale)
9.59.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.59.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.59.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.59.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.59.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.59.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.59.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.59.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.59.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.60 Scenario 60: Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (small scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.60 ff.

Description of ES 60

Free short title	Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.60.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	10 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.400 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.220 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

SpERC	COLIPA SPERC 2.1.c.v1 - Formulation of low viscosiy liquids (Shampoo, hair conditioner, shower gel, foam bath) (small scale)
9.60.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.60.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.60.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.60.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.60.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.60.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.60.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.60.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.60.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.61 Scenario 61: Formulation of Fine Fragrances - Cleaning with Water (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Fine Fragrances - Cleaning with Water (medium scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.61 ff.

Description of ES 61

Free short title	Formulation of Fine Fragrances - Cleaning with Water (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.61.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	800 to/year
Daily amount used at site	3,636.364 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	1.5 %
Release fraction to soil from process	0 %

Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.1.d.v1 - Formulation of Fine Fragrances - Cleaning with Water (medium scale)
9.61.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.61.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.61.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.61.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.61.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.61.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.61.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.61.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation

Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.61.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.62 Scenario 62: Formulation of Fine Fragrances - Cleaning with Water (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Fine Fragrances - Cleaning with Water (small scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.62 ff.

Description of ES 62

Free short title	Formulation of Fine Fragrances - Cleaning with Water (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.62.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	10 kg/day
Release times per year	220 days/year

Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	3 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.220 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.1.e.v1 - Formulation of Fine Fragrances - Cleaning with Water (small scale)
9.62.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.62.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.62.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.62.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.62.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.62.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.62.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.62.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.62.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.63 Scenario 63: Formulation of Medium Viscosity Body Care Products (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Medium Viscosity Body Care Products (medium scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.63 ff.

Description of ES 63

Free short title	Formulation of Medium Viscosity Body Care Products (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories

9.63.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	4,500 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	99 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.1.f.v1 - Formulation of Medium Viscosity Body Care Products (medium scale)
9.63.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.63.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	

Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.63.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.63.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.63.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.63.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.63.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.63.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.63.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.64 Scenario 64: Formulation of Medium Viscosity Body Care Products (Small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Medium Viscosity Body Care Products (Small scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.64 ff.

Description of ES 64

Free short title	Formulation of Medium Viscosity Body Care Products (Small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.64.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	10 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.220 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.1.g.v1 - Formulation of Medium Viscosity Body Care Products (Small scale)
9.64.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.64.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.64.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.64.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.64.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.64.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.64.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.64.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.64.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.65 Scenario 65: Formulation of Non-liquid Creams, high viscosity Products (large scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Non-liquid Creams, high viscosity Products (large scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.65 ff.

Description of ES 65

Free short title	Formulation of Non-liquid Creams, high viscosity Products (large scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.65.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	4,545.455 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

SpERC	COLIPA SPERC 2.1.h.v1 - Formulation of Non-liquid Creams, high viscosity Products (large scale)
9.65.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.65.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.65.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.65.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.65.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.65.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.65.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.65.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.65.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.66 Scenario 66: Formulation of Non-liquid Creams, high viscosity Products (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Non-liquid Creams, high viscosity Products (medium scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.66 ff.

Description of ES 66

Free short title	Formulation of Non-liquid Creams, high viscosity Products (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.66.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	600 to/year
Daily amount used at site	2,727.273 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %

Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.1.i.v1 - Formulation of Non-liquid Creams, high viscosity Products (medium scale)
9.66.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.66.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.66.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.66.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.66.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.66.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.66.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.66.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.66.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.67 Scenario 67: Formulation of Non-liquid Creams, high viscosity Products (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of Non-liquid Creams, high viscosity Products (small scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.67 ff.

Description of ES 67

Free short title	Formulation of Non-liquid Creams, high viscosity Products (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.67.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	10 kg/day
Release times per year	220 days/year

Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	4 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.220 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.1.j.v1 - Formulation of Non-liquid Creams, high viscosity Products (small scale)
9.67.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.67.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.67.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.67.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.67.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.67.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.67.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.67.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.67.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.68 Scenario 68: Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (large scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (large scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.68 ff.

Description of ES 68

Free short title	Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (large scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.68.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	4,545.455 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.2.a.v1 - Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (large scale)
9.68.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.68.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.68.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.68.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.68.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.68.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.68.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.68.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.68.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.69 Scenario 69: Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of cosmetic products involving cleaning*

with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (medium scale).

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.69 ff.

Description of ES 69

Free short title	Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (medium scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.69.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	4,500 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %

Fraction used at main source	99 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.2.b.v1 - Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (medium scale)
9.69.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.69.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.69.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.69.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.69.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.69.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.69.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.69.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	

Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.69.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no

9.70 Scenario 70: Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (small scale).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.70 ff.

Description of ES 70

Free short title	Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories

9.70.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	10 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.220 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.2.c.v1 - Formulation of cosmetic products involving cleaning with Organic Solvents (Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products - (small scale)
9.70.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.70.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.70.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.70.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.70.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.70.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.70.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.70.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.70.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.71 Scenario 71: Formulation of body care soap (large scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of body care soap (large scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.71 ff.

Description of ES 71

Free short title	Formulation of body care soap (large scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.71.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	4,545.455 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.050 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.3.a.v1 - Formulation of body care soap (large scale)
9.71.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.71.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.71.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.71.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.71.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.71.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.71.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.71.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.71.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.72 Scenario 72: Formulation of body care soap (medium scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of body care soap (medium scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.72 ff.

Description of ES 72

Free short title	Formulation of body care soap (medium scale)

Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.72.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	4,500 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	99 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 2.3.b.v1 - Formulation of body care soap (medium scale)
9.72.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.72.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.72.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.72.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.72.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.72.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.72.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.72.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.72.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.73 Scenario 73: Formulation of body care soap (small scale)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation of body care soap (small scale)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.73 ff.

Description of ES 73

Free short title	Formulation of body care soap (small scale)
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 5, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.73.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	10 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.200 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.020 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

SpERC	COLIPA SPERC 2.3.c.v1 - Formulation of body care soap (small scale)
9.73.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1 (PC 39)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Closed process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.73.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2 (PC 39)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Closed process, controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.73.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3 (PC 39)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.73.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 5 (PC 39)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.73.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A (PC 39)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer, non dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.73.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 39)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer, dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.73.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9 (PC 39)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer into small containers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.73.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14 (PC 39)	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Tabletting, compression etc.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.73.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15 (PC 39)	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.74 Scenario 74: Wide Dispersive Use in ‘Down the Drain’ products - hair and skin care products (Consumers and Professionals) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.74 ff.

Description of ES 74

Free short title	Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products
Systematic title based on use descriptor	ERC 8A
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.74.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	0.205479 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 8a.1.a.v1 - Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) Fraction of EU tonnage to region: 0.053 (default: 0.1)

9.75 Scenario 75: Wide Dispersive Use of Aerosol products for hair and skin care (Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Wide Dispersive Use of Aerosol products for hair and skin care (Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.75 ff.

Description of ES 75

Free short title	Wide Dispersive Use of Aerosol products for hair and skin care (Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products
Systematic title based on use descriptor	ERC 8A
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.75.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	0.205479 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	100 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 8a.1.b.v1 - Wide Dispersive Use of Aerosol products for hair and skin care (Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1)

9.76 Scenario 76: Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be

subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.76 ff.

Description of ES 76

Free short title	Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products
Systematic title based on use descriptor	ERC 8A
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.76.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	1,000 to/year
Daily amount used at site	0.205479 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.075 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	COLIPA SPERC 8a.1.c.v1 - Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) Fraction of EU tonnage to region: 0.053 (default: 0.1)

9.77 Scenario 77: Bulk loading (including marine vessel/barge, rail car and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Bulk loading (including marine vessel/barge, rail car*

and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals).

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.77 ff.

Description of ES 77

Free short title	Bulk loading (including marine vessel/barge, rail car and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals)
Systematic title based on use descriptor	ERC 6A; PROC 1, 2, 3, 4, 8A, 8B, 9, 15
Name of constributing environmental scenario and corresponding ERC	ERC 6a Industrial use of intermediates
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 15 - Use of laboratory reagents in small scale laboratories
9.77.1 Contributing Scenario (1) controlling environmental exposure for ERC 6A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.333333 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.001 %
Release fraction to wastewater from process	0.001 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	0.200 %
STP	yes

River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 1.1b.v1 - Distribution: Industrial (SU3)
9.77.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.77.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.77.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.77.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.77.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.77.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.77.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.77.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 15	

Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.78 Scenario 78: Use as a isolated intermediate not under stricitly controlled conditions

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as a isolated intermediate not under stricitly controlled conditions*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.78 ff.

Description of ES 78

Free short title	Use as a isolated intermediate not under stricitly controlled conditions
Systematic title based on use descriptor	ERC 6A; PROC 1, 2, 3, 4, 8A, 8B, 15
Name of constributing environmental scenario and corresponding ERC	ERC 6a Industrial use of intermediates

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 15 - Use of laboratory reagents in small scale laboratories
9.78.1 Contributing Scenario (1) controlling environmental exposure for ERC 6A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	166.667 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0.100 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 6.1a.v1 - Manufacture of substances: Industrial (SU8, SU9)
9.78.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.78.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.78.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.78.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.78.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A	

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.78.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.78.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.79 Scenario 79: Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.79 ff.

Description of ES 79

Free short title	Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance
Systematic title based on use descriptor	ERC 2; PROC 1, 2, 3, 4, 8A, 8B, 9, 14, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories
9.79.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	166.667 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.250 %
Release fraction to wastewater from process	0.500 %
Release fraction to soil from process	0.010 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day

Risk management measures	
SpERC	ESVOC SpERC 2.2.v1 - Formulation & packing of preparations and mixtures: Industrial (SU10)
9.79.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.79.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.79.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.79.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.79.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.79.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.79.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.79.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 14	

Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.79.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no

9.80 Scenario 80: Use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials transfer from bulk and semi-bulk and spraying, brushing and other manual application tasks); and equipment cleaning

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials transfer from bulk and semi-bulk and spraying, brushing and other manual application tasks); and equipment cleaning*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.80 ff.

Description of ES 80

Free short title	Use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials transfer from bulk and semi-bulk and spraying, brushing and other manual application tasks); and equipment cleaning
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 5, 7, 8A, 8B, 10, 13, 15
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 13 - Treatment of articles by dipping and pouring PROC 15 - Use of laboratory reagents in small scale laboratories
9.80.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	166.667 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	98 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 4.3a.v1 - Uses in Coatings: Industrial (SU3)
9.80.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.80.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.80.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.81 Scenario 81: Use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials transfer and spraying, brushing and other manual application tasks); and equipment cleaning

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials transfer and spraying, brushing and other manual application tasks); and equipment cleaning*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.81 ff.

Description of ES 81

Free short title	Use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials transfer and spraying, brushing and other manual application tasks); and equipment cleaning
Systematic title based on use descriptor	ERC 8A; PROC 1, 2, 3, 4, 5, 11, 8A, 8B, 10, 13, 15, 19
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 15 - Use of laboratory reagents in small scale

	laboratories PROC 19 - Hand-mixing with intimate contact (only PPE available PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 11 - Non industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 15 - Use of laboratory reagents in small scale laboratories PROC 19 - Hand-mixing with intimate contact (only PPE available
9.81.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	98 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	1 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %

STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.3b.v1 - Uses in Coatings: Professional (SU22)
9.81.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.6 Contributing Scenario (6) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.7 Contributing Scenario (7) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Industrial spraying
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	less than 15 mins
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.81.9 Contributing Scenario (9) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.10 Contributing Scenario (10) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	less than 15 mins
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.11 Contributing Scenario (11) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	less than 15 mins
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.12 Contributing Scenario (12) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.13 Contributing Scenario (13) controlling professional worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.14 Contributing Scenario (14) controlling professional worker exposure for PROC 19	
Name of contributing scenario	19 - Hand-mixing with intimate contact (only PPE available
Further specifications	Hand-mixing with intimate contact and only PPE available
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	less than 15 mins
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.15 Contributing Scenario (15) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.16 Contributing Scenario (16) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.17 Contributing Scenario (17) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.18 Contributing Scenario (18) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.19 Contributing Scenario (19) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.20 Contributing Scenario (20) controlling professional worker exposure for PROC 11	

Name of contributing scenario	11 - Non industrial spraying
Further specifications	Industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	less than 15 mins
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.21 Contributing Scenario (21) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.22 Contributing Scenario (22) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.23 Contributing Scenario (23) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	

Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.24 Contributing Scenario (24) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	less than 15 mins
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.25 Contributing Scenario (25) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.26 Contributing Scenario (26) controlling professional worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.81.27 Contributing Scenario (27) controlling professional worker exposure for PROC 19	
Name of contributing scenario	19 - Hand-mixing with intimate contact (only PPE available
Further specifications	Hand-mixing with intimate contact and only PPE available
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.82 Scenario 82: Use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and spraying, brushing, aerosol and other manual application tasks); and equipment cleaning

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and spraying, brushing, aerosol and other manual application tasks); and equipment cleaning*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.82 ff.

Description of ES 82

Free short title	Use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and spraying, brushing, aerosol and other manual application tasks); and equipment cleaning
Systematic title based on use descriptor	ERC 8A; PC 1, 9a, 9b, 9c, 24, 31
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.82.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.013699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100

Release fraction to air from process	98.5 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0.500 %
Fraction tonnage to region	10 %
Fraction used at main source	0.100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.3c.v1 - Uses in Coatings: Consumer (SU21)
9.82.2 Contributing Scenario (2) controlling consumer exposure for PC 1	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	30 %
Product ingredient fraction by weight (dermal)	30 %
Amounts used	
Amounts used	255 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.82.3 Contributing Scenario (3) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	

Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	90 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.82.4 Contributing Scenario (4) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	100 %
Product ingredient fraction by weight (dermal)	100 %
Product ingredient fraction by weight (oral)	10 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*

9.82.5 Contributing Scenario (5) controlling consumer exposure for PC 9c	
Calculation model	Ecetoc TRA
Product subcategory	Finger paints, face paints
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	5 %
Product ingredient fraction by weight (oral)	5 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.82.6 Contributing Scenario (6) controlling consumer exposure for PC 24	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	50 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	

Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.82.7 Contributing Scenario (7) controlling consumer exposure for PC 31	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	50 %
Amounts used	
Amounts used	135 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*

9.83 Scenario 83: Use as a component of cleaning products for industrial use including transfer from storage; pouring/unloading from drums or containers; exposures during cleaning activities (automated and by hand); and related maintenance

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as a component of cleaning products for industrial use including transfer from storage; pouring/unloading from drums or containers; exposures during cleaning activities (automated and by hand); and related maintenance.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.83 ff.

Description of ES 83

Free short title	Use as a component of cleaning products for industrial use including transfer from storage; pouring/unloading from drums or containers; exposures during cleaning activities (automated and by hand); and related maintenance
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 7, 8A, 8B, 10, 13
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 13 - Treatment of articles by dipping and pouring
9.83.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	2,500 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	30 %
Release fraction to wastewater from process	0.010 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day

Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 4.4a.v1 - Use in Cleaning Agents: Industrial (SU3)
9.83.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.83.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.83.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.83.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.83.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.83.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.83.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.83.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing

Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.83.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.84 Scenario 84: Use as a component of cleaning products for professional use including pouring/unloading from drums or containers; and exposures during cleaning activities (automated and by hand)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as a component of cleaning products for professional use including pouring/unloading from drums or containers; and exposures during cleaning activities (automated and by hand).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.84 ff.

Description of ES 84

Free short title	Use as a component of cleaning products for professional use including pouring/unloading from drums or containers; and exposures during cleaning activities (automated and by hand)
Systematic title based on use descriptor	ERC 8A; PROC 1, 2, 3, 4, 8A, 8B, 10, 11, 13
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring
9.84.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.013699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100

Release fraction to air from process	2 %
Release fraction to wastewater from process	0.0001 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.4b.v1 - Use in Cleaning Agents: Professional (SU22)
9.84.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.84.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.8 Contributing Scenario (8) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.9 Contributing Scenario (9) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.10 Contributing Scenario (10) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.11 Contributing Scenario (11) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.12 Contributing Scenario (12) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.13 Contributing Scenario (13) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.14 Contributing Scenario (14) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.15 Contributing Scenario (15) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.16 Contributing Scenario (16) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.17 Contributing Scenario (17) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.84.18 Contributing Scenario (18) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.84.19 Contributing Scenario (19) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.85 Scenario 85: General exposures to consumers arising from the use household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *General exposures to consumers arising from the use household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.85 ff.

Description of ES 85

Free short title	General exposures to consumers arising from the use household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products
Systematic title based on use descriptor	ERC 8A; PC 3, 9a, 24, 35
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.85.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.013699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	95 %
Release fraction to wastewater from process	2.5 %
Release fraction to soil from process	2.5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

SpERC	ESVOC SpERC 8.4c.v1 - Use in Cleaning Agents: Consumer (SU21)
9.85.2 Contributing Scenario (2) controlling consumer exposure for PC 3	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.250 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	10 %
Amounts used	
Amounts used	10 g
Human factors not influenced by risk management	
Skin surface area dermal	fingertips
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.85.3 Contributing Scenario (3) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	90 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %

Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.85.4 Contributing Scenario (4) controlling consumer exposure for PC 24	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	50 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.85.5 Contributing Scenario (5) controlling consumer exposure for PC 35	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	60 %
Amounts used	
Amounts used	35 g

Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*

9.86 Scenario 86: Industrial oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.86 ff.

Description of ES 86

Free short title	Industrial oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 8A, 8B
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.86.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	3 to/year
Daily amount used at site	150 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	100 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	5 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.86.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.86.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.86.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.86.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.86.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.86.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no

9.87 Scenario 87: Professional oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.87 ff.

Description of ES 87

Free short title	Professional oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.
Systematic title based on use descriptor	ERC 8D; PROC 1, 2, 3, 4, 8A, 8B
Name of constributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.87.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day

Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	100 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	20 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.87.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.87.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.87.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.87.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises

Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.87.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.87.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.88 Scenario 88: Industrial use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/ reject articles, recycling and disposal of waste oils.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/ reject articles, recycling and disposal of waste oils.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.88 ff.

Description of ES 88

Free short title	Industrial use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/ reject articles, recycling and disposal of waste oils.
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 5, 7, 8A, 8B, 9, 10, 13, 17
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 13 - Treatment of articles by dipping and pouring PROC 17 - Lubrication at high energy conditions and in partly open process

9.88.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	2,500 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.600 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0 %

Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 4.7a.v1 - Metal working fluids and rolling oilds: Industrial (SU3)
9.88.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying

Further specifications	Industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.88.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.88.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 17	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Lubrication at high energy conditions and in partly open process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.89 Scenario 89: Professional use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/ reject articles, recycling and disposal of waste oils.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/ reject articles, recycling and disposal of waste oils.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.89 ff.

Description of ES 89

Free short title	Professional use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/ reject articles, recycling and disposal of waste oils.
Systematic title based on use descriptor	ERC 8A; PROC 1, 2, 3, 4, 5, 8A, 8B, 9, 10, 11, 13, 17
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 17 - Lubrication at high energy conditions and in partly open process PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure

	PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 17 - Lubrication at high energy conditions and in partly open process
9.89.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.013699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.500 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.7c.v1 - Metal working fluids and rolling oilds: Professional (SU22) - high environmental release
9.89.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure

Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.89.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.6 Contributing Scenario (6) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.9 Contributing Scenario (9) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.10 Contributing Scenario (10) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.11 Contributing Scenario (11) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.12 Contributing Scenario (12) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.13 Contributing Scenario (13) controlling professional worker exposure for PROC 17	

Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Lubrication at high energy conditions and in partly open process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.14 Contributing Scenario (14) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.89.15 Contributing Scenario (15) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.16 Contributing Scenario (16) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.17 Contributing Scenario (17) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.18 Contributing Scenario (18) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.19 Contributing Scenario (19) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.20 Contributing Scenario (20) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.21 Contributing Scenario (21) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.22 Contributing Scenario (22) controlling professional worker exposure for PROC 10	

Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.23 Contributing Scenario (23) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.89.24 Contributing Scenario (24) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.89.25 Contributing Scenario (25) controlling professional worker exposure for PROC 17	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Lubrication at high energy conditions and in partly open process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.90 Scenario 90: Use as a blowing agent, including material transfers, curing, storage and maintenance

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as a blowing agent, including material transfers, curing, storage and maintenance*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.90 ff.

Description of ES 90

Free short title	Use as a blowing agent, including material transfers, curing, storage and maintenance
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 8B, 9, 12
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 12 - Use of blow agents for foam production
9.90.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	166.667 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100

Release fraction to air from process	100 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 4.9.v1 - Blowing agents: Industrial (SU3)
9.90.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.90.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.90.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.90.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.90.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.90.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 12	
Name of contributing scenario	12 - Use of blow agents for foam production
Further specifications	Use of blowing agents in manufactureof foam
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.91 Scenario 91: Use as binders and release agents in industrial settings, including material transfers, mixing, application and disposal

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as binders and release agents in industrial settings, including material transfers, mixing, application and disposal.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.91 ff.

Description of ES 91

Free short title	Use as binders and release agents in industrial settings, including material transfers, mixing, application and disposal
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 6, 7, 8B, 10, 13, 14

Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 6 - Calendering operations PROC 7 - Industrial spraying PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 13 - Treatment of articles by dipping and pouring PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
9.91.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	500 kg/day
Release times per year	100 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	20 %
Release fraction to wastewater from process	0.010 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 4.10a.v1 - Use as binders and release agents: Industrial (SU3)
9.91.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure

Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.91.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.91.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.91.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.91.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 6	
Name of contributing scenario	6 - Calendering operations
Further specifications	Calendering operations
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.91.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.91.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.91.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.91.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.91.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.92 Scenario 92: Use as binders and release agents in professional settings, including material transfers, mixing, application and disposal

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as binders and release agents in professional settings, including material transfers, mixing, application and disposal.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.92 ff.

Description of ES 92

Free short title	Use as binders and release agents in professional settings, including material transfers, mixing, application and disposal
Systematic title based on use descriptor	ERC 8A; PROC 1, 2, 3, 4, 6, 8A, 8B, 10, 11, 14
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 6 - Calendering operations PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 6 - Calendering operations PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
9.92.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year

Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	95 %
Release fraction to wastewater from process	2.5 %
Release fraction to soil from process	2.5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.10b.v1 - Use as binders and release agents: Professional (SU22)
9.92.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure

Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.92.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.6 Contributing Scenario (6) controlling professional worker exposure for PROC 6	
Name of contributing scenario	6 - Calendering operations
Further specifications	Calendering operations
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.9 Contributing Scenario (9) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.10 Contributing Scenario (10) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.11 Contributing Scenario (11) controlling professional worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.12 Contributing Scenario (12) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.13 Contributing Scenario (13) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.14 Contributing Scenario (14) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.15 Contributing Scenario (15) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.92.16 Contributing Scenario (16) controlling professional worker exposure for PROC 6	
Name of contributing scenario	6 - Calendering operations
Further specifications	Calendering operations
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.17 Contributing Scenario (17) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.18 Contributing Scenario (18) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.19 Contributing Scenario (19) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2

Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.20 Contributing Scenario (20) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.92.21 Contributing Scenario (21) controlling professional worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.93 Scenario 93: Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.93 ff.

Description of ES 93

Free short title	Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging.
Systematic title based on use descriptor	ERC 8A; PROC 1, 2, 4, 8A, 8B, 11, 13
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring
9.93.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	90 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	9 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day

Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.11a.v1 - Agrochemical uses: Professional (SU22)
9.93.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.4 Contributing Scenario (4) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.7 Contributing Scenario (7) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.8 Contributing Scenario (8) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.9 Contributing Scenario (9) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure

Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.10 Contributing Scenario (10) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.93.11 Contributing Scenario (11) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.12 Contributing Scenario (12) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.13 Contributing Scenario (13) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.14 Contributing Scenario (14) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.93.15 Contributing Scenario (15) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.94 Scenario 94: Use as an agrochemical excipient for application by manual spraying and aerosols

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as an agrochemical excipient for application by*

manual spraying and aerosols.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.94 ff.

Description of ES 94

Free short title	Use as an agrochemical excipient for application by manual spraying and aerosols
Systematic title based on use descriptor	ERC 8A; PC 12
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.94.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	90 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	9 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.11b.v1 - Agrochemical uses: Consumer (SU21)
9.94.2 Contributing Scenario (2) controlling consumer exposure for PC 12	
Calculation model	Ecetoc TRA
Product subcategory	Lawn and garden preparations
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	5 %
Product ingredient fraction by weight (oral)	5 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	

Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*

9.95 Scenario 95: Application of surface coatings and binders in road and construction activities, including material transfers and procut disposal

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Application of surface coatings and binders in road and construction activities, including material transfers and procut disposal*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.95 ff.

Description of ES 95

Free short title	Application of surface coatings and binders in road and construction activities, including material transfers and procut disposal
Systematic title based on use descriptor	ERC 8D; PROC 8A, 8B, 9, 10, 11, 13
Name of constributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring
9.95.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D	
Operational conditions	

Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	95 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	4 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.15.v1 - Road and Construction applications: Professional (SU22)
9.95.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.95.3 Contributing Scenario (3) controlling professional worker exposure for PROC 8B	

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.95.4 Contributing Scenario (4) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.95.5 Contributing Scenario (5) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.95.6 Contributing Scenario (6) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.95.7 Contributing Scenario (7) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.96 Scenario 96: Manufacture of rubber articles, including processing of raw rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Manufacture of rubber articles, including processing of raw rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.96 ff.

Description of ES 96

Free short title	Manufacture of rubber articles, including processing of raw rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing.
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 5, 6, 7, 8A, 8B, 9, 13, 14, 15, 21
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 6 - Calendering operations PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 13 - Treatment of articles by dipping and pouring PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 15 - Use of laboratory reagents in small scale laboratories PROC 21 - Low energy manipulation of substances in materials and/or articles
9.96.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	166.667 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100

Release fraction to air from process	1 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0.010 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 4.19.v1 - Rubber production and processing: Industrial (SU10)
9.96.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.96.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 6	
Name of contributing scenario	6 - Calendering operations
Further specifications	Calendering operations
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.96.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 21	
Name of contributing scenario	21 - Low energy manipulation of substances in materials and/or articles
Further specifications	Low energy manipulation of substances bound in materials and/or articles
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.97 Scenario 97: Processing of formulated polymers including material

transfers, additives handling, moulding, curing and forming activities, material re-works and associated maintenance.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Processing of formulated polymers including material transfers, additives handling, moulding, curing and forming activities, material re-works and associated maintenance*..

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.97 ff.

Description of ES 97

Free short title	Processing of formulated polymers including material transfers, additives handling, moulding, curing and forming activities, material re-works and associated maintenance.
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 5, 6, 8A, 8B, 9, 13, 14, 21
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 6 - Calendering operations PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 13 - Treatment of articles by dipping and pouring PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 21 - Low energy manipulation of substances in materials and/or articles
9.97.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	166.667 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	2 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

SpERC	ESVOC SpERC 4.21a.v1 - Polymer production: Industrial (SU10)
9.97.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 6	
Name of contributing scenario	6 - Calendering operations
Further specifications	Calendering operations
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.97.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.97.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 21	
Name of contributing scenario	21 - Low energy manipulation of substances in materials and/or articles
Further specifications	Low energy manipulation of substances bound in materials and/or articles
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.98 Scenario 98: Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.98 ff.

Description of ES 98

Free short title	Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.
Systematic title based on use descriptor	ERC 8A; PROC 1, 2, 6, 8A, 8B, 14, 21
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 6 - Calendering operations PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 21 - Low energy manipulation of substances in materials and/or articles PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 6 - Calendering operations PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 21 - Low energy manipulation of substances in materials and/or articles
9.98.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10

Local marine water dilution factor	100
Release fraction to air from process	98 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	1 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.21b.v1 - Polymer production: Professional (SU22)
9.98.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.4 Contributing Scenario (4) controlling professional worker exposure for PROC 6	
Name of contributing scenario	6 - Calendering operations
Further specifications	Calendering operations
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.7 Contributing Scenario (7) controlling professional worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.8 Contributing Scenario (8) controlling professional worker exposure for PROC 21	
Name of contributing scenario	21 - Low energy manipulation of substances in materials and/or articles
Further specifications	Low energy manipulation of substances bound in materials and/or articles
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.9 Contributing Scenario (9) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.10 Contributing Scenario (10) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.11 Contributing Scenario (11) controlling professional worker exposure for PROC 6	
Name of contributing scenario	6 - Calendering operations
Further specifications	Calendering operations
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.12 Contributing Scenario (12) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.13 Contributing Scenario (13) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.14 Contributing Scenario (14) controlling professional worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation

Further specifications	Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.98.15 Contributing Scenario (15) controlling professional worker exposure for PROC 21	
Name of contributing scenario	21 - Low energy manipulation of substances in materials and/or articles
Further specifications	Low energy manipulation of substances bound in materials and/or articles
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,980 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no

9.99 Scenario 99: Use as a fuel including incineration of wastes and use as a solvent in fuel additives, covers refueling and evaporative losses

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as a fuel including incineration of wastes and use as a solvent in fuel additives, covers refueling and evaporative losses*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.99 ff.

Description of ES 99

Free short title	Use as a fuel including incineration of wastes and use as a solvent in fuel additives, covers refueling and evaporative losses
Systematic title based on use descriptor	ERC 7; PROC 1, 2, 3, 8A, 8B, 16
Name of constributing environmental scenario and corresponding ERC	ERC 7 Industrial use of substances in closed systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 16 - Using material as fuel sources, limited exposure to unburned product to be expected
9.99.1 Contributing Scenario (1) controlling environmental exposure for ERC 7	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	166.667 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100

Release fraction to air from process	0.025 %
Release fraction to wastewater from process	0.001 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 7.12a.v1 - Use as a fuel: Industrial (SU3)
9.99.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.99.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.99.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.99.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.99.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.99.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 16	
Name of contributing scenario	16 - Using material as fuel sources, limited exposure to unburned product to be expected
Further specifications	Using material as fuel sources, limited exposure to unburned product to be expected
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.100 Scenario 100: Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.100 ff.

Description of ES 100

Free short title	Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses

Systematic title based on use descriptor	ERC 9A; PROC 1, 2, 3, 8A, 8B, 16
Name of constributing environmental scenario and corresponding ERC	ERC 9a Wide dispersive indoor use of substances in closed systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 16 - Using material as fuel sources, limited exposure to unburned product to be expected PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 16 - Using material as fuel sources, limited exposure to unburned product to be expected
9.100.1 Contributing Scenario (1) controlling environmental exposure for ERC 9A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.010 %
Release fraction to wastewater from process	0.001 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %

STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 9.12b.v1 - Use as a fuel: Professional (SU22)
9.100.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.7 Contributing Scenario (7) controlling professional worker exposure for PROC 16	
Name of contributing scenario	16 - Using material as fuel sources, limited exposure to unburned product to be expected

Further specifications	Using material as fuel sources, limited exposure to unburned product to be expected
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.8 Contributing Scenario (8) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.100.9 Contributing Scenario (9) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.10 Contributing Scenario (10) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.11 Contributing Scenario (11) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.12 Contributing Scenario (12) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.100.13 Contributing Scenario (13) controlling professional worker exposure for PROC 16	
Name of contributing scenario	16 - Using material as fuel sources, limited exposure to unburned product to be expected
Further specifications	Using material as fuel sources, limited exposure to unburned product to be expected
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.101 Scenario 101: Consumer use as a fuel including use as a solvent in fuel additives, covers refueling and evaporative losses

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use as a fuel including use as a solvent in fuel*

additives, covers refueling and evaporative losses.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.101 ff.

Description of ES 101

Free short title	Consumer use as a fuel including use as a solvent in fuel additives, covers refueling and evaporative losses
Systematic title based on use descriptor	ERC 9A; PC 13
Name of constributing environmental scenario and corresponding ERC	ERC 9a Wide dispersive indoor use of substances in closed systems
9.101.1 Contributing Scenario (1) controlling environmental exposure for ERC 9A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.010 %
Release fraction to wastewater from process	0.001 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 9.12c.v1 - Use as a fuel: Consumer (SU21)
9.101.2 Contributing Scenario (2) controlling consumer exposure for PC 13	
Calculation model	Ecetoc TRA
Product subcategory	Liquids
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	5 %
Product ingredient fraction by weight (dermal)	5 %
Amounts used	
Amounts used	5,000 g

Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*

9.102 Scenario 102: Industrial use of formulated lubricants in closed and open systems including transfer operations, operation of engines and similar articles, maintenance and disposal of waste oil

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of formulated lubricants in closed and open systems including transfer operations, operation of engines and similar articles, maintenance and disposal of waste oil*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.102 ff.

Description of ES 102

Free short title	Industrial use of formulated lubricants in closed and open systems including transfer operations, operation of engines and similar articles, maintenance and disposal of waste oil
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 7, 8A, 8B, 9, 10, 13, 17, 18
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7 - Industrial spraying PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 13 - Treatment of articles by dipping and pouring PROC 17 - Lubrication at high energy conditions and in partly open process PROC 18 - Greasing at high energy conditions
9.102.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	2,500 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.003 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0.100 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 4.6a.v1 - Lubricants: Industrial (SU3)
9.102.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.102.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 17	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Lubrication at high energy conditions and in partly open process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.102.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 18	

Name of contributing scenario	18 - Greasing at high energy conditions
Further specifications	Greasing at high energy conditions
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.103 Scenario 103: Professional use of formulated lubricants in closed systems including transfer operations, operation of engines and similar articles, recycling and disposal of waste oil

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional use of formulated lubricants in closed systems including transfer operations, operation of engines and similar articles, recycling and disposal of waste oil*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.103 ff.

Description of ES 103

Free short title	Professional use of formulated lubricants in closed systems including transfer operations, operation of engines and similar articles, recycling and disposal of waste oil
Systematic title based on use descriptor	ERC 9A; PROC 1, 2, 3, 4, 8A, 8B, 9, 10, 11, 13, 17, 18
Name of constributing environmental scenario and corresponding ERC	ERC 9a Wide dispersive indoor use of substances in closed systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 17 - Lubrication at high energy conditions and in partly open process PROC 18 - Greasing at high energy conditions PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring
	PROC 17 - Lubrication at high energy conditions and in partly open process PROC 18 - Greasing at high energy conditions

9.103.1 Contributing Scenario (1) controlling environmental exposure for ERC 9A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	1 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	1 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 9.6b.v1 - Lubricants: Professional (SU22) - low environmental release
9.103.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	

Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.103.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.8 Contributing Scenario (8) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.9 Contributing Scenario (9) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.10 Contributing Scenario (10) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.11 Contributing Scenario (11) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.12 Contributing Scenario (12) controlling professional worker exposure for PROC 17	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Lubrication at high energy conditions and in partly open process

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.13 Contributing Scenario (13) controlling professional worker exposure for PROC 18	
Name of contributing scenario	18 - Greasing at high energy conditions
Further specifications	Greasing at high energy conditions
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.14 Contributing Scenario (14) controlling professional worker exposure for PROC 1	

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.15 Contributing Scenario (15) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.103.16 Contributing Scenario (16) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.17 Contributing Scenario (17) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.18 Contributing Scenario (18) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.19 Contributing Scenario (19) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.20 Contributing Scenario (20) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.21 Contributing Scenario (21) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.22 Contributing Scenario (22) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.23 Contributing Scenario (23) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.24 Contributing Scenario (24) controlling professional worker exposure for PROC 17	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Lubrication at high energy conditions and in partly open process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.103.25 Contributing Scenario (25) controlling professional worker exposure for PROC 18	

Name of contributing scenario	18 - Greasing at high energy conditions
Further specifications	Greasing at high energy conditions
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.104 Scenario 104: Professional use of formulated lubricants in open systems including transfer operations, operation of engines and similar articles, recycling and disposal of waste oil

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional use of formulated lubricants in open systems including transfer operations, operation of engines and similar articles, recycling and disposal of waste oil*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.104 ff.

Description of ES 104

Free short title	Professional use of formulated lubricants in open systems including transfer operations, operation of engines and similar articles, recycling and disposal of waste oil
Systematic title based on use descriptor	ERC 8A; PROC 1, 2, 3, 4, 8A, 8B, 9, 10, 11, 13, 17, 18
Name of contributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring PROC 17 - Lubrication at high energy conditions and in partly open process PROC 18 - Greasing at high energy conditions PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring

	PROC 17 - Lubrication at high energy conditions and in partly open process PROC 18 - Greasing at high energy conditions
9.104.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.013699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.500 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.6c.v1 - Lubricants: Professional (SU22) - high environmental release
9.104.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.8 Contributing Scenario (8) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.9 Contributing Scenario (9) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.10 Contributing Scenario (10) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying

Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.11 Contributing Scenario (11) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.104.12 Contributing Scenario (12) controlling professional worker exposure for PROC 17	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Lubrication at high energy conditions and in partly open process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.13 Contributing Scenario (13) controlling professional worker exposure for PROC 18	
Name of contributing scenario	18 - Greasing at high energy conditions
Further specifications	Greasing at high energy conditions
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.14 Contributing Scenario (14) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.15 Contributing Scenario (15) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors

Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.16 Contributing Scenario (16) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.17 Contributing Scenario (17) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.18 Contributing Scenario (18) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.19 Contributing Scenario (19) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.20 Contributing Scenario (20) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.21 Contributing Scenario (21) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing

Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.22 Contributing Scenario (22) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.104.23 Contributing Scenario (23) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.24 Contributing Scenario (24) controlling professional worker exposure for PROC 17	
Name of contributing scenario	17 - Lubrication at high energy conditions and in partly open process
Further specifications	Lubrication at high energy conditions and in partly open process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.104.25 Contributing Scenario (25) controlling professional worker exposure for PROC 18	
Name of contributing scenario	18 - Greasing at high energy conditions
Further specifications	Greasing at high energy conditions
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.105 Scenario 105: Consumer use of formulated lubricants in closed systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of formulated lubricants in closed systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.105 ff.

Description of ES 105

Free short title	Consumer use of formulated lubricants in closed systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil.
Systematic title based on use descriptor	ERC 9A; PC 1, 24, 31
Name of constributing environmental scenario and corresponding ERC	ERC 9a Wide dispersive indoor use of substances in closed systems
9.105.1 Contributing Scenario (1) controlling environmental exposure for ERC 9A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.013699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	1 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	1 %
Fraction tonnage to region	10 %
Fraction used at main source	0.100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 9.6d.v1 - Lubricants: Consumer (SU21) - low environmental release
9.105.2 Contributing Scenario (2) controlling consumer exposure for PC 1	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	30 %
Product ingredient fraction by weight (dermal)	30 %
Amounts used	
Amounts used	255 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-

Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.105.3 Contributing Scenario (3) controlling consumer exposure for PC 24	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	50 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.105.4 Contributing Scenario (4) controlling consumer exposure for PC 31	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	50 %
Amounts used	

Amounts used	135 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*

9.106 Scenario 106: Consumer use of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.106 ff.

Description of ES 106

Free short title	Consumer use of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil.
Systematic title based on use descriptor	ERC 8A; PC 1, 24, 31
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.106.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.013699 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.500 %

Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.6e.v1 - Lubricants: Consumer (SU21) - high environmental release
9.106.2 Contributing Scenario (2) controlling consumer exposure for PC 1	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	30 %
Product ingredient fraction by weight (dermal)	30 %
Amounts used	
Amounts used	255 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.106.3 Contributing Scenario (3) controlling consumer exposure for PC 24	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no

Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	50 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*
9.106.4 Contributing Scenario (4) controlling consumer exposure for PC 31	
Calculation model	Ecetoc TRA
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	50 %
Product ingredient fraction by weight (dermal)	50 %
Amounts used	
Amounts used	135 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
Saturated vapour concentration	100 % *(justification: The Saturated vapour concentration (SVC) at 20°C amounts to 1.33 mg/m3 which is far below the DNEL. Hence, the risk is considered negligible via this route.* *SVC = VP/(8.31/MW*293))*

9.107 Scenario 107: De-icing of vehicles, aircraft and other equipment by spraying

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *De-icing of vehicles, aircraft and other equipment by spraying*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.107 ff.

Description of ES 107

Free short title	De-icing of vehicles, aircraft and other equipment by spraying
Systematic title based on use descriptor	ERC 8D; PROC 1, 2, 8A, 8B, 11
Name of constributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 11 - Non industrial spraying
9.107.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	95 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	4 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

SpERC	ESVOC SpERC 8.14a.v1 - De-icing applications: Professional (SU22)
9.107.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.107.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.107.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.107.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.107.6 Contributing Scenario (6) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.108 Scenario 108: De-icing of vehicles and similar equipment by spraying

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.

The following scenarios contribute to the scenario *De-icing of vehicles and similar equipment by spraying*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.108 ff.

Description of ES 108

Free short title	De-icing of vehicles and similar equipment by spraying
Systematic title based on use descriptor	ERC 8D
Name of constributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems
9.108.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	90 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.14b.v1 - De-icing applications: Consumer (SU21)

9.109 Scenario 109: Use of substances within Laboratory settings, Including material transfer and equipment cleaning

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use of substances within Laboratory settings, Including material transfer and equipment cleaning*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.109 ff.

Description of ES 109

Free short title	Use of substances within Laboratory settings, Including material transfer and equipment cleaning
Systematic title based on use descriptor	ERC 2; PROC 10, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 10 - Roller application or brushing PROC 15 - Use of laboratory reagents in small scale laboratories
9.109.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	20 to/year
Daily amount used at site	2,000 kg/day
Release times per year	10 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	2.5 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0.010 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.109.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.109.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.110 Scenario 110: Use of substances within Laboratory settings, within enclosed or contained systems, including incidental exposures during material transfers and equipment cleaning

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use of substances within Laboratory settings, within enclosed or contained systems, including incidental exposures during material transfers and equipment cleaning.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.110 ff.

Description of ES 110

Free short title	Use of substances within Laboratory settings, within enclosed or contained systems, including incidental exposures during material transfers and equipment cleaning
Systematic title based on use descriptor	ERC 2; PROC 10, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 10 - Roller application or brushing PROC 15 - Use of laboratory reagents in small scale laboratories
9.110.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	20 to/year
Daily amount used at site	2,000 kg/day
Release times per year	10 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	2.5 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0.010 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.110.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.110.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.111 Scenario 111: Use of small quantities within laboratory settings

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use of small quantities within laboratory settings.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.111 ff.

Description of ES 111

Free short title	Use of small quantities within laboratory settings

Systematic title based on use descriptor	ERC 8A; PROC 10, 15
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 10 - Roller application or brushing PROC 15 - Use of laboratory reagents in small scale laboratories
9.111.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	50 %
Release fraction to wastewater from process	50 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.17.v1 - Laboratory reagents: Professional (SU22)
9.111.2 Contributing Scenario (2) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.111.3 Contributing Scenario (3) controlling professional worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Use as laboratory reagent
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.112 Scenario 112: Use of the substance in extraction processes at mining operations, including material transfers, winning and separation activities, and substance recovery and disposal.

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use of the substance in extraction processes at mining operations, including material transfers, winning and separation activities, and substance recovery and disposal.*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.112 ff.

Description of ES 112

Free short title	Use of the substance in extraction processes at mining operations, including material transfers, winning and separation activities, and substance recovery and disposal.
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 5, 8A, 8B, 9
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line)

9.112.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	2 to/year
Daily amount used at site	100 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	50 %
Release fraction to soil from process	5 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	

SpERC	ESVOC SpERC 4.23.v1 - Mining Chemicals: Industrial (SU10)
9.112.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.112.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.112.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.112.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.112.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.112.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.112.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.112.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)

Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.113 Scenario 113: Use of the substance for the treatment of water at industrial facilities in open and closed systems

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use of the substance for the treatment of water at industrial facilities in open and closed systems*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.113 ff.

Description of ES 113

Free short title	Use of the substance for the treatment of water at industrial facilities in open and closed systems
Systematic title based on use descriptor	ERC 4; PROC 1, 2, 3, 4, 8A, 8B, 13
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 13 - Treatment of articles by dipping and pouring
9.113.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	10 to/year
Daily amount used at site	33.333 kg/day
Release times per year	300 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	95 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 3.22a.v1 - Water treatment chemicals: Industrial (SU10)
9.113.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.113.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.113.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.113.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.113.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A	

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.113.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.113.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.114 Scenario 114: Use of the substance for the treatment of water in open and closed systems

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use of the substance for the treatment of water in open and closed systems.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.114 ff.

Description of ES 114

Free short title	Use of the substance for the treatment of water in open and closed systems
Systematic title based on use descriptor	ERC 8F; PROC 1, 2, 3, 4, 8A, 8B, 13
Name of constributing environmental scenario and corresponding ERC	ERC 8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 13 - Treatment of articles by dipping and pouring
9.114.1 Contributing Scenario (1) controlling environmental exposure for ERC 8F	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	4 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	1 %
Release fraction to wastewater from process	99 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	29.2 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.22b.v1 - Water treatment chemicals: Professional (SU22)
9.114.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.114.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.114.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	

Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.114.5 Contributing Scenario (5) controlling professional worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.114.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.114.7 Contributing Scenario (7) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.114.8 Contributing Scenario (8) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping andpouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.115 Scenario 115: Consumer use of the substance for the treatment of water in open and closed systems

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer use of the substance for the treatment of water in open and closed systems.*

The corresponding release to the environment, exposure of workers and consumers resulting from these

contributing scenarios is summarized in chapter 10.115 ff.

Description of ES 115

Free short title	Consumer use of the substance for the treatment of water in open and closed systems
Systematic title based on use descriptor	ERC 8F
Name of constributing environmental scenario and corresponding ERC	ERC 8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix
9.115.1 Contributing Scenario (1) controlling environmental exposure for ERC 8F	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	4 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	1 %
Release fraction to wastewater from process	99 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	29.2 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.22c.v1 - Water treatment chemicals: Consumer (SU21)

9.116 Scenario 116: Covers exposure arising from the manufacturing and use of slurry explosives

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Covers exposure arising from the manufacturing and use of slurry explosives*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.116 ff.

Description of ES 116

Free short title	Covers exposure arising from the manufacturing and use of slurry explosives

Systematic title based on use descriptor	ERC 8E; PROC 1, 3, 5, 8A, 8B
Name of constributing environmental scenario and corresponding ERC	ERC 8e Wide dispersive outdoor use of reactive substances in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.116.1 Contributing Scenario (1) controlling environmental exposure for ERC 8E	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.027397 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.100 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	1 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.116.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.116.3 Contributing Scenario (3) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.116.4 Contributing Scenario (4) controlling professional worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations* and ar-ticles (multistage and/or significant con-tact)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.116.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.116.6 Contributing Scenario (6) controlling professional worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.117 Scenario 117: Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment including maintenance and related material transfers

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment including maintenance and related material transfers*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.117 ff.

Description of ES 117

Free short title	Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment including maintenance and related material transfers
Systematic title based on use descriptor	ERC 7; PROC 1, 2, 3, 4, 8A, 8B, 9
Name of constributing environmental scenario and corresponding ERC	ERC 7 Industrial use of substances in closed systems

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line)
9.117.1 Contributing Scenario (1) controlling environmental exposure for ERC 7	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	500 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.010 %
Release fraction to wastewater from process	0.100 %
Release fraction to soil from process	0.100 %
Fraction tonnage to region	100 %
Fraction used at main source	20 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 7.13a.v1 - Functional Fluids: Industrial (SU3)
9.117.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.117.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.117.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.117.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Use in batch and other process (syn-thesis) where opportunity for exposure arises
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.117.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8A	

Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.117.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at dedicated facili-ties
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.117.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.118 Scenario 118: Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment including maintenance

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment including maintenance.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.118 ff.

Description of ES 118

Free short title	Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment including maintenance
Systematic title based on use descriptor	ERC 9A; PROC 1, 2, 3, 8A, 9, 20
Name of constributing environmental scenario and corresponding ERC	ERC 9a Wide dispersive indoor use of substances in closed systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 20 - Heat and pressure transfer fluids (closed systems) in dispersive use PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 20 - Heat and pressure transfer fluids (closed systems) in dispersive use
9.118.1 Contributing Scenario (1) controlling environmental exposure for ERC 9A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	2.5 %

Release fraction to soil from process	2.5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 9.13b.v1 - Functional Fluids: Professional (SU22)
9.118.2 Contributing Scenario (2) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.5 Contributing Scenario (5) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.6 Contributing Scenario (6) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.7 Contributing Scenario (7) controlling professional worker exposure for PROC 20	

Name of contributing scenario	20 - Heat and pressure transfer fluids (closed systems) in dispersive use
Further specifications	Heat and pressure transfer fluids in dispersive, professional use but closed systems
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.8 Contributing Scenario (8) controlling professional worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Use in closed process, no likelihood of exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.118.9 Contributing Scenario (9) controlling professional worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Use in closed, continuous process with occasional controlled exposure
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.10 Contributing Scenario (10) controlling professional worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.11 Contributing Scenario (11) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.12 Contributing Scenario (12) controlling professional worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.118.13 Contributing Scenario (13) controlling professional worker exposure for PROC 20	
Name of contributing scenario	20 - Heat and pressure transfer fluids (closed systems) in dispersive use
Further specifications	Heat and pressure transfer fluids in dispersive, professional use but closed systems
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.119 Scenario 119: Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be

subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.119 ff.

Description of ES 119

Free short title	Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids
Systematic title based on use descriptor	ERC 9A
Name of constributing environmental scenario and corresponding ERC	ERC 9a Wide dispersive indoor use of substances in closed systems
9.119.1 Contributing Scenario (1) controlling environmental exposure for ERC 9A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	2.5 %
Release fraction to soil from process	2.5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 9.13c.v1 - Functional Fluids: Consumer (SU21)

9.120 Scenario 120: Other Consumer Uses: Consumer

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Other Consumer Uses: Consumer*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.120 ff.

Description of ES 120

Free short title	Other Consumer Uses: Consumer
Systematic title based on use descriptor	ERC 8A
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.120.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	0.006849 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	95 %
Release fraction to wastewater from process	2.5 %
Release fraction to soil from process	2.5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.050 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ESVOC SpERC 8.16.v1 - Other Consumer Uses: Consumer (SU21)

9.121 Scenario 121: Co-formulants used in crop protection products (seed treatments and granules, Outdoor).

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Co-formulants used in crop protection products (seed treatments and granules, Outdoor).*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.121 ff.

Description of ES 121

Free short title	Co-formulants used in crop protection products (seed treatments and granules, Outdoor).
Systematic title based on use descriptor	ERC 8A
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems

9.121.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	100 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ECPA SPERC 8d.1.v1 - Co-formulants used in crop protection products (seed treatments and granules). Application / Service Life. Please see ECPA website (www.ecpa.eu/information-page/regulatory-affairs/reach) for further details on how to use the SpERC.

9.122 Scenario 122: Co-formulants used in crop protection products (seed treatments and granules, Indoor).

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Co-formulants used in crop protection products (seed treatments and granules, Indoor).*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.122 ff.

Description of ES 122

Free short title	Co-formulants used in crop protection products (seed treatments and granules, Indoor).
Systematic title based on use descriptor	ERC 8D
Name of constributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems
9.122.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D	
Operational conditions	

Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	100 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ECPA SPERC 8d.1.v1 - Co-formulants used in crop protection products (seed treatments and granules). Application / Service Life. Please see ECPA website (www.ecpa.eu/information-page/regulatory-affairs/reach) for further details on how to use the SpERC.

9.123 Scenario 123: Co-formulants used in crop protection products (sprays, Outdoor).

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Co-formulants used in crop protection products (sprays, Outdoor).*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.123 ff.

Description of ES 123

Free short title	Co-formulants used in crop protection products (sprays, Outdoor).
Systematic title based on use descriptor	ERC 8A
Name of constributing environmental scenario and corresponding ERC	ERC 8a Wide dispersive indoor use of processing aids in open systems
9.123.1 Contributing Scenario (1) controlling environmental exposure for ERC 8A	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day

Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	50 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	50 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ECPA SPERC 8d.2.v2 - Co-formulants used in crop protection products (sprays). Application / Service Life. Releases dependent on co-formulant vapour pressure. Please see ECPA website (www.ecpa.eu/information-page/regulatory-affairs/reach) for further details on how to use the SpERC.

9.124 Scenario 124: Co-formulants used in crop protection products (sprays, Indoor).

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Co-formulants used in crop protection products (sprays, Indoor).*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.124 ff.

Description of ES 124

Free short title	Co-formulants used in crop protection products (sprays, Indoor).
Systematic title based on use descriptor	ERC 8D
Name of constributing environmental scenario and corresponding ERC	ERC 8d Wide dispersive outdoor use of processing aids in open systems
9.124.1 Contributing Scenario (1) controlling environmental exposure for ERC 8D	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year

Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	50 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	50 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ECPA SPERC 8d.2.v2 - Co-formulants used in crop protection products (sprays). Application / Service Life. Releases dependent on co-formulant vapour pressure. Please see ECPA website (www.ecpa.eu/information-page/regulatory-affairs/reach) for further details on how to use the SpERC.

9.125 Scenario 125: Applying treatment to seed (on-farm, Outdoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Applying treatment to seed (on-farm, Outdoor)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.125 ff.

Description of ES 125

Free short title	Applying treatment to seed (on-farm, Outdoor)
Systematic title based on use descriptor	ERC 8C
Name of constributing environmental scenario and corresponding ERC	ERC 8c Wide dispersive indoor use resulting in inclusion into or onto a matrix
9.125.1 Contributing Scenario (1) controlling environmental exposure for ERC 8C	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	15 %
Release fraction to wastewater from process	0 %

Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ECPA-Applying treatment to seed (Applying treatmeant to seed)
Conduct seed treatment in bunded areas. Do not allow emission of liquid waste to drains or surface water	yes
RMM effectivity	soil0 %

9.126 Scenario 126: Applying treatment to seed (on-farm, Indoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Applying treatment to seed (on-farm, Indoor).*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.126 ff.

Description of ES 126

Free short title	Applying treatment to seed (on-farm, Indoor)
Systematic title based on use descriptor	ERC 8F
Name of constributing environmental scenario and corresponding ERC	ERC 8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix
9.126.1 Contributing Scenario (1) controlling environmental exposure for ERC 8F	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	15 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %

STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	ECPA-Applying treatment to seed (Applying treatmeant to seed)
Conduct seed treatment in bunded areas. Do not allow emission of liquid waste to drains or surface water	yes
RMM effectivity	soil0 %

9.127 Scenario 127: Non-Volatile substances for the Formulation of Construction Chemicals

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Non-Volatile substances for the Formulation of Construction Chemicals.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.127 ff.

Description of ES 127

Free short title	Non-Volatile substances for the Formulation of Construction Chemicals
Systematic title based on use descriptor	ERC 2; PROC 3, 5, 8B, 9
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line)
9.127.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	100 to/year

Daily amount used at site	454.545 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	0.500 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	EFCC SPERC 2.1c.v1 - Non-Volatile substances for the Formulation of Construction Chemicals.
9.127.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Use in closed batch process (synthesis or formulation).
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.127.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)

Further specifications	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.127.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	yes (inhalation 90 %)

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.127.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	240 min/day *(justification: Imported Scenario settings from file: EFCC_Kondensierte_Szenarien_20072010-Solids.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.127.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer of substance or preparation into small containers (dedicated filling line, including weighing).
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	240 min/day *(justification: Imported Scenario settings from file: EFCC_Kondensierte_Szenarien_20072010-Solids.xls)*

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.128 Scenario 128: Industrial use of non-volatile substances in Construction Chemicals

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Industrial use of non-volatile substances in Construction Chemicals*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.128 ff.

Description of ES 128

Free short title	Industrial use of non-volatile substances in Construction Chemicals
Systematic title based on use descriptor	ERC 5; PROC 7, 8B, 10, 13, 14
Name of constributing environmental scenario and corresponding ERC	ERC 5 Industrial use resulting in inclusion into or onto a matrix
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 7 - Industrial spraying PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 10 - Roller application or brushing PROC 13 - Treatment of articles by dipping and pouring PROC 14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
9.128.1 Contributing Scenario (1) controlling environmental exposure for ERC 5	
Operational conditions	
Annual site tonnage	100 to/year

Daily amount used at site	454.545 kg/day
Release times per year	220 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	1.7 %
Release fraction to wastewater from process	0 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	EFCC SPERC 5.1a.v1 - Industrial use of non-volatile substances in Construction Chemicals.
9.128.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Industrial spraying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	95 %
9.128.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

Further specifications	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	240 min/day *(justification: Imported Scenario settings from file: EFCC_Kondensierte_Szenarien_20072010-Solids.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.128.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.128.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping and pouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.128.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 14	
Name of contributing scenario	14 - Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Further specifications	Production of preparation or articles by tabletting, compression, extrusion, pelettisation.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no

9.129 Scenario 129: Wide dispersive use of non-volatile substances in Construction Chemicals, indoor

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Wide dispersive use of non-volatile substances in Construction Chemicals, indoor*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.129 ff.

Description of ES 129

Free short title	Wide dispersive use of non-volatile substances in Construction Chemicals, indoor
Systematic title based on use descriptor	ERC 8C; PROC 8A, 10, 11, 13; PC 1, 9a, 9b
Name of constributing environmental scenario and corresponding ERC	ERC 8c Wide dispersive indoor use resulting in inclusion into or onto a matrix
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring
9.129.1 Contributing Scenario (1) controlling environmental exposure for ERC 8C	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %

Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	EFCC SPERC 8C.1a.v1 - Wide dispersive use of non-volatile substances in Construction Chemicals, indoor.
9.129.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	240 min/day *(justification: Imported Scenario settings from file: EFCC_Kondensierte_Szenarien_20072010-Solids.xls)*
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.129.3 Contributing Scenario (3) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.129.4 Contributing Scenario (4) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	95 %
9.129.5 Contributing Scenario (5) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping and pouring
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.129.6 Contributing Scenario (6) controlling consumer exposure for PC 1	
Calculation model	Ecetoc TRA
Product subcategory	Glue from spray
Frequency and duration of use	
Frequency of use	12 times/year *(justification: ConsExpo assumption (12 times per year))*
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	255 g
Human factors not influenced by risk management	
Skin surface area dermal	fingertips
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.129.7 Contributing Scenario (7) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Aerosol spray can
Frequency and duration of use	

Frequency of use	2 times/year *(justification: ConsExpo assumption (2 times per year))*
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	-
Skin surface area oral	-
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.129.8 Contributing Scenario (8) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.130 Scenario 130: Wide dispersive use of non-volatile substances in Construction Chemicals, outdoor

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Wide dispersive use of non-volatile substances in Construction Chemicals, outdoor*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.130 ff.

Description of ES 130

Free short title	Wide dispersive use of non-volatile substances in Construction Chemicals, outdoor
Systematic title based on use descriptor	ERC 8F; PROC 10, 11, 13; PC 1, 9a, 9b
Name of constributing environmental scenario and corresponding ERC	ERC 8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 10 - Roller application or brushing PROC 11 - Non industrial spraying PROC 13 - Treatment of articles by dipping and pouring
9.130.1 Contributing Scenario (1) controlling environmental exposure for ERC 8F	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0 %
Release fraction to wastewater from process	1 %
Release fraction to soil from process	3.7 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
SpERC	EFCC SPERC 8F.1a.v1 - Wide dispersive use of non-volatile substances in Construction Chemicals, outdoor.
9.130.2 Contributing Scenario (2) controlling professional worker exposure for PROC 10	
Name of contributing scenario	10 - Roller application or brushing
Further specifications	Roller application or brushing.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.130.3 Contributing Scenario (3) controlling professional worker exposure for PROC 11	
Name of contributing scenario	11 - Non industrial spraying
Further specifications	Non industrial spraying.
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	95 %
9.130.4 Contributing Scenario (4) controlling professional worker exposure for PROC 13	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Treatment of articles by dipping and pouring
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	outdoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	Gloves APF 5 80 %
Respiratory protection	no
9.130.5 Contributing Scenario (5) controlling consumer exposure for PC 1	
Calculation model	Ecetoc TRA
Product subcategory	Glue from spray
Frequency and duration of use	
Frequency of use	12 times/year *(justification: ConsExpo assumption (12 times per year))*
Exposure time	4 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	255 g
Human factors not influenced by risk management	
Skin surface area dermal	fingertips
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.130.6 Contributing Scenario (6) controlling consumer exposure for PC 9a	
Calculation model	Ecetoc TRA
Product subcategory	Aerosol spray can

Frequency and duration of use	
Frequency of use	2 times/year *(justification: ConsExpo assumption (2 times per year))*
Exposure time	0.330 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Amounts used	
Amounts used	300 g
Human factors not influenced by risk management	
Skin surface area dermal	-
Skin surface area oral	-
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3
9.130.7 Contributing Scenario (7) controlling consumer exposure for PC 9b	
Calculation model	Ecetoc TRA
Product subcategory	Plasters and floor equalizers
Frequency and duration of use	
Frequency of use	1 times/year *(justification: ConsExpo assumption (0.5 times per year))*
Exposure time	2 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	2.50E4 g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.131 Scenario 131: Service Life of Construction Chemicals (Indoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Service Life of Construction Chemicals (Indoor)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.131 ff.

Description of ES 131

Free short title	Service Life of Construction Chemicals (Indoor) (EFCC
Systematic title based on use descriptor	ERC 11A; AC 13
Name of constributing environmental scenario and corresponding ERC	ERC 11a Wide dispersive indoor use of longlife articles and materials with low release
9.131.1 Contributing Scenario (1) controlling environmental exposure for ERC 11A	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.050 %
Release fraction to wastewater from process	0.050 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.131.2 Contributing Scenario (2) controlling consumer exposure for AC 13	
Calculation model	Ecetoc TRA
Article subcategory	Plastic, larger articles (plastic chair, PVC-flooring, lawn mower, PC)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	8 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	

Amounts used	8,000 g
Human factors not influenced by risk management	
Skin surface area dermal	upper part of the body
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.132 Scenario 132: Service Life of Construction Chemicals (Outdoor)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Service Life of Construction Chemicals (Outdoor)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.132 ff.

Description of ES 132

Free short title	Service Life of Construction Chemicals (Outdoor)
Systematic title based on use descriptor	ERC 10A; AC 13
Name of constributing environmental scenario and corresponding ERC	ERC 10a Wide dispersive outdoor use of long-life articles and materials with low release
9.132.1 Contributing Scenario (1) controlling environmental exposure for ERC 10A	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.050 %
Release fraction to wastewater from process	3.2 %
Release fraction to soil from process	3.2 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.132.2 Contributing Scenario (2) controlling consumer exposure for AC 13	

Calculation model	Ecetoc TRA
Article subcategory	Plastic, larger articles (plastic chair, PVC-flooring, lawn mower, PC)
Frequency and duration of use	
Frequency of use	1 time(s)/day
Exposure time	8 h
Product characteristics	
Spray application	no
Product ingredient fraction by weight (inhalation)	20 %
Product ingredient fraction by weight (dermal)	20 %
Amounts used	
Amounts used	8,000 g
Human factors not influenced by risk management	
Skin surface area dermal	upper part of the body
Skin surface area oral	-
Tranfer factor dermal	100 %
Other given operational conditions affecting consumers exposure	
Room volume	20 m^3

9.133 Scenario 133: Manufacturing / Formulation of Fertilizers

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Manufacturing / Formulation of Fertilizers*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.133 ff.

Description of ES 133

Free short title	Manufacturing / Formulation of Fertilizers
Systematic title based on use descriptor	ERC 2; PROC 5, 2, 3, 9, 8B, 13, 1; PC 12
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 13 - Treatment of articles by dipping and pouring PROC 13 - Treatment of articles by dipping and pouring PROC 1 - Use in closed process, no likelihood of exposure PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 2 - Use in closed, continuous process with occasional controlled exposure
9.133.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	60 to/year
Daily amount used at site	6,000 kg/day
Release times per year	10 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	2.5 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0.010 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %

STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.133.2 Contributing Scenario (2) controlling professional worker exposure for PROC 5 (PC 12)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Solid Fertilizers NPK/PK/NP/Straights/phosphate fertilizer/potassium fertilizer: Blending of fertilizer and other compounds as compost and substrates and pesticides
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2 (PC 12)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Solid Fertilizers NPK/PK/NP/Straights/phosphate fertilizer/potassium fertilizer: Blending of fertilizer and other compounds as compost and substrates and pesticides
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.4 Contributing Scenario (4) controlling professional worker exposure for PROC 3 (PC 12)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Solid Fertilizers NPK/PK/NP/Straights/phosphate fertilizer/potassium fertilizer: Blending of fertilizer and other compounds as compost and substrates and pesticides
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.5 Contributing Scenario (5) controlling professional worker exposure for PROC 9 (PC 12)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Solid Fertilizers NPK/PK/NP/Straights/phosphate fertilizer/potassium fertilizer: Packaging of fertilizer
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.6 Contributing Scenario (6) controlling professional worker exposure for PROC 5 (PC 12)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Soluble liquid or solid fertilizer or suspension fertilizer: Dilution or suspension
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 8B (PC 12)	

Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer loading/unloading of liquid and solid fertilizers: Loading / unloading
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.8 Contributing Scenario (8) controlling professional worker exposure for PROC 8B (PC 12)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Transfer loading/unloading of liquid and solid fertilizers: Loading / unloading
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 9 (PC 12)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer loading/unloading of liquid and solid fertilizers: Loading / unloading
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.10 Contributing Scenario (10) controlling professional worker exposure for PROC 9 (PC 12)	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Transfer loading/unloading of liquid and solid fertilizers: Loading / unloading
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 13 (PC 12)	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Seed treatment: Treating or coating of seed with Fertilizer
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.12 Contributing Scenario (12) controlling professional worker exposure for PROC 13 (PC 12)	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Seed treatment: Treating or coating of seed with Fertilizer
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 1 (PC 19)	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Manufacturing of mineral fertilizers, including maintenance or cleaning (Intermediates): Manufacturing of solid or liquid mineral fertilizers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 5 (PC 12)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Manufacturing of mineral fertilizers, including maintenance or cleaning: Adding micronutrients and/or additives (anti-caking, fillers, coatings, colouring agent …) in solidor liquid fertilizers
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 2 (PC 12)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Manufacturing of mineral fertilizers, including maintenance or cleaning (Intermediates): Adding micronutrients and/or additives (anti-caking, fillers, coatings, colouring agent …) in solid or liquid fertilizers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.133.16 Contributing Scenario (16) controlling consumer exposure for PC 12	

Calculation model	Ecetoc TRA
Product subcategory	Lawn and garden preparations
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	50 %
Product ingredient fraction by weight (oral)	50 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-

9.134 Scenario 134: Manufacturing / Formulation of Fertilizers (Intermediates)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Manufacturing / Formulation of Fertilizers (Intermediates)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.134 ff.

Description of ES 134

Free short title	Manufacturing / Formulation of Fertilizers (Intermediates)
Systematic title based on use descriptor	ERC 6A; PROC 2, 3, 5
Name of constributing environmental scenario and corresponding ERC	ERC 6a Industrial use of intermediates

Name(s) of contributing worker scenarios and corresponding PROCs	PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact)
9.134.1 Contributing Scenario (1) controlling environmental exposure for ERC 6A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	2,500 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0.100 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.134.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 2 (PC 19)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Manufacturing of mineral fertilizers, including maintenance or cleaning (Intermediates): Manufacturing of solid or liquid mineral fertilizers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.134.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 3 (PC 19)	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Manufacturing of mineral fertilizers, including maintenance or cleaning (Intermediates): Manufacturing of solid or liquid mineral fertilizers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.134.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 5 (PC 12)	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Manufacturing of mineral fertilizers, including maintenance or cleaning: Manufacturing of solid or liquid or suspension mineral fertilizers
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.135 Scenario 135: Professional Use of Fertilizers (Outdoor, Open System)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Fertilizers (Outdoor, Open System)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.135 ff.

Description of ES 135

Free short title	Professional Use of Fertilizers (Outdoor, Open System)
Systematic title based on use descriptor	ERC 8E; PROC 8A, 13
Name of constributing environmental scenario and corresponding ERC	ERC 8e Wide dispersive outdoor use of reactive substances in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 13 - Treatment of articles by dipping and pouring PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
9.135.1 Contributing Scenario (1) controlling environmental exposure for ERC 8E	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.100 %

Release fraction to wastewater from process	2 %
Release fraction to soil from process	1 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.135.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8A (PC 12)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Solid Fertilizers NPK/PK/NP/Straights/phosphate fertilizer/potassium fertilizer: Surface spreading or incorporation at open field and /or forest fertilization. Fertilization of amenity (parks, public lawns, sport fields, golf courses)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.135.3 Contributing Scenario (3) controlling professional worker exposure for PROC 13 (PC 12)	
Name of contributing scenario	13 - Treatment of articles by dipping and pouring
Further specifications	Liquid fertilizers: Surface spreading or incorporation at open field and /or forest fertilization. Fertilization of amenity (parks, public lawns, sport fields, golf courses)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.135.4 Contributing Scenario (4) controlling professional worker exposure for PROC 8A (PC 12)	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Liquid foliar fertilizers: Leaf spray at open field
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.136 Scenario 136: Professional Use of Fertilizers (Indoor, Open System)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Fertilizers (Indoor, Open System)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.136 ff.

Description of ES 136

Free short title	Professional Use of Fertilizers (Indoor, Open System)
Systematic title based on use descriptor	ERC 8B; PROC 8B
Name of constributing environmental scenario and corresponding ERC	ERC 8b Wide dispersive indoor use of reactive substances in open systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
9.136.1 Contributing Scenario (1) controlling environmental exposure for ERC 8B	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.100 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.136.2 Contributing Scenario (2) controlling professional worker exposure for PROC 8B (PC 12)	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Liquid fertilizers: Greenhouse applications
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.137 Scenario 137: Professional Use of Fertilizers (Outdoor, Closed System)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Professional Use of Fertilizers (Outdoor, Closed System)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.137 ff.

Description of ES 137

Free short title	Professional Use of Fertilizers (Outdoor, Closed System)
Systematic title based on use descriptor	ERC 9B; PROC 2
Name of constributing environmental scenario and corresponding ERC	ERC 9b Wide dispersive outdoor use of substances in closed systems
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure
9.137.1 Contributing Scenario (1) controlling environmental exposure for ERC 9B	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	5 %

Release fraction to soil from process	5 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.137.2 Contributing Scenario (2) controlling professional worker exposure for PROC 2 (PC 12)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Liquid fertilizers: Fertigation at open field
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.137.3 Contributing Scenario (3) controlling professional worker exposure for PROC 2 (PC 12)	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Ammonia gas: Incorporation into soil
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	professional
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.138 Scenario 138: Consumer Use of Fertilizers (Outdoor, Open System)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer Use of Fertilizers (Outdoor, Open System)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.138 ff.

Description of ES 138

Free short title	Consumer Use of Fertilizers (Outdoor, Open System)
Systematic title based on use descriptor	ERC 8E; PC 12
Name of constributing environmental scenario and corresponding ERC	ERC 8e Wide dispersive outdoor use of reactive substances in open systems
9.138.1 Contributing Scenario (1) controlling environmental exposure for ERC 8E	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.100 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	1 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day

Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.138.2 Contributing Scenario (2) controlling consumer exposure for PC 12	
Calculation model	Ecetoc TRA
Product subcategory	Lawn and garden preparations
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	50 %
Product ingredient fraction by weight (oral)	50 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-
9.138.3 Contributing Scenario (3) controlling consumer exposure for PC 12	
Calculation model	Ecetoc TRA
Product subcategory	Lawn and garden preparations
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	50 %
Product ingredient fraction by weight (oral)	50 %
Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-

9.139 Scenario 139: Consumer Use of Fertilizers (Indoor, Open System)

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Consumer Use of Fertilizers (Indoor, Open System)*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.139 ff.

Description of ES 139

Free short title	Consumer Use of Fertilizers (Indoor, Open System)
Systematic title based on use descriptor	ERC 8B; PC 12
Name of constributing environmental scenario and corresponding ERC	ERC 8b Wide dispersive indoor use of reactive substances in open systems
9.139.1 Contributing Scenario (1) controlling environmental exposure for ERC 8B	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	0.054795 kg/day
Release times per year	365 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	0.100 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0 %
Fraction tonnage to region	10 %
Fraction used at main source	0.200 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.139.2 Contributing Scenario (2) controlling consumer exposure for PC 12	
Calculation model	Ecetoc TRA
Product subcategory	Lawn and garden preparations
Frequency and duration of use	
Frequency of use	1 time(s)/day
Product characteristics	
Spray application	no
Product ingredient fraction by weight (dermal)	50 %
Product ingredient fraction by weight (oral)	50 %

Amounts used	
Amounts used	- g
Human factors not influenced by risk management	
Skin surface area dermal	hands
Skin surface area oral	-
Tranfer factor dermal	100 %
Transfer factor ingestion	100 %
Other given operational conditions affecting consumers exposure	
Room volume	-

9.140 Scenario 140: Manufacture of aqueous polymer dispersions and dispersion powders - Formulation of Preparations

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Manufacture of aqueous polymer dispersions and dispersion powders - Formulation of Preparations*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.140 ff.

Description of ES 140

Free short title	Manufacture of aqueous polymer dispersions and dispersion powders - Formulation of Preparations
Systematic title based on use descriptor	ERC 2; PROC 1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15
Name of constributing environmental scenario and corresponding ERC	ERC 2 Formulation of preparations
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of

	exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7 - Industrial spraying PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities

	PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 15 - Use of laboratory reagents in small scale laboratories PROC 1 - Use in closed process, no likelihood of exposure
9.140.1 Contributing Scenario (1) controlling environmental exposure for ERC 2	
Operational conditions	
Annual site tonnage	60 to/year

Daily amount used at site	6,000 kg/day
Release times per year	10 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	2.5 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0.010 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.140.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids via pipeline from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.140.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Raw material assembly and charging: raw material dispensing of liquids or solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - indoor. open batch process (additions)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Blending/emulsifying: closed process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Blending/emulsifying: closed continuous process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Blending/emulsifying: closed batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Blending/emulsifying: batch or other process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)

Further specifications	Blending/emulsifying: open batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Polymerization: mixing, heating,cooling - closed process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.140.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Polymerization: mixing, heating,cooling - closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Polymerization: mixing, heating,cooling - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Polymerization: mixing, heating,cooling - batch or other processes (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Stripping: closed continous process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Stripping: Destillation - closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Mixing, blending, completion: closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Mixing, blending, completion: closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Mixing, blending, completion: batch process (sampling)
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Spray-Drying: Spray-Drying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 4	

Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Manufacturing equipment cleaning: enclosed in situ in workplace or off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Manufacturing equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 1	

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.35 Contributing Scenario (35) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.140.36 Contributing Scenario (36) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: Incineration on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.37 Contributing Scenario (37) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.38 Contributing Scenario (38) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.39 Contributing Scenario (39) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.40 Contributing Scenario (40) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.41 Contributing Scenario (41) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.42 Contributing Scenario (42) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.43 Contributing Scenario (43) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.44 Contributing Scenario (44) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory use: QC & RD laboratory use
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.140.45 Contributing Scenario (45) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure

Further specifications	Storage and delivery of finished products: in bulk and packaged goods, indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.141 Scenario 141: Manufacture of aqueous polymer dispersions and dispersion powders - Use of Processing Aids

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Manufacture of aqueous polymer dispersions and dispersion powders - Use of Processing Aids*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.141 ff.

Description of ES 141

Free short title	Manufacture of aqueous polymer dispersions and dispersion powders - Use of Processing Aids
Systematic title based on use descriptor	ERC 4; PROC 1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15
Name of constributing environmental scenario and corresponding ERC	ERC 4 Industrial use of processing aids
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 4 - Use in batch and other process (synthesis)

	where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7 - Industrial spraying

	PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large

	containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 15 - Use of laboratory reagents in small scale laboratories PROC 1 - Use in closed process, no likelihood of exposure
9.141.1 Contributing Scenario (1) controlling environmental exposure for ERC 4	
Operational conditions	
Annual site tonnage	1 to/year
Daily amount used at site	50 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	100 %
Release fraction to wastewater from process	100 %
Release fraction to soil from process	5 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.141.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids via pipeline from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Raw material assembly and charging: raw material dispensing of liquids or solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - indoor. open batch process (additions)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 1	

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Blending/emulsifying: closed process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Blending/emulsifying: closed continuous process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.141.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Blending/emulsifying: closed batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Blending/emulsifying: batch or other process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Blending/emulsifying: open batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Polymerization: mixing, heating,cooling - closed process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Polymerization: mixing, heating,cooling - closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Polymerization: mixing, heating,cooling - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Polymerization: mixing, heating,cooling - batch or other processes (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure

Further specifications	Stripping: closed continous process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Stripping: Destillation - closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.141.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Mixing, blending, completion: closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Mixing, blending, completion: closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Mixing, blending, completion: batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Spray-Drying: Spray-Drying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Manufacturing equipment cleaning: enclosed in situ in workplace or off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.141.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Manufacturing equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.35 Contributing Scenario (35) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.36 Contributing Scenario (36) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: Incineration on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.37 Contributing Scenario (37) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.38 Contributing Scenario (38) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.39 Contributing Scenario (39) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.40 Contributing Scenario (40) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.41 Contributing Scenario (41) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)

Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.42 Contributing Scenario (42) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.141.43 Contributing Scenario (43) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.44 Contributing Scenario (44) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory use: QC & RD laboratory use
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.141.45 Contributing Scenario (45) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Storage and delivery of finished products: in bulk and packaged goods, indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.142 Scenario 142: Manufacture of aqueous polymer dispersions and dispersion powders - Use of Intermediates

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Manufacture of aqueous polymer dispersions and dispersion powders - Use of Intermediates.*

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.142 ff.

Description of ES 142

Free short title	Manufacture of aqueous polymer dispersions and dispersion powders - Use of Intermediates
Systematic title based on use descriptor	ERC 6A; PROC 1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15
Name of constributing environmental scenario and corresponding ERC	ERC 6a Industrial use of intermediates
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation)

	PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7 - Industrial spraying PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with

	occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 15 - Use of laboratory reagents in small scale laboratories PROC 1 - Use in closed process, no likelihood of exposure
9.142.1 Contributing Scenario (1) controlling environmental exposure for ERC 6A	
Operational conditions	
Annual site tonnage	50 to/year
Daily amount used at site	2,500 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	2 %
Release fraction to soil from process	0.100 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.142.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids via pipeline from bulk storage or packaged goods - indoor and outdoor

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.142.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Raw material assembly and charging: raw material dispensing of liquids or solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - indoor. open batch process (additions)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Blending/emulsifying: closed process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Blending/emulsifying: closed continuous process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Blending/emulsifying: closed batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Blending/emulsifying: batch or other process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Blending/emulsifying: open batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure

Further specifications	Polymerization: mixing, heating,cooling - closed process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Polymerization: mixing, heating,cooling - closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.142.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Polymerization: mixing, heating,cooling - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Polymerization: mixing, heating,cooling - batch or other processes (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Stripping: closed continous process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Stripping: Destillation - closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Mixing, blending, completion: closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Mixing, blending, completion: closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Mixing, blending, completion: batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Spray-Drying: Spray-Drying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.142.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Manufacturing equipment cleaning: enclosed in situ in workplace or off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Manufacturing equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	

Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	

Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.35 Contributing Scenario (35) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)

Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.36 Contributing Scenario (36) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: Incineration on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.142.37 Contributing Scenario (37) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.38 Contributing Scenario (38) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.142.39 Contributing Scenario (39) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.40 Contributing Scenario (40) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.41 Contributing Scenario (41) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.42 Contributing Scenario (42) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.43 Contributing Scenario (43) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.44 Contributing Scenario (44) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory use: QC & RD laboratory use
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.142.45 Contributing Scenario (45) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Storage and delivery of finished products: in bulk and packaged goods, indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.143 Scenario 143: Manufacture of aqueous polymer dispersions and dispersion powders - Use of Monomers

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Manufacture of aqueous polymer dispersions and dispersion powders - Use of Monomers*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.143 ff.

Description of ES 143

Free short title	Manufacture of aqueous polymer dispersions and dispersion powders - Use of Monomers
Systematic title based on use descriptor	ERC 6C; PROC 1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15
Name of constributing environmental scenario and corresponding ERC	ERC 6c Production of plastics
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or

	formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7 - Industrial spraying PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure

	PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 15 - Use of laboratory reagents in small scale laboratories PROC 1 - Use in closed process, no likelihood of exposure
9.143.1 Contributing Scenario (1) controlling environmental exposure for ERC 6C	
Operational conditions	
Annual site tonnage	20 to/year
Daily amount used at site	1,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	5 %
Release fraction to wastewater from process	5 %
Release fraction to soil from process	0 %
Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.143.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	

Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids via pipeline from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Raw material assembly and charging: raw material dispensing of liquids or solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - indoor. open batch process (additions)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %

Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Blending/emulsifying: closed process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Blending/emulsifying: closed continuous process (with sampling)

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Blending/emulsifying: closed batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 4	

Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Blending/emulsifying: batch or other process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Blending/emulsifying: open batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Polymerization: mixing, heating,cooling - closed process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Polymerization: mixing, heating,cooling - closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Polymerization: mixing, heating,cooling - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Polymerization: mixing, heating,cooling - batch or other processes (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Stripping: closed continous process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Stripping: Destillation - closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Mixing, blending, completion: closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Mixing, blending, completion: closed batch process (sampling)

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Mixing, blending, completion: batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 7	

Name of contributing scenario	7 - Industrial spraying
Further specifications	Spray-Drying: Spray-Drying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.143.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Manufacturing equipment cleaning: enclosed in situ in workplace or off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Manufacturing equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.143.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.35 Contributing Scenario (35) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.36 Contributing Scenario (36) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: Incineration on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors

Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.37 Contributing Scenario (37) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.38 Contributing Scenario (38) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2

Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.39 Contributing Scenario (39) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.40 Contributing Scenario (40) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.41 Contributing Scenario (41) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.42 Contributing Scenario (42) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.43 Contributing Scenario (43) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.44 Contributing Scenario (44) controlling industrial worker exposure for PROC 15	

Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory use: QC & RD laboratory use
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.143.45 Contributing Scenario (45) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Storage and delivery of finished products: in bulk and packaged goods, indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no

9.144 Scenario 144: Manufacture of aqueous polymer dispersions and dispersion powders - Use of Process Regulators for Polymerisation

This scenario is described by the following combinations of use descriptors. The corresponding contributing scenarios are described in the respective subchapters.

An overall exposure scenario may be described by a number of contributing scenarios which may be subdivided into environmental exposure, worker exposure and consumer exposure.
The following scenarios contribute to the scenario *Manufacture of aqueous polymer dispersions and dispersion powders - Use of Process Regulators for Polymerisation*.

The corresponding release to the environment, exposure of workers and consumers resulting from these contributing scenarios is summarized in chapter 10.144 ff.

Description of ES 144

Free short title	Manufacture of aqueous polymer dispersions and dispersion powders - Use of Process Regulators for Polymerisation
Systematic title based on use descriptor	ERC 6D; PROC 1, 4, 8A, 8B, 5, 2, 3, 7, 9, 15
Name of constributing environmental scenario and corresponding ERC	ERC 6d Production of resins/rubbers
Name(s) of contributing worker scenarios and corresponding PROCs	PROC 1 - Use in closed process, no likelihood of exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises

	PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 7 - Industrial spraying PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 9 - Transfer of chemicals into small containers (dedicated filling line) PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 1 - Use in closed process, no likelihood of exposure

	PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 1 - Use in closed process, no likelihood of exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 1 - Use in closed process, no likelihood of exposure PROC 1 - Use in closed process, no likelihood of exposure PROC 2 - Use in closed, continuous process with occasional controlled exposure PROC 3 - Use in closed batch process (synthesis or formulation) PROC 4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 - Mixing or blending in batch processes (multistage and/or significant contact) PROC 8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities PROC 8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities PROC 15 - Use of laboratory reagents in small scale laboratories PROC 1 - Use in closed process, no likelihood of exposure
9.144.1 Contributing Scenario (1) controlling environmental exposure for ERC 6D	
Operational conditions	
Annual site tonnage	100 to/year
Daily amount used at site	5,000 kg/day
Release times per year	20 days/year
Local freshwater dilution factor	10
Local marine water dilution factor	100
Release fraction to air from process	35 %
Release fraction to wastewater from process	0.005 %
Release fraction to soil from process	0.025 %

Fraction tonnage to region	100 %
Fraction used at main source	100 %
STP	yes
River flow rate	18000 m^3/day
Municipal sewage treatment plant discharge	2000000 L/day
Risk management measures	
9.144.2 Contributing Scenario (2) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.3 Contributing Scenario (3) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Receipt and storage of raw materials : bulk raw material and packaged goods delivery - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week

Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.4 Contributing Scenario (4) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids via pipeline from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.5 Contributing Scenario (5) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.6 Contributing Scenario (6) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Raw material assembly and charging: raw material dispensing of liquids and solids manually from bulk storage or packaged goods - indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.7 Contributing Scenario (7) controlling industrial worker exposure for PROC 5	

Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Raw material assembly and charging: raw material dispensing of liquids or solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - indoor. open batch process (additions)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.8 Contributing Scenario (8) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Blending/emulsifying: closed process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.9 Contributing Scenario (9) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Blending/emulsifying: closed continuous process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.10 Contributing Scenario (10) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Blending/emulsifying: closed batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.11 Contributing Scenario (11) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Blending/emulsifying: batch or other process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.12 Contributing Scenario (12) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Blending/emulsifying: open batch process (with sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.13 Contributing Scenario (13) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Polymerization: mixing, heating,cooling - closed process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.14 Contributing Scenario (14) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Polymerization: mixing, heating,cooling - closed continuous process (sampling)
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.15 Contributing Scenario (15) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Polymerization: mixing, heating,cooling - closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.16 Contributing Scenario (16) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises

Further specifications	Polymerization: mixing, heating,cooling - batch or other processes (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.17 Contributing Scenario (17) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Stripping: closed continous process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %

Respiratory protection	no
9.144.18 Contributing Scenario (18) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Stripping: Destillation - closed batch process
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.19 Contributing Scenario (19) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Mixing, blending, completion: closed continuous process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	

Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.20 Contributing Scenario (20) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Mixing, blending, completion: closed batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.21 Contributing Scenario (21) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Mixing, blending, completion: batch process (sampling)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	

Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.22 Contributing Scenario (22) controlling industrial worker exposure for PROC 7	
Name of contributing scenario	7 - Industrial spraying
Further specifications	Spray-Drying: Spray-Drying
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	15 mins to 1 hour
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	1,500 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.23 Contributing Scenario (23) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.24 Contributing Scenario (24) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – enclosed dedicated lines
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.25 Contributing Scenario (25) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.26 Contributing Scenario (26) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.27 Contributing Scenario (27) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.28 Contributing Scenario (28) controlling industrial worker exposure for PROC 9	
Name of contributing scenario	9 - Transfer of chemicals into small containers (dedicated filling line)
Further specifications	Filtering and filling: filtration, centrifugation, sieving and filling – batch or other processes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no

9.144.29 Contributing Scenario (29) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Manufacturing equipment cleaning: enclosed in situ in workplace or off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.30 Contributing Scenario (30) controlling industrial worker exposure for PROC 4	
Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Manufacturing equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial

Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.31 Contributing Scenario (31) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.32 Contributing Scenario (32) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.33 Contributing Scenario (33) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Waste management: transfer of wastes to tanks and storage containers: off-line in workplace
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.34 Contributing Scenario (34) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible

Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.35 Contributing Scenario (35) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: storage of waste prior to removal for off-site and/or on-site treatment
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.36 Contributing Scenario (36) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: Incineration on site
Product characteristics	
Physical state	liquid

Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.37 Contributing Scenario (37) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.38 Contributing Scenario (38) controlling industrial worker exposure for PROC 2	
Name of contributing scenario	2 - Use in closed, continuous process with occasional controlled exposure
Further specifications	Waste management: waste water treatment on site

Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.39 Contributing Scenario (39) controlling industrial worker exposure for PROC 3	
Name of contributing scenario	3 - Use in closed batch process (synthesis or formulation)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.40 Contributing Scenario (40) controlling industrial worker exposure for PROC 4	

Name of contributing scenario	4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.41 Contributing Scenario (41) controlling industrial worker exposure for PROC 5	
Name of contributing scenario	5 - Mixing or blending in batch processes (multistage and/or significant contact)
Further specifications	Waste management: waste water treatment on site
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	480 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	

Protective gloves	No 0 %
Respiratory protection	no
9.144.42 Contributing Scenario (42) controlling industrial worker exposure for PROC 8A	
Name of contributing scenario	8a - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.43 Contributing Scenario (43) controlling industrial worker exposure for PROC 8B	
Name of contributing scenario	8b - Transfer of chemicals from/to vessels/ large containers at dedicated facilities
Further specifications	Manufacturing equipment maintenance: opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	

Exposed skin surface	960 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.44 Contributing Scenario (44) controlling industrial worker exposure for PROC 15	
Name of contributing scenario	15 - Use of laboratory reagents in small scale laboratories
Further specifications	Laboratory use: QC & RD laboratory use
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)
Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no
9.144.45 Contributing Scenario (45) controlling industrial worker exposure for PROC 1	
Name of contributing scenario	1 - Use in closed process, no likelihood of exposure
Further specifications	Storage and delivery of finished products: in bulk and packaged goods, indoor and outdoor
Product characteristics	
Physical state	liquid
Concentration in substance	100 %
Fugacity / Dustiness	negligible
Frequency and duration of use	
Duration of activity	>4 hours (default)

Frequency of use	5 days / week
Human factors not influenced by risk management	
Exposed skin surface	240 cm^2
Other given operational conditions affecting workers exposure	
Location	indoors
Domain	industrial
Technical conditions and measures to control dispersion and exposure	
Local exhaust ventilation	no
Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves	No 0 %
Respiratory protection	no