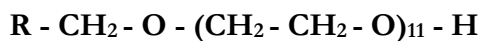


DESCRIPTION

EMULDAC[®] AS-11 is a fatty alcohol polyethylenglycol ether, based on NAFOL[®] 16-18 and ethylene oxide (11 moles). It is manufactured in our plant located at Terranova dei Passerini (Lodi, Italy). The chemical structure is the following:



R = C₁₅H₃₁ or C₁₇H₃₅ (linear)

CAS registry no. 68439-49-6
EINECS no. not defined, polymer
INCI- name Cetareth-11

SALES SPECIFICATION

<i>Property</i>	<i>Test Method</i>	<i>Unit</i>	<i>Specification¹</i>
* Appearance at 25°C	visual	-	solid
* Colour (50% w/w in IPA)	RCM 3668	APHA	≤ 30
* Cloud point ^a	RCM 3646	°C	88 - 90
Hydroxyl number	RCM 3851	mg KOH/g	73 - 77
Molecular weight	calculated	g/mol	728 - 769
Polyethylene glycols	RCM 1412	% weight	≤ 3.0
* pH (5%)	RCM 3645	-	5.0 - 7.0
* Water (Karl-Fisher)	RCM 3804	% weight	≤ 0.50

* values reported on inspection certificate.

¹ specification No. D003270 rev. 1 of April 16th, 2008.

^a 1% in water.

ADDITIONAL PROPERTIES

<i>Property</i>	<i>Test Method</i>	<i>Unit</i>	<i>Typical Value</i>
Pour point	RCM 3629	°C	40
H.L.B.	calculated	-	13.0
Viscosity at 50°C	RCM 3633	cSt	44
Density at 50°C	RCM 3663	kg/l	0.98
Ethylene Oxide portion	calculated	% w/w	65

RCM are Sasol Italy analytical methods, internal or referred to international standard. Additional information available upon request.

EMULDAC[®] AS-11

Technical Sheet No. 2003 – May 2009



MAIN APPLICATIONS

EMULDAC[®] AS-11 is used as wool scouring agent in textile applications. It is also suitable for detergent applications in heavy duty powders due to its high emulsification property at high temperature. EMULDAC[®] AS-11 is also suitable for personal care applications as O/W emulsifier in a broad range of pH. Other minor applications are metal soaking and wax emulsification.

HANDLING AND STORAGE

EMULDAC[®] AS-11 should preferably be stored in heated stainless steel tanks.

It is a solid at room temperature and it becomes homogeneous and transparent at temperature between 40 and 45°C. It is preferable to avoid heating above 60°C and to store under nitrogen in order to minimise yellowish phenomena.

Shelf life is 3 years from the production date.

SAFETY AND BIODEGRADABILITY

EMULDAC[®] AS-11 has showed acute oral toxicity in a limit test; its LD₅₀ ranges between 200 and 2000 mg/kg.

EMULDAC[®] AS-11 is not irritant to skin (OECD 404), however it is irritant to eyes (OECD 405) and consequently prolonged or repeated contact with mucosa should be prevented.

Protective clothing, neoprene gloves and anti-splash facial mask or goggles should be worn when handling this product.

In the event of contact, contaminated clothing should be removed and the part concerned flushed with abundant water.

If the product is accidentally swallowed, vomiting should not be induced to avoid any risk of the product being inhaled. Immediate medical attention should be sought.

EMULDAC[®] AS-11 is not classified as flammable substance.

In the event of accidental spills, inert materials should be used to absorb the product and then the material taken up must be disposed of in accordance with regulation.

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

PACKAGING AND TRANSPORT

EMULDAC[®] AS-11 is generally supplied in bulk by road tank car (stainless steel) . It is also supplied in iron and plastic drums of 217 or 120 liters capacity , by tank trucks or tank containers.

EMULDAC[®] AS-11 is not classified as hazardous substance for transport by road and rail (ADR/RID), by air (ICAO/IATA) and by ship (IMO/IMDG).

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