

MARLIPAL 1618/1

Version: 7.03

Revision Date 2019/09/02

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Trade name	MARLIPAL 1618/1
REACH No.	01-2119977094-30-0002
Substance name (REACH / CLP)	Alcohols, C16-18, ethoxylated

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use	Industrial use surface-active substance raw material for plastics additives
Uses advised against	

1.3 Details of the supplier of the safety data sheet

Company	SASOL Germany GmbH Anckelmannsplatz 1 20537 Hamburg Germany
	Telephone: +49 40 63684-1000 Telefax: +49 40 63684-3700
Information (Product safety):	Telephone: + 49 (0) 23 65 - 49 47 05 Telefax: + 49 (0) 23 65 - 49 92 40
E-mail address	msds-info.germany@de.sasol.com

1.4 Emergency telephone number

Emergency telephone number	+ 49 (0) 23 65 - 49 22 32
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SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Long-term (chronic) aquatic hazard Category 2 Toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)****Hazard pictograms****Hazard statements**
H411

Toxic to aquatic life with long lasting effects.

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Precautionary statements

P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

Danger of slipping after spill or leakage.
Forms slippery/greasy layers with water.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a substance in the meaning of regulation (EC) 1907/2006.

COMPONENTS TO BE NAMED IN ACCORDANCE WITH REGULATION (EC) 1907/2006 AS WELL AS OTHER HAZARDOUS INGREDIENTS AND CONTAINED SUBSTANCES WITH WORK PLACE LIMIT VALUES**Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO**

content: >= 90 - <= 100 %	component type: Active ingredient
EC-No.: 939-518-5 REACH No.: 01-2119977094-30-xxxx	Index-No.: CAS-No.: 68439-49-6
Classification (Regulation (EC) No 1272/2008):	Aquatic Chronic 2 H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures**

General advice	If you feel unwell, seek medical advice (show the label where possible).
If inhaled	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, give oxygen if necessary. Consult a physician.
In case of skin contact	Wash off immediately with plenty of water. Consult a physician if necessary.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed	Symptoms: No information available. Risks: No information available.
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4.3 Indication of any immediate medical attention and special treatment needed

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Indication of any immediate medical attention and special treatment needed

Treatment: No information available.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Water spray, Dry powder, Foam, Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting Dangerous gases or fumes may occur in case of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

Further information Standard procedure for chemical fires.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Use mechanical handling equipment. The material taken up must be disposed of in accordance with regulations.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Wear personal protective equipment. Avoid contact with skin and eyes.

Advice on protection against fire and explosion Provide sufficient air exchange and/or exhaust in work rooms. Keep away from heat and sources of ignition.

Fire-fighting class B: Fires involving liquids or liquid containing substances. Also includes substances which become liquid at elevated temperatures.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Keep tightly closed in a dry and cool place.

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Storage class (TRGS 510) 11: Combustible Solids
Other data Stable at normal ambient temperature and pressure.

7.3 Specific end use(s)

Specific use(s) This information is not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****COMPONENTS WITH WORKPLACE CONTROL PARAMETERS****National occupational exposure limits**

No data available

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

No data available

DERIVED NO EFFECT LEVEL (DNEL)

Substance name: Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO			
End Use	Exposure routes	Value	Note
Workers	dermal, Acute/short-term exposure - systemic effects		Not relevant / Not applicable
	Inhalation, Acute/short-term exposure - systemic effects		Not relevant / Not applicable
	dermal, Acute/short-term exposure - local effects		Not relevant / Not applicable
	Inhalation, Acute/short-term exposure - local effects		Not relevant / Not applicable
	dermal, long-term exposure - systemic effects	2080 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	294 mg/m ³	
	dermal, long-term exposure - local effects		Not relevant / Not applicable
	Inhalation, long-term exposure - local effects		Not relevant / Not applicable
	Consumers	dermal, Acute/short-term exposure - systemic effects	
Inhalation, Acute/short-term exposure - systemic effects			Not relevant / Not applicable
Oral, Acute/short-term exposure - systemic effects			Not relevant / Not applicable
dermal, Acute/short-term exposure - local effects			Not relevant / Not applicable
Inhalation, Acute/short-term exposure - local effects			Not relevant / Not applicable
dermal, long-term exposure - systemic effects		1250 mg/kg	based on body weight and day

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	Inhalation, long-term exposure - systemic effects	87 mg/m3	
	Oral, long-term exposure - systemic effects	25 mg/kg	based on body weight and day
	dermal, long-term exposure - local effects		Not relevant / Not applicable
	Inhalation, long-term exposure - local effects		Not relevant / Not applicable

PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO		
Environmental Compartment	Value	Note
Fresh water	0.002845 mg/l	
Marine water	0.002845 mg/l	
intermittent release	0.1 mg/l	
Sewage treatment plant	1.4 mg/l	
Fresh water sediment	68.3 mg/kg	based on dry weight
Marine sediment	68.3 mg/kg	based on dry weight
Soil	1 mg/kg	based on dry weight
food		Not relevant / Not applicable

8.2 Exposure controls

ENGINEERING MEASURES

If possible, use material transfer/filling, metering and blending plants that are closed.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection

In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where dust, fibres and smoke occur, use self-contained breathing apparatus or breathing apparatus with a type P2 or P3 filter, in compliance with EN 143. No personal respiratory protective equipment normally required.

Hand protection

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature).

gloves suitable for permanent contact:

Material: butyl-rubber
Break through time: >= 480 min
Layer thickness: >= 0.7 mm

gloves suitable for splash protection:

Material: Nitrile rubber/nitrile latex
Break through time: >= 30 min

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Layer thickness: ≥ 0.4 mm

Eye protection	Tightly fitting safety goggles, Safety glasses with side-shields
Skin and body protection	Protective suit
Hygiene measures	Avoid contact with eyes. General industrial hygiene practice. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. When using, do not eat, drink or smoke.
Protective measures	Avoid contact with eyes. Wear suitable gloves and eye/face protection.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice	Avoid subsoil penetration.
Water	Do not flush into surface water or sanitary sewer system.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Physical state	solid; 20 °C; 1,013 hPa
Form	Solid form
Colour	colorless to yellow
Odour	mild
Odour Threshold	No valid method available.
pH	6.5 - 7.5; 20 °C; aqueous extract
Melting point/range	42 - 45 °C
Boiling point/boiling range	Not relevant / Not applicable Justification: Solid
Flash point	ca. 180 °C; DIN 51376
Evaporation rate	Not relevant / Not applicable Justification: Solid
Flammability (solid, gas)	not auto-flammable
Lower explosion limit	Not applicable Justification: Solid
Upper explosion limit	Not applicable Justification: Solid
Vapour pressure	< 0.1 hPa; 20 °C
Relative vapour density	Not relevant / Not applicable, Justification: Solid
Density	ca.0.84 g/cm ³ ; 50 °C
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	Not relevant / Not applicable Justification: Solid
Ignition temperature	Not relevant, solid with a melting point < 160°C

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Auto-ignition temperature	not auto-flammable
Viscosity, dynamic	ca. 15 mPas; 50 °C
Explosive properties	not expected based on structure and functional groups
Oxidizing properties	not expected based on structure and functional groups

9.2 Other data

Additional advice	no data
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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Note	Stable at normal ambient temperature and pressure.
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10.2 Chemical stability

Note	No decomposition if stored and applied as directed.
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10.3 Possibility of hazardous reactions

Hazardous reactions	None known.
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10.4 Conditions to avoid

Conditions to avoid	Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.
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10.5 Incompatible materials to avoid

Materials to avoid	Strong acids and oxidizing agents;
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10.6 Hazardous decomposition products

Hazardous decomposition products	No decomposition if stored normally.
Thermal decomposition	Hazardous decomposition products formed under fire conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: LD50 Rat: > 5,000 mg/kg; OECD Test Guideline 401 Symptoms: Piloerection Based on available data, the classification criteria are not met.
Acute inhalation toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: LC50 Rat: > 1.6 mg/l; 4 h Symptoms: Nasal discharge, Lachrymation maximal attainable concentration Category approach (literature value) Based on available data, the classification criteria are not met.

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Acute dermal toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: LD50 Rabbit: > 2,000 - 5,000 mg/kg; OECD Test Guideline 402 Symptoms: Emaciation, Drowsiness, Shortness of breath Category approach (literature value) Based on available data, the classification criteria are not met.
Skin corrosion/irritation	
Skin irritation	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Rabbit: not irritating; OECD Test Guideline 404 Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	
Eye irritation	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Rabbit: not irritating; OECD Test Guideline 405 Category approach Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	
Sensitisation	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Buehler Test Guinea pig: not sensitizing; OECD Test Guideline 406 Based on available data, the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity in vitro	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: In vitro tests did not show mutagenic effects (literature value)
Genotoxicity in vivo	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: No data available
Carcinogenicity	
Carcinogenicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential.
Reproductive toxicity	
Reproductive toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Rat; dermal Fertility and developmental toxicity tests did not reveal any effect on reproduction. Category approach (literature value)
Remarks-Reproductive toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Based on available data, the classification criteria are not met.
Teratogenicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Rat; dermal Did not show teratogenic effects in animal experiments. Category approach (literature value)
Remarks-Teratogenicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Based on available data, the classification criteria are not met.
STOT - single exposure	
Remarks	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	

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Remarks	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Rat; oral feed; 90-day NOAEL: 500 mg/kg (based on body weight and day) Category approach (literature value)
Aspiration hazard	
Aspiration toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Not applicable
Toxicological information	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Toxicokinetics extensive and rapid metabolisation Main route of resorption: Oral Excretion: Urine faeces (literature value)

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: LC50 (96 h) Danio rerio (zebra fish): > 100 mg/l ; static test; OECD Test Guideline 203 Category approach (literature value)
Toxicity to fish - Chronic toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: EC20 (30 d) Pimephales promelas (fathead minnow): 0.269 mg/l; mortality; QSAR (literature value)
Toxicity to daphnia and other aquatic invertebrates	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: EL50 (48 h) Daphnia magna (Water flea): > 10 - 100 mg/l ; static test; OECD Test Guideline 202 Category approach (literature value)
Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: EC20 (21 d) Daphnia magna (Water flea): 0.0542 mg/l; reproduction rate; QSAR; (literature value)
Toxicity to aquatic plants	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: EL50 (72 h) Desmodesmus subspicatus (green algae): > 10 - 100 mg/l ; Growth rate; OECD Test Guideline 201; Category approach (literature value)
Toxicity to bacteria	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: EC50 (3 h) activated sludge of a predominantly domestic sewage: 140 mg/l; static test Category approach
Toxicity to soil dwelling organisms	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: LC50 (14 d) Eisenia fetida (earthworms): > 1,000 mg/kg; mortality; artificial soil Category approach (literature value)

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Toxicity to terrestrial flora	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: emergence, growth; NOEC (19 d): 100 mg/kg; Triticum aestivum (wheat), Lepidium sativum (cress), Brassica alba (mustard); OECD Test Guideline 208 Category approach
Toxicity for other terrestrial non-mammalian fauna	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: The study is not necessary. Justification: low bioaccumulation potential Unlikely to pose a hazard to birds.
12.2 Persistence and degradability	
Biodegradability	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B (literature value)
12.3 Bioaccumulative potential	
Bioaccumulation	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Pimephales promelas (fathead minnow); 72 h; Bioconcentration factor (BCF): 387.5 Bioaccumulation is unlikely. (literature value) Category approach
12.4 Mobility in soil	
Mobility	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Adsorption/Soil/Sewage sludge; Koc: > 5000; QSAR immobile strong adsorption to soil (literature value)
12.5 Results of PBT and vPvB assessment	
Results of PBT assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Results of PBT assessment	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Based on available data, the classification criteria are not met.
12.6 Other adverse effects	
General advice	Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO: Toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Product	Can be incinerated, when in compliance with local regulations.
waste code of the European Union: EWC	The waste code must be determined in agreement with the regional waste disposal authority or company. A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose.

SECTION 14: TRANSPORT INFORMATION



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14.1 UN number

ADR	3077
RID	3077
ADN	3077
IMDG	3077
ICAO/IATA	3077

14.2 Proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Fatty alcohol polyethoxylated)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Fatty alcohol polyethoxylated)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Fatty alcohol polyethoxylated)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Fatty alcohol polyethoxylated)
ICAO/IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Fatty alcohol polyethoxylated)

14.3 Transport hazard class

ADR	9
RID	9
ADN	9
IMDG	9
ICAO/IATA	9

14.4 Packing group

ADR	III
RID	III
ADN	III
IMDG	III
ICAO/IATA	III

14.5 Environmental hazards

ADR	Environmentally hazardous	yes
RID	Environmentally hazardous	yes
ADN	Environmentally hazardous	yes
IMDG	Marine pollutant	yes
ICAO/IATA	Environmentally hazardous	yes

14.6 Special precautions for user

ADR	Hazard Identification Number	90
	Labels	9
	Tunnel restriction code	(-)
IMDG	Labels	9
	EmS Number 1	F-A
	EmS Number 2	S-F
ICAO/IATA	Labels	9MI

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14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks No information available.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****NATIONAL/OTHER REGULATIONS****Legislation on the control of major-accident hazards involving dangerous substances**

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

list entry in the directive:: ENVIRONMENTAL HAZARDS; E2

Qualifying quantity 1: 200 t; Qualifying quantity 2: 500 t;

Other regulations

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.

NOTIFICATION STATUS

Switzerland. Consolidated Inventory	CH INV	listed (product or constituents are listed)
US. Toxic Substances Control Act	TSCA	listed (product or constituents are listed)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	listed (product or constituents are listed)
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	listed (product or constituents are listed)
Japan. Kashin-Hou Law List	ENCS (JP)	listed (product or constituents are listed)
Japan. Industrial Safety & Health Law (ISHL) List	ISHL (JP)	listed (product or constituents are listed)
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	listed (product or constituents are listed)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	listed (product or constituents are listed)
China. Inventory of Existing Chemical Substances (IECSC)	INV (CN)	listed (product or constituents are listed)

Please note: the names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in chapter 3.

15.2 Chemical safety assessment**Alcohols, C16-18 (even numbered), ethoxylated, < 2.5 EO**

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A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H411 Toxic to aquatic life with long lasting effects.

Safety datasheet sections which have been updated:

- 2. Hazards identification
- 7. Handling and storage
- 15. Regulatory information

Further information:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

Key or legend to abbreviations and acronyms used in the safety data sheet

ADN	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
AICS	Australian Inventory of Chemical Substances
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials (US)
BCF	Bioconcentration factor
CLP	Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DIN	Deutsches Institut für Normung
DNEL	Derived No-Effect Level
DSL	Domestic Substances List
EC...	Effect concentration ... %
ENCS	Existing Notified Chemical Substances (Japan)
EWC	European Waste Catalogue
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organization for Standardization
IUAPC	International Union of Pure and Applied Chemistry
KECI	Korea Existing Chemicals Inventory
LC...	Lethal Concentration, ...%
LD...	Lethal Dose, ...%
MARPOL	International Convention for the Prevention of Pollution From Ships
NDSL	Non-Domestic Substances List
NOAEL	no observable adverse effect level
NOEL/NOEC	No Observed-effect level/concentration
NZIoC	New Zealand Inventory of Chemicals
OECD	Organisation for Economic Co-operation and Development
PBT	persistent, bioaccumulative, toxic
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport international ferroviaire de marchandises dangereuses
TG	Test Guideline
TRGS	Technische Regeln für Gefahrstoffe
TSCA	Toxic Substances Control Act

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vPvB
WGK

very persistent, very bioaccumulative
Wassergefährdungsklasse

Annex

Attachments to the safety data sheet and/or lists of the identified uses for the listed substances can be downloaded using the internet links below.

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000017497_EN_01.pdf
