

Product Information

21.05.2015

MARLINAT 242/28

Composition

Fatty alcohol-(C₁₂-C₁₄) polyethylene glycol-(2 EO) ethersulphate sodium salt
 INCI: Sodium Laureth Sulfate

Product data (specification)

Property	Value	Unit	Test method
Appearance at 20 °C	liquid, clear	-	visual
Active substance, anionic	26.5 ± 0.5	% by mass	DIN ISO 2271
Unsulphated matter	≤ 1.2	% by mass	DIN EN 13273
Klett colour number (5% active substance in water)	≤ 20		DIN EN 1557
Sodium sulphate	≤ 0.5	% by mass	ISO 6844
pH (10% active substance in fully demin. water)	6.5 - 9.0	-	DIN EN 1262
Dioxane (based on 100% Active substance)	max. 20	mg/kg	DIN EN 12974

General product description

Property	Value	Unit	Test method
Molar mass	about 383	g/mol	calculated
Density at 20 °C	about 1.04	g/ml	DIN 51757
Setting point	about 0	°C	DIN ISO 3841
Water	about 72	% by mass	DIN EN 13267
Sodium chloride ≤ 0,1		% by mass	ISO 4323
Viscosity at 20 °C (Brookfield)	about 50	mPa s	DIN ISO 6388
Preservative:			
Methylchloroisothiazolinone(and) Methylisothiazolinone.		Approx 0.01	% by mass

Transport and packaging

Road tankers, about 160 kg plastic drums, about 1000 kg containers

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 Sitz der Gesellschaft: Hamburg Registergericht: Amtsgericht Hamburg HRB 78475



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General Information

MARLINAT 242/28 is at + 20 °C a clear homogeneous liquid with newtonian behaviour. The product is delivered in drums, 1 m³ containers or in stainless steel road tankers at a temperature between + 20 to + 30°C.

Storage

Stainless steel vessels (Steel No. 1.4541 or 1.4571), Temperature + 10 to + 30 °C

Storage Information

MARLINAT 242/28 should be stored at room temperature. Temperatures above + 30°C must be avoided, even briefly, because hydrolysis or discoloration may then occur. If material is stored stationary for long periods of time, particularly at temperatures of below + 10 °C, then MARLINAT 242/28 separates into two phases of differing compositions - this occurs above all with drummed material. Should the occasion arise, the product can be dissolved again by means of homogenisation and simultaneous heating to + 20 to a maximum of + 30 °C. If all and not just part of the contents of the drum are to be used at the same time, then these measures do not have to be carried out. Only warm water of max. + 30 °C should be used as medium for heating. The use of hot steam to warm up the material is absolutely prohibited. It is advisable to use storage tanks of stainless steel or plastic equipped with an agitator or a circulating pump.

pH-Control

The hydrolysis, and therefore the decomposition, of MARLINAT 242/28 is catalysed by acids. Hydrolysis, caused by local overheating or acidification, continues rapidly as the process is autocatalytic. Therefore it is essential to check the pH in short intervals and adjust, if necessary, with caustic.

According to DIN EN 1262 fully demin. water free of carbondioxide should be used for checking the pH. Both, the dissolution of MARLINAT 242/28 in fully demin. water and the pH-measurement should be done under condition wich exclude the presence of air. Suitable is a glass jar with a taperground joint. This is completely filled with the MARLINAT 242/28 solution.

Other data

This product contains a biocidal product to prevent microbial contamination and decomposition by microorganisms. The biocidal active substance contained in this product is Methylchloroisothiazolinone(and) Methylisothiazolinone

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Microbial Contamination

Like all biodegradable surfactants with a high water content, MARLINAT 242/28 is susceptible to microbial contamination and decomposition by microorganisms. Since uncontrolled growth of microorganisms has an adverse effect on product quality, MARLINAT 242/28 is supplied containing a small amount of preservative sufficient for transport and short-term storage. It is therefore necessary, especially if the product is stored for several weeks, to carry out regular checks of the microbial content of the homogenised material in store. Various manufacturers supply test kits for this purpose. However, careful hygienic precautions are also necessary (clean sampling vessels, sterilised water for dilution, etc.). Degradation may even occur if MARLINAT 242/28 comes into contact with the surrounding air too often. In such cases, evaporation of water leads to a gel forming on the surface of MARLINAT 242/28, which adheres to the walls of the tank as the tank level falls and continually exposed to the risk of microbial contamination.

Data on material safety, as well as transport classes and on toxicology and biodegradability, can be obtained from the material safety data sheet.

This information is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party patent rights. In particular, no guarantee of properties in the legal sense is implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Reference to trade names used by other companies is neither a recommendation, nor is it intended to suggest that similar products could not be used. All our business transactions shall exclusively be governed by our General Sales Conditions.

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**MARLINAT 242/28 /000/ BULKWARE**

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

Trade name	MARLINAT 242/28 /000/ Bulkware
Unique Formula Identifier (UFI):	R5N1-0023-D00V-ATJ0

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

Use of the Substance/Mixture	Industrial use, raw material for washing and cleaning agents, surface-active substance, raw material for personal care products
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Uses advised against

1.3 Details of the supplier of the safety data sheet

Company	Tennants Distribution Limited Hazelbottom Road Cheetham Manchester M8 0GR
Information (Product safety)	Telephone: +44(0)161 205 4454 E-mail: msds@tennantsdistribution.com

1.4 Emergency telephone number	Telephone: +44(0)844 335 0001 (24hrs)
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SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Skin irritation Category 2	Causes skin irritation.
Serious eye damage Category 1	Causes serious eye damage.
Long-term (chronic) aquatic hazard Category 3	Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms**Signal word**

Danger

Hazard statements

H315

Causes skin irritation.

H318

Causes serious eye damage.

H412

Harmful to aquatic life with long lasting effects.

Precautionary statements

P264

Wash skin thoroughly after handling.

P273

Avoid release to the environment.

P280

Wear protective gloves/ eye protection/ face protection.

P305 + P351 + P338 + P310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P332 + P313

If skin irritation occurs: Get medical advice/ attention.

P501

Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

- Alcohols, C12-14, ethoxylated, sulfates, sodium salts (< 2.5 EO)

2.3 Other hazards

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.

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures**

This product is a mixture 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

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Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO)**content:** >= 25 - < 30 %**component type:** Active ingredient**EC-No.:** 500-234-8**Index-No.:****CAS-No.:** 68891-38-3**REACH No.:** 01-2119488639-16-xxxx**Substance name (REACH / CLP):** Alcohols, C12-14, ethoxylated, sulfates, sodium salts (< 2.5 EO)**Classification (Regulation
(EC) No 1272/2008)**Skin Irrit. 2
Eye Dam. 1
Aquatic Chronic 3H315
H318
H412**Specific Concentration Limits (see section 11)**>= 10 % Eye Dam. Category 1; H318
5 - < 10 % Eye Irrit. Category 2; H319**bronopol (INN)****content:** >= 0.0025 - < 0.025 %**component type:** Preservative**EC-No.:** 200-143-0**Index-No.:** 603-085-00-8**CAS-No.:** 52-51-7**REACH No.:** This substance is exempt from registration according to Regulation (EC) No. 1907/2006 (REACH).**Classification (Regulation
(EC) No 1272/2008)**Acute Tox. 4 (Oral) H302
Acute Tox. 4 (Dermal) H312
Skin Irrit. 2 H315
Eye Dam. 1 H318
STOT SE 3 (Respiratory system) H335
Aquatic Acute 1 H400
Aquatic Chronic 2 H411
M-Factor (Acute aquatic toxicity: 1010
M-Factor (Chronic aquatic toxicity: 1

For information on ingredients listed on the candidate list (Candidate List of Substances of Very High Concern for Authorisation) or in the list of substances subject to authorization (Annex XIV of Regulation (EC) No 1907/2006), see section 15.1. of this data sheet.

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

Other data

This product contains a biocidal product to prevent microbial contamination and decomposition by microorganisms. The biocidal active substance contained in this product is Bronopol, CAS 52-51-7.

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). Take off all contaminated clothing immediately.

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.

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In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Consult a physician. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
Risks	Causes skin irritation. Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media**

Suitable extinguishing media	Water spray, Dry powder, Foam, Carbon dioxide (CO2)
Unsuitable extinguishing media	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	Dangerous gases or fumes may occur in case of fire.
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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.
Special precautions	Forms slippery/greasy layers with water.

6.2 Environmental precautions

Environmental precautions	Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.
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6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
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6.4 Reference to other sections

For personal protection see section 8.



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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Wear personal protective equipment. If a warming up of the material is necessary it should only be done by treatment with warm water of maximal 30°C.
	如必须对物料进行加热，则只能使用最高温度不超过30°C的热水进行。 The use of hot steam to warm up the material is absolutely prohibited. Frozen valves or outlets have to be handled in the same manner. The total quantity has to be filled in one compartment only.
Advice on protection against fire and explosion	No special protective measures against fire required.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	pH must be checked at regular intervals. Keep container tightly closed. Protect from frost, heat and sunlight. Optimal storage temperature is between 20°C and 30°C.
Storage class (TRGS 510)	10-13: German Storage Class 10 to 13
Other data	Optimal storage temperature is between 20°C and 30°C.
container material	suitable materials: Stainless steel: 1.4541, 1.4571 (DIN); X6CrNiTi18-10, X6CrNiMoTi17-12-2 (EN); 321, 316 Ti (AISI), Temperature, 10 - 30°C

7.3 Specific end use(s)

Specific use(s)	This information is not available.
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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, C12-14, ethoxylated, sulfates, sodium salts (< 2.5 EO)			
End Use	Exposure routes	Value	Note
Workers	dermal, Acute/short-term exposure -		Not relevant / Not

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	systemic effects		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	2750 mg/kg bw/day	
	Inhalation, long-term exposure - systemic effects	175 mg/m3	
	dermal, long-term exposure - local effects	0.132 mg/cm2	
	Inhalation, long-term exposure - local effects		Not relevant / Not applicable
Consumers	dermal, Acute/short-term exposure - systemic effects		Not relevant / Not applicable
	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	1650 mg/kg bw/day	
	Inhalation, long-term exposure - systemic effects	52 mg/m3	
	Oral, long-term exposure - systemic effects	15 mg/kg15 mg/kg bw/day	
	dermal, long-term exposure - local effects	0.079 mg/cm2	
	Inhalation, long-term exposure - local effects		Not relevant / Not applicable

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PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: Alcohols, C12-14, ethoxylated, sulfates, sodium salts (< 2.5 EO)		
Environmental Compartment	Value	Note
Fresh water	0.24 mg/l	
Marine water	0.024 mg/l	
intermittent release	0.071 mg/l	
Sewage treatment plant	10000 mg/l	
Fresh water sediment	0.9168mg/kg dry weight (d.w.)	
Marine sediment	0.0917mg/kg dry weight (d.w.)	
Soil	7.5mg/kg dry weight (d.w.)	
food		Not relevant / Not applicable

8.2 Exposure controls**PERSONAL PROTECTIVE EQUIPMENT****Respiratory protection**

No personal respiratory protective equipment normally required. In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a type A filter or appropriate combined filter (e.g. where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141.

Hand protection

Material: butyl-rubber
Break through time: \geq 480 min
Glove thickness: \geq 0.7 mm

Material: Nitrile rubber
Break through time: \geq 30 min
Glove thickness: \geq 0.4 mm

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).

Eye protection

Safety glasses with side-shields

Skin and body protection

Wear suitable protective equipment.

Hygiene measures

Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs.

Protective measures

Avoid contact with eyes. Wear suitable gloves and eye/face protection.

ENVIRONMENTAL EXPOSURE CONTROLS

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General advice

Avoid subsoil penetration.
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	Physical state: liquid; 20 °C; 1,013 hPa Shape: Liquid
Colour	light yellow
Odour	mild
Odour Threshold	No valid method available.
Melting point/range	ca. 0 °C
Boiling point/boiling range	ca. 100 °C
Flammability	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Flash point	does not flash
Auto-ignition temperature	Not applicable
Decomposition temperature	Decomposes on heating.
pH	7 - 8.5; 10 g/l; 20 °C
Viscosity	
Viscosity, dynamic	ca. 50 mPas; 20 °C; ISO 6388
Solubility(ies)	
Water solubility	20 °C; completely miscible
Partition coefficient: n-octanol/water	not applicable (mixture)
Vapour pressure	< 0.1 hPa; 20 °C
Density	ca. 1.04 g/cm ³ ; 20 °C; DIN 51757
Relative vapour density	> 1

9.2 Other information

Explosives	not expected based on structure and functional groups
Oxidizing properties	not expected based on structure and functional groups
Self-ignition	not auto-flammable
Evaporation rate	No data available

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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Note Stable at normal ambient temperature and pressure.

10.2 Chemical stability

Note Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid Avoid temperatures above 30°C, direct sunlight and contact with sources of heat.

10.5 Incompatible materials to avoid

Materials to avoid Strong acids and oxidizing agents;

10.6 Hazardous decomposition products

Hazardous decomposition products diluted sulfuric acid

Thermal decomposition Decomposes on heating.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**Acute toxicity**

Not classified based on available information.

Acute oral toxicity *Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):*
LD50 Rat: > 2,000 - 5,000 mg/kg; OECD Test Guideline 401
(literature value)
Based on available data, the classification criteria are not met.

Acute inhalation toxicity *Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):*
The study is not necessary.
Sufficient data are available from alternative routes of exposure.

Acute dermal toxicity *Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):*
LD50 Rat: > 2,000 mg/kg; OECD Test Guideline 402
(literature value)
Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Causes skin irritation.

Skin irritation *Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):*
Rabbit: Skin irritation; OECD Test Guideline 404

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Serious eye damage/eye irritation

Causes serious eye damage.

Eye irritation*Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*

Rabbit: Irreversible effects on the eye; OECD Test Guideline 405 (literature value)

Test substance: Alcohols, C12-14 , ethoxylated, sulfated, sodium salts, $\geq 10\%$

Causes serious eye damage.

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):

Rabbit: Eye irritation; OECD Test Guideline 405 (literature value)

Test substance: Alcohols, C12-14 , ethoxylated, sulfated, sodium salts, $\geq 5\% - < 10\%$

Causes serious eye irritation.

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):

Rabbit: No eye irritation; OECD Test Guideline 405 (literature value)

Test substance: Alcohols, C12-14 , ethoxylated, sulfated, sodium salts, $< 5\%$ **Skin sensitisation / Respiratory sensitisation**

Skin contact: Not classified based on available information.

Inhalation: Not classified based on available information.

Sensitisation*Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*

Maximisation Test Guinea pig: not sensitizing; OECD Test Guideline 406 Based on available data, the classification criteria are not met.

*Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*Respiratory sensitisation :
No data available**Germ cell mutagenicity**

Not classified based on available information.

Genotoxicity in vitro*Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*In vitro tests did not show mutagenic effects
own test results/literature values**Genotoxicity in vivo***Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*In vivo tests did not show mutagenic effects
(literature value)**Germ cell mutagenicity - Assessment***Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*In vitro tests did not show mutagenic effects
In vivo tests did not show mutagenic effects**Carcinogenicity**

Not classified based on available information.

Carcinogenicity*Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*

This information is not available.

Reproductive toxicity

Not classified based on available information.

Effects on fertility*Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*Rat; Oral; Two-generation study; OECD Test Guideline 416
No toxicity to reproduction

(literature value)

Effects on foetal*Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):*

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development

Rat; Oral; OECD Test Guideline 414
Animal testing did not show any effects on foetal development.

(literature value)

**Reproductive toxicity -
Assessment**

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):
No toxicity to reproduction
Animal testing did not show any effects on foetal development.

STOT - single exposure

Not classified based on available information.

Assessment

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):
The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Not classified based on available information.

Assessment

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):
Rat; Oral; 90-day
NOAEL: > 225 mg/kg (based on body weight and day); OECD Test Guideline 408
Target Organs: Liver
Symptoms: Gastrointestinal disturbance, Liver disorders
(literature value)

Aspiration hazard

Not classified based on available information.

Aspiration toxicity

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):
Not applicable

11.2 Information on other hazards**Endocrine disrupting
properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):
Toxicokinetics, metabolism and distribution
Components of the product may be absorbed into the body by ingestion.
The substance is poorly absorbed via skin.
The substance is metabolised and excreted.
extensive and rapid metabolism

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Toxicity to fish**

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):
LC50 Danio rerio (zebra fish): > 1 - 10 mg/l ; flow-through test; OECD Test

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	Guideline 203
Toxicity to fish - Chronic toxicity	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> NOEC (28 d) Oncorhynchus mykiss (rainbow trout): > 0.1 - 1 mg/l; mortality; flow-through test; OECD Test Guideline 204 (literature value)
Toxicity to daphnia and other aquatic invertebrates	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> EC50 (48 h) Daphnia magna (Water flea): > 1 - 10 mg/l ; static test; OECD Test Guideline 202
Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> NOEC (21 d) Daphnia magna (Water flea): > 0.1 - 1 mg/l; reproduction rate; flow-through test; OECD Test Guideline 211 (literature value) Category approach
Toxicity to aquatic plants	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> EC50 (72 h) Desmodesmus subspicatus (green algae): > 10 - 100 mg/l ; Growth rate; static test; OECD Test Guideline 201 <i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> NOEC (72 h) Desmodesmus subspicatus (green algae): 0.93 mg/l ; Growth rate; static test; OECD Test Guideline 201
Toxicity to bacteria	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> EC10 Pseudomonas putida: > 10,000 mg/l; Cell multiplication inhibition test
Toxicity to soil dwelling organisms	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> NOEC (56 d) Eisenia fetida (earthworms): 750 mg/kg; reproduction rate; OECD Test Guideline 222 (literature value)
Plant toxicity	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> The study is not necessary. Justification: Direct exposure to soil is unlikely. Readily biodegradable.
Toxicity to terrestrial organisms	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> Not relevant Justification: Studies on birds do not need to be conducted due to large mammalian dataset. Readily biodegradable.
12.2 Persistence and degradability	
Biodegradability	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> Readily biodegradable.; > 70 %; 28 d; aerobic; OECD Test Guideline 301A <i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> Biodegradable; > 60 %; 41 d; anaerobic; ISO Draft (literature value)
12.3 Bioaccumulative potential	
Bioaccumulation	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> Bioaccumulation is unlikely. Justification: Substance is readily biodegradable and has a low aquatic toxicity. Category approach
12.4 Mobility in soil	
Distribution among environmental compartments	<i>Alcohols, C12-14, ethoxylated, sulfated, sodium salts (< 2.5 EO):</i> Adsorption/Soil; Koc: 2.2; log Koc: 0.34; calculated Highly mobile in soils
12.5 Results of PBT and vPvB assessment	

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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.

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, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Endocrine disrupting properties**Endocrine disrupting potential**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects**Additional ecological information**

Alcohols, C12-14 , ethoxylated, sulfated, sodium salts (< 2.5 EO):
Harmful 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

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.
The waste code must be determined in agreement with the regional waste disposal authority or company.

SECTION 14: TRANSPORT INFORMATION**14.1 UN number or ID number**

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.2 UN proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

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14.3 Transport hazard class(es)

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.4 Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.5 Environmental hazards

ADR	Environmentally hazardous	no
RID	Environmentally hazardous	no
ADN	Environmentally hazardous	no
IMDG	Marine pollutant	no
ICAO/IATA	Environmentally hazardous	no

14.6 Special precautions for user

Transport temperature must not fall below +5°C.

14.7 Maritime transport in bulk according to IMO instruments

Remarks	No information available.
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SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**EU PIC: Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals**

Not applicable

EU SVHC: REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Not applicable

EU. REACH-Annex XIV: REACH - List of substances subject to authorisation (Annex XIV)

Not applicable

EC 1005/2009: Regulation (EC) No 1005/2009 on substances that deplete the ozone layer

Not applicable

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EU POP: Regulation (EU) 2019/1021 on persistent organic pollutants (recast)

Not applicable

UK. REACH Annex XIV: UK REACH List of substances subject to authorisation (Annex XIV)

Not applicable

UK SVHC: UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation

Not applicable

GB POPs: The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)

Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Number on list: 3

See Annex XVII to Regulation (EC) no 1907/2006 and amendments for Conditions of restriction

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Number on list: 75

See Annex XVII to Regulation (EC) no 1907/2006 and amendments for Conditions of restriction

The product contains following substances that are listed on the named regulation/list:

Substance name	CAS-No. EC-No.	content
citric acid	77-92-9 201-069-1	0.2 %
bronopol (INN)	52-51-7 200-143-0	0.0126 %

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:: Not applicable

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Notification status

Australian Inventory of Industrial Chemicals	ZAU_AIIC	listed (product or constituents are listed)
Canadian Domestic Substances List (DSL)	DSL	listed (product or constituents are listed)
Switzerland. Consolidated Inventory (based on EU-EINECS and EU-NLP)	CH INV	listed (product or constituents are listed)
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	listed (product or constituents are listed)
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	listed (product or constituents are listed)
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	listed (product or constituents are listed)
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC	listed (product or constituents are listed)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	listed (product or constituents are listed)
Taiwan Chemical Substance Inventory (TCSI)	ZTW_INV	listed (product or constituents are listed)
United States TSCA Inventory	TSCA	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, C12-14, ethoxylated, sulfates, sodium salts (< 2.5 EO)**

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.**

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Safety datasheet sections which have been updated:

- 3. Composition/information on ingredients
- 15. Regulatory information

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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
vPvB	very persistent, very bioaccumulative
WGK	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.

Alcohols, C12-14, ethoxylated, sulfates, sodium salts (< 2.5 EO)

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000024942_EN_01.pdf



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