

GALENOL 1618 AE

Version: 5.04

Revision Date 2019/09/16

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

Trade name	GALENOL 1618 AE
INCI	Cetearyl Alcohol (and) Ceteareth-20

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

Use	Industrial use raw material for cosmetic agents Thickening agent
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) 5 51 - 1 92 40 (GIZ-Nord Poisons Centre)
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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 3 Harmful to aquatic life with long lasting effects.

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

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/ container to an approved waste disposal plant.

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2.3 Other hazards

Forms slippery/greasy layers with water.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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**tetradecanol****content:** $\geq 1 - < 2.5 \%$ **component type:** Active ingredient**EC-No.:** 204-000-3**Index-No.:****CAS-No.:** 112-72-1**REACH No.:** 01-2119485910-33-0000**Substance name (REACH / CLP):** tetradecanol**Classification (Regulation (EC) No 1272/2008):**Eye Irrit. 2
Aquatic Chronic

H319

1 H410

dodecan-1-ol**content:** $\geq 1 - < 2.5 \%$ **component type:** Active ingredient**EC-No.:** 203-982-0**Index-No.:****CAS-No.:** 112-53-8**REACH No.:** 01-2119485976-15-0000**Substance name (REACH / CLP):** dodecan-1-ol**Classification (Regulation (EC) No 1272/2008):**Eye Irrit. 2
Aquatic Acute
Aquatic Chronic

H319

1 H400

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**

No hazards which require special first aid measures.

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 with plenty of water.

In case of eye contact

Rinse with plenty of water.

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**Most important symptoms and effects, both acute and delayed**

Symptoms: No information available.

Risks: No information available.

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.

Special precautions Danger of slipping after spill or leakage.

6.2 Environmental precautions

Environmental precautions Should not be released into the environment.
Avoid subsoil penetration.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Sweep up or vacuum up spillage and collect in suitable container for disposal.
Molten form Allow to solidify, use mechanical handling equipment.

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 protection against fire and explosion Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers No special storage conditions required.

Storage class (TRGS 510) 10-13: German Storage Class 10 to 13

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Other data

Stable under normal conditions.

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: dodecan-1-ol			
End Use	Exposure routes	Value	Note
Workers	dermal, Acute/short-term exposure - systemic effects	125 mg/kg	based on body weight and day
	Inhalation, Acute/short-term exposure - systemic effects	220 mg/m3	
	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	125 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	220 mg/m3	
	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	75 mg/kg	based on body weight and day
	Inhalation, Acute/short-term exposure - systemic effects	65 mg/m3	
	Oral, Acute/short-term exposure - systemic effects	75 mg/kg	based on body weight and day
	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	75 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic	65 mg/m3	

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	effects		
	Oral, long-term exposure - systemic effects	75 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

Substance name: tetradecanol			
End Use	Exposure routes	Value	Note
Workers	dermal, Acute/short-term exposure - systemic effects	125 mg/kg	based on body weight and day
	Inhalation, Acute/short-term exposure - systemic effects	220 mg/m3	
	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	125 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	220 mg/m3	
	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	75 mg/kg	based on body weight and day
	Inhalation, Acute/short-term exposure - systemic effects	65 mg/m3	
	Oral, Acute/short-term exposure - systemic effects	75 mg/kg	based on body weight and day
	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	75 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	65 mg/m3	
	Oral, long-term exposure - systemic effects	75 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

Substance name: hexadecan-1-ol			
End Use	Exposure routes	Value	Note

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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	110 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	389 mg/m3	
	dermal, long-term exposure - local effects		Not relevant / Not applicable
	Inhalation, long-term exposure - local effects	200 mg/m3	
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	55 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	96 mg/m3	
	Oral, long-term exposure - systemic effects	55 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

Substance name: octadecan-1-ol			
End Use	Exposure routes	Value	Note
Workers	dermal, Acute/short-term exposure - systemic effects	125 mg/kg	based on body weight and day
	Inhalation, Acute/short-term exposure - systemic effects	220 mg/m3	
	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	125 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	220 mg/m3	

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	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	75 mg/kg	based on body weight and day
	Inhalation, Acute/short-term exposure - systemic effects	65 mg/m3	
	Oral, Acute/short-term exposure - systemic effects	75 mg/kg	based on body weight and day
	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	75 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	65 mg/m3	
	Oral, long-term exposure - systemic effects	75 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

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PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: dodecan-1-ol		
Environmental Compartment	Value	Note
Fresh water	0.0028 mg/l	
Marine water	0.00028 mg/l	
intermittent release		Not relevant / Not applicable
Sewage treatment plant	0.021 mg/l	
Fresh water sediment	1.1 mg/kg	based on dry weight
Marine sediment	0.11 mg/kg	based on dry weight
Soil	0.888 mg/kg	based on dry weight
Air		No hazard identified
food		Not relevant / Not applicable

Substance name: tetradecanol		
Environmental Compartment	Value	Note
Fresh water	0.00032 mg/l	
Marine water	0.000032 mg/l	
intermittent release		Not relevant / Not applicable
Sewage treatment plant	0.0019 mg/l	
Fresh water sediment	0.36 mg/kg	based on dry weight
Marine sediment	0.036 mg/kg	based on dry weight
Soil	0.28 mg/kg	based on dry weight
food		Not relevant / Not applicable

Substance name: hexadecan-1-ol		
Environmental Compartment	Value	Note
Fresh water	0.0012 mg/l	
Marine water	0.00012 mg/l	
intermittent release		Not relevant / Not applicable
Sewage treatment plant		Not relevant / Not applicable
Fresh water sediment	30 mg/kg	based on dry weight
Marine sediment	3 mg/kg	based on dry weight
Soil	5.8 mg/kg	based on dry weight
Air		Not relevant / Not applicable

Substance name: octadecan-1-ol		
Environmental Compartment	Value	Note
Fresh water	0.00156 mg/l	

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Marine water	0.000156 mg/l	
intermittent release		Not relevant / Not applicable
Sewage treatment plant	0.000011 mg/l	
Fresh water sediment	16 mg/kg	based on dry weight
Marine sediment	1.6 mg/kg	based on dry weight
Soil	13 mg/kg	based on dry weight
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 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.
Hand protection	<p>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).</p> <p>gloves suitable for permanent contact: Material: butyl-rubber Break through time: \geq 480 min Layer thickness: \geq 0.7 mm</p> <p>gloves suitable for splash protection: Material: Nitrile rubber/nitrile latex Break through time: \geq 30 min Layer thickness: \geq 0.4 mm</p>
Eye protection	Safety glasses
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.
Protective measures	No special protective equipment required.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice	Should not be released into the environment. Avoid subsoil penetration.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	solid; 20 °C; 1,013 hPa
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Form	solid
Colour	white
Odour	characteristic
Odour Threshold	No data available
pH	ca. 7 - 8; 10 g/l
Melting point/range	ca. 47 - 53 °C
Flash point	ca. > 180 °C
Evaporation rate	Not applicable Justification: Solid
Flammability (solid, gas)	No data available
Lower explosion limit	Not applicable Justification: Solid
Upper explosion limit	Not applicable Justification: Solid
Vapour pressure	ca. < 1.000 hPa; 20 °C
Relative vapour density	Not applicable, Justification: Solid
Density	0.851 g/cm ³ ; 60 °C
Relative density	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	not applicable (mixture)
Ignition temperature	ca. 235 °C
Auto-ignition temperature	not auto-flammable
Viscosity, dynamic	Not applicable, Justification: Solid
Explosive properties	Constituents do not contain chemical groups associated with explosivity.
Oxidizing properties	not expected based on structure and functional groups

9.2 Other data

None known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Note Stable at normal ambient temperature and pressure.

10.2 Chemical stability

Note No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions Hazardous decomposition products formed under fire conditions.

10.4 Conditions to avoid

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

10.5 Incompatible materials to avoid

Materials to avoid None known.;

10.6 Hazardous decomposition products

Hazardous decomposition products No decomposition if used as directed.

Thermal decomposition No decomposition if used as directed.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute toxicity****Acute oral toxicity**

tetradecanol:
LD50 Rat: > 5,000 mg/kg
Based on available data, the classification criteria are not met.

hexadecan-1-ol:
LD50 Rat: > 5,000 mg/kg; OECD Test Guideline 401
(literature value)
Based on available data, the classification criteria are not met.

octadecan-1-ol:
LD50 Rat: > 5,000 mg/kg; OECD Test Guideline 401
(literature value)
Based on available data, the classification criteria are not met.

Acute inhalation toxicity

tetradecanol:
LC50 Rat: > 1.5 mg/l; 1 h
Based on available data, the classification criteria are not met.

hexadecan-1-ol:
LC50 Rat: > 1.5 mg/l; 1 h
maximal attainable concentration
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: 1-Tetradecanol
Based on available data, the classification criteria are not met.

octadecan-1-ol:
Obtaining data is technically impossible.
Justification:
The LC50 is expected to be greater than the saturated vapour concentration based on weight of evidence across category.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):
No data available

Acute dermal toxicity

tetradecanol:
LD50 Rabbit: > 5,000 mg/kg;
Target Organs: Skin
Symptoms: Local irritation
Based on available data, the classification criteria are not met.

hexadecan-1-ol:
LD50 Dermal Rabbit: > 5,000 mg/kg;
Symptoms: Erythema, Emaciation, Weakness
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: 1-Tetradecanol

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Based on available data, the classification criteria are not met.

octadecan-1-ol:

LD50 Dermal Rabbit: > 5,000 mg/kg;

Symptoms: Erythema, Emaciation, Weakness

The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Test substance: 1-Tetradecanol

Based on available data, the classification criteria are not met.

Skin corrosion/irritation**Skin irritation**

tetradecanol:

Human: not irritating; OECD Test Guideline 404

(literature value)

Based on available data, the classification criteria are not met.

hexadecan-1-ol:

Rabbit: not irritating; OECD Test Guideline 404

(literature value)

Based on available data, the classification criteria are not met.

octadecan-1-ol:

Rabbit: not irritating; OECD Test Guideline 404

(literature value)

Based on available data, the classification criteria are not met.

Human experience -Skin contact

hexadecan-1-ol:

not irritating

octadecan-1-ol:

not irritating

Serious eye damage/eye irritation**Eye irritation**

tetradecanol:

Rabbit: irritating; OECD Test Guideline 405

Causes serious eye irritation.

hexadecan-1-ol:

Rabbit: not irritating; OECD Test Guideline 405

(literature value)

Based on available data, the classification criteria are not met.

octadecan-1-ol:

Rabbit: not irritating; OECD Test Guideline 405

(literature value)

Based on available data, the classification criteria are not met.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

Rabbit: Irritation to eyes, reversing within 7 days; OECD Test Guideline 405

own test results/literature values

Category approach

Causes serious eye irritation.

Respiratory or skin sensitisation**Sensitisation**

tetradecanol:

Maximisation Test Guinea pig: not sensitizing; OECD Test Guideline 406

(literature value)

Based on available data, the classification criteria are not met.

hexadecan-1-ol:

Maximisation Test Guinea pig: not sensitizing; OECD Test Guideline 406

(literature value)

Based on available data, the classification criteria are not met.

octadecan-1-ol:

Maximisation Test Guinea pig: not sensitizing; OECD Test Guideline 406

(literature value)

Based on available data, the classification criteria are not met.

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Germ cell mutagenicity**Genotoxicity in vitro**

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):
not expected based on structure and functional groups

tetradecanol:
In vitro tests did not show mutagenic effects
(literature value)
Category approach

hexadecan-1-ol:
In vitro tests did not show mutagenic effects
(literature value)
Category approach

octadecan-1-ol:
In vitro tests did not show mutagenic effects
(literature value)

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):
Ames test; Salmonella typhimurium; with and without metabolic activation: Non
mutagenic; OECD Test Guideline 471
own test results/literature values
Category approach

Genotoxicity in vivo

tetradecanol:
In vivo tests did not show mutagenic effects
(literature value)
Category approach

hexadecan-1-ol:
In vivo tests did not show mutagenic effects
(literature value)

octadecan-1-ol:
In vivo tests did not show mutagenic effects
(literature value)

Remarks

tetradecanol:
Based on available data, the classification criteria are not met.

hexadecan-1-ol:
Based on available data, the classification criteria are not met.

octadecan-1-ol:
Based on available data, the classification criteria are not met.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):
Based on available data, the classification criteria are not met.

Carcinogenicity**Carcinogenicity**

tetradecanol:
The substance has been shown to be not genotoxic, therefore it is not expected to
have a carcinogenic potential.
Category approach

hexadecan-1-ol:
The study is not necessary.
Justification:
The substance has been shown to be not genotoxic, therefore it is not expected to
have a carcinogenic potential.
Category approach

octadecan-1-ol:
The study is not necessary.
Justification:
The substance has been shown to be not genotoxic, therefore it is not expected to
have a carcinogenic potential.
Category approach

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

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This information is not available.

Reproductive toxicity**Reproductive toxicity**

tetradecanol:
Rat; Oral; 55-day
NOAEL ((parents)): 2,000 mg/kg (based on body weight and day)
NOAEL (F1): 2,000 mg/kg (based on body weight and day)
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dodecan-1-ol

hexadecan-1-ol:
Rat; Oral; 90-day
No toxicity to reproduction
Category approach

octadecan-1-ol:
Rat; Oral; 55-day; OECD Test Guideline 422
No toxicity to reproduction
(literature value)

RemarksReproductive toxicity

tetradecanol:
Based on available data, the classification criteria are not met.

hexadecan-1-ol:
Based on available data, the classification criteria are not met.

octadecan-1-ol:
Based on available data, the classification criteria are not met.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):
No data available

Teratogenicity

tetradecanol:
Rat; Oral
NOAEL: 2,000 mg/kg (based on body weight and day); OECD Test Guideline 422
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dodecan-1-ol

hexadecan-1-ol:
Rat; Oral; OECD Test Guideline 422
Did not show teratogenic effects in animal experiments.
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dodecan-1-ol

octadecan-1-ol:
Rat; Oral; OECD Test Guideline 422
Did not show teratogenic effects in animal experiments.
(literature value)

Remarks-Teratogenicity

tetradecanol:
Based on available data, the classification criteria are not met.

hexadecan-1-ol:
Based on available data, the classification criteria are not met.

octadecan-1-ol:
Based on available data, the classification criteria are not met.

STOT - single exposure**Remarks**

tetradecanol:
The substance or mixture is not classified as specific target organ toxicant, single exposure.

hexadecan-1-ol:

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The substance or mixture is not classified as specific target organ toxicant, single exposure.

octadecan-1-ol:

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure**Remarks**

tetradecanol:

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

hexadecan-1-ol:

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

octadecan-1-ol:

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

tetradecanol:

Rat; oral feed; 90-day

NOAEL: 3,548 mg/kg (based on body weight and day)
(literature value)

The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Test substance: Alcohols, C14-15- branched and linear

hexadecan-1-ol:

Rat; Oral; Subchronic toxicity

NOAEL: > 4,000 mg/kg (based on body weight and day)
(literature value)

octadecan-1-ol:

Rat; Oral; Subacute toxicity

NOAEL: 1,000 mg/kg (based on body weight and day); OECD Test Guideline 407
(literature value)

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

Rat; Oral; Subchronic toxicity

NOAEL: > 100 mg/kg (based on body weight and day)

Symptoms: reduced body weight gain

literature value

Category approach

Aspiration hazard**Aspiration toxicity**

tetradecanol:

Not applicable

hexadecan-1-ol:

Not applicable

octadecan-1-ol:

Not applicable

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

Not applicable

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Toxicological information

tetradecanol:
Toxicokinetics
The substance is poorly absorbed via skin.
The substance is metabolised and excreted.

hexadecan-1-ol:
Toxicokinetics
The substance is poorly absorbed via skin.
Components of the product may be absorbed into the body by ingestion.
The substance is metabolised and excreted.

octadecan-1-ol:
Toxicokinetics
The substance is poorly absorbed via skin.
Components of the product may be absorbed into the body by ingestion.
The substance is metabolised and excreted.

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

tetradecanol:
LC50 (96 h) *Oncorhynchus mykiss* (rainbow trout) ; semi-static test; OECD Test Guideline 203
In the range of water solubility not toxic under test conditions.
(literature value)

hexadecan-1-ol:
(96 h) *Salmo gairdneri* ; semi-static test; OECD Test Guideline 203
(literature value)
In the range of water solubility not toxic under test conditions.

octadecan-1-ol:
(96 h) *Oncorhynchus mykiss* (rainbow trout) ; semi-static test; OECD Test Guideline 203
In the range of water solubility not toxic under test conditions.
(literature value)

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):
LC50 (96 h) *Brachydanio rerio* (zebrafish): > 10 - 100 mg/l ; semi-static test; OECD Test Guideline 203
own test results/literature values

Toxicity to fish - Chronic toxicity

hexadecan-1-ol:
The study is not necessary.
Sufficient information is available to predict no toxicity at the limit of solubility.

octadecan-1-ol:
Sufficient information is available to predict no toxicity at the limit of solubility.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):
No data available

Toxicity to daphnia and other aquatic invertebrates

tetradecanol:
EC50 (48 h) *Daphnia magna* (Water flea) ; semi-static test; OECD Test Guideline 202
In the range of water solubility not toxic under test conditions.
(literature value)

hexadecan-1-ol:
(48 h) *Daphnia magna* (Water flea) ; calculated; QSAR
(literature value)
In the range of water solubility not toxic under test conditions.

octadecan-1-ol:
(48 h) *Daphnia magna* (Water flea) ; static test; OECD Test Guideline 202
In the range of water solubility not toxic under test conditions.

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Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity

(literature value)

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):EC50 (48 h) Daphnia magna (Water flea): > 100 mg/l ; static test; OECD Test Guideline 202

own test results/literature values

tetradecanol:

NOEC (21 d) Daphnia magna (Water flea): $> 0.001 - 0.01$ mg/l; reproduction rate; semi-static test; OECD Test Guideline 211; (literature value)

hexadecan-1-ol:

The study is not necessary.

Sufficient information is available to predict no toxicity at the limit of solubility.

octadecan-1-ol:

NOEC (21 d) Daphnia magna (Water flea); reproduction rate; flow-through test; EPA OPPTS 850.1300; (literature value)

In the range of water solubility not toxic under test conditions.

Test substance: Octadecanol, branched

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

No data available

Toxicity to aquatic plants

tetradecanol:

EL50 (96 h) Desmodesmus subspicatus (green algae) ; static test; In the range of water solubility not toxic under test conditions.

(literature value)

hexadecan-1-ol:

(96 h) Desmodesmus subspicatus (green algae) ; static test; OECD Test Guideline 201; (literature value)

In the range of water solubility not toxic under test conditions.

octadecan-1-ol:

(96 h) Desmodesmus subspicatus (green algae) ; static test; OECD Test Guideline 201; In the range of water solubility not toxic under test conditions. (literature value)

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

No data available

Toxicity to bacteria

tetradecanol:

No data available

hexadecan-1-ol:

No data available

octadecan-1-ol:

No data available

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):EC10 (16 h) Pseudomonas putida: $< 10,000$ mg/l; Cell multiplication inhibition test; DIN 38412

Category approach

Toxicity to soil dwelling organisms

tetradecanol:

LC50 (72 h) Caenorhabditis elegans, Worm (Nematoda): $> 1,000$ mg/kg; mortality (literature value)

tetradecanol:

EC50 (7 d) Folsomia candida, Arthropod (Collembola): 530 mg/kg; Immobilization (literature value)

hexadecan-1-ol:

No data available

octadecan-1-ol:

No data available

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

No data available

Toxicity to terrestrial floraAlcohols, C16-18, ethoxylated (≥ 2.5 EO):

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No data available

12.2 Persistence and degradability**Biodegradability**

tetradecanol:

Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B (literature value)

hexadecan-1-ol:

Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B (literature value)

hexadecan-1-ol:

Biodegradable; > 60 %; 28 d; anaerobic (literature value)

octadecan-1-ol:

Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B (literature value)

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B own test results/literature values

12.3 Bioaccumulative potential**Bioaccumulation**

tetradecanol:

Bioaccumulation is unlikely.

hexadecan-1-ol:

Bioaccumulation is unlikely.

octadecan-1-ol:

Bioaccumulation is unlikely.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

Bioaccumulation is unlikely.

12.4 Mobility in soil**Mobility**

tetradecanol:

Adsorption/Soil; Koc: 50828; log Koc: 4.71; calculated immobile

strong adsorption to soil

The substance and its relevant degradation products decompose rapidly.

hexadecan-1-ol:

Adsorption/Soil; Koc: 143000; log Koc: 5.15; calculated immobile

strong adsorption to soil

The substance and its relevant degradation products decompose rapidly.

octadecan-1-ol:

Adsorption/Soil; Koc: 471350; log Koc: 5.67; OECD Test Guideline 106 immobile

strong adsorption to soil

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

Adsorption/Soil; Koc: > 5000; QSAR

immobile

strong adsorption to soil

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

tetradecanol:

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

This substance is not considered to be very persistent and very bioaccumulating

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(vPvB).

hexadecan-1-ol:

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).

octadecan-1-ol:

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).

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

Based on available data, the classification criteria are not met.

12.6 Other adverse effects**General advice**

tetradecanol:

Very toxic to aquatic life with long lasting effects.

hexadecan-1-ol:

None known.

octadecan-1-ol:

None known.

Alcohols, C16-18, ethoxylated (≥ 2.5 EO):

None known.

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

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**

ADR

Not dangerous goods

RID

Not dangerous goods

ADN

Not dangerous goods

IMDG

Not dangerous goods

ICAO/IATA

Not dangerous goods

14.2 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

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

Not classified as dangerous in the meaning of transport regulations.

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:: Not applicable
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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**tetradecanol**

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

hexadecan-1-ol

A Chemical Safety Assessment has been carried out for this substance. An annex to the MSDS is not required.

octadecan-1-ol

A Chemical Safety Assessment has been carried out for this substance. An annex to the MSDS is not required.

Alcohols, C16-18, ethoxylated (≥ 2.5 moles EO) (CAS: 68439-49-6)

A Chemical Safety Assessment is not required for this substance (exempted from obligation to register).

SECTION 16: OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3.**

H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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Safety datasheet sections which have been updated:

- 8. Exposure controls/personal protection
- 11. Toxicological information
- 12. Ecological information
- 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
IUPAC	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.



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tetradecanol

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000000101_EN_01.pdf

hexadecan-1-ol

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000000062_EN_01.pdf

octadecan-1-ol

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000000063_EN_01.pdf
