

# Safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH)

Date of issue: 23.01.2020      Supersedes edition of: 06.02.2018

## SECTION 1: Identification of the substance / mixture and of the company / undertaking

### 1.1 Product identifier

Product name:            Lino Stripper

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

Identified uses: Basic cleaner

### 1.3 Details of the supplier of the safety data sheet

Company:                Otto Oehme GmbH  
                              Industriestraße 20  
                              D-90584 Allersberg Deutschland  
                              Tel. +49 9176 98050  
                              info@oehme-lorito.de

### 1.4 Emergency telephone number

GIZ Nord Poisons Center, Göttingen Tel. +49 (0) 551 19240

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

*Classification (Regulation (EC) No. 1272/2008)*

Eye Irrit. 2, H319

Full text of hazard statements: See under section 16.

### 2.2 Label elements

*Labelling (Regulation (EC) No. 1272/2008)*

*Hazard pictograms:*



*Signal word:*

Warning

*Hazard statements:*

H319 Causes serious eye irritation.

EUH208 Contains: 1-(2,3,8,8-tetramethyl-1,3,4,5,6,7-hexahydronaphthalen-2-yl)ethanone. May produce an allergic reaction.

*Precautionary statements:*

P280 Wear protective gloves/eye protection.

P337 + P313 If eye irritation persists: Get medical advice/attention.

**2.3 Other hazards**

May cause allergic reactions.

**SECTION 3: Composition / information on ingredients**

Solution in water.

*Hazardous components (Regulation (EC) No. 1272/2008)*

<i>Chemical name</i>				<i>Content</i>
<i>CAS-No.</i>	<i>EC-No.</i>	<i>EC-Index-No.</i>	<i>Classification according to EC-Regulation</i>	
2-(2-Butoxyethoxy)ethanol				< 10 %
112-34-5	203-961-6	603-096-00-8	Eye Irrit. 2, H319	
REACH Registration Number: 01-2119475104-44				
Ethanol				< 10 %
64-17-5	200-578-6	603-002-00-5	Flam. Liq. 2, H225 Eye Irrit. 2, H319	
REACH Registration Number: 01-2119457610-43				
Ethyl methyl ketone				< 0.1 %
78-93-3	201-159-0	606-002-00-3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	
REACH Registration Number: 01-2119457290-43				
1-Butoxy-2-propanol and isomeres				< 10 %
5131-66-8	225-878-4	603-052-00-8	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319	
REACH Registration Number: 01-2119475527-28				
Sodium p-cumenesulphonate				< 10 %
15763-76-5	239-854-6		Eye Irrit. 2, H319	
REACH Registration Number: 01-2119489411-37				
Tetrapotassium pyrophosphate				< 10 %
7320-34-5	230-785-7		Eye Irrit. 2, H319	
REACH Registration Number: 01-2119457610-43				
Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt (*)				< 5 %
			Met. Corr. 1, H290	
Alcohols, C10-12, ethoxylated propoxylated (*)				< 10 %
68154-97-2			Eye Irrit. 2, H319	

(\*) A registration number is not available for this substance as the substance or its use is exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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## **SECTION 4: First aid measures**

### **4.1 Description of first aid measures**

After inhalation: Fresh air. Call in physician if feeling unwell.

After skin contact: Wash off with plenty of water. Remove contaminated clothing. Consult a physician if skin irritations occur.

After eye contact: Rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist.

After swallowing: Make victim drink plenty of water (two glasses at most), avoid vomiting. Call in physician.

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

Irritant effects, shortness of breath, dizziness, diarrhoea, nausea, CNS disorders, respiratory paralysis, dermatitis, narcosis, inebriation, euphoria, vomiting.

Drying-out effect resulting in rough and chapped skin.

### **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*

Carbon dioxide, foam, dry powder.

*Unsuitable extinguishing media*

For this substance / mixture no limitations of extinguishing agents are given.

### **5.2 Special hazards arising from the substance or mixture**

Contains combustible material. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air at ambient temperatures. Pay attention to flashback. Development of hazardous combustion gases or vapours possible in the event of fire.

### **5.3 Advice for firefighters**

*Special protective equipment for firefighters*

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

*Further information*

Prevent fire-fighting water from entering surface water or groundwater.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Caution: Risk of slipping.

Do not inhale vapours/aerosols. Avoid substance contact. Use personal protective equipment as required, see section 8.2. Ensure supply of fresh air in enclosed rooms. In case of inadequate ventilation wear respiratory protection.

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## 6.2 Environmental precautions

Do not get undiluted into sewerage system.

## 6.3 Methods and material for containment and cleaning up

Take up with incombustible liquid-absorbent material. Forward for disposal. Clean up affected area.

## 6.4 Reference to other sections

Indications about waste treatment see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### *Notes for safe handling*

Ensure adequate ventilation. Avoid contact with skin and eyes. Do not inhale vapours/aerosols. Avoid generation of vapours/aerosols. See section 8.

#### *Notes for prevention of fire and explosion*

Not required.

### 7.2 Conditions for safe storage, including any incompatibilities

Store cool above 5 °C. Keep away from sun and heat. Tightly closed in a well-ventilated place.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### *2-(2-Butoxyethoxy)ethanol*

ECTLV

Name	2-(2-Butoxyethoxy)ethanol
Limit value 8 hours	10 ppm 67.5 mg/m <sup>3</sup>

Short term (< 15 min.)	15 ppm 101.2 mg/m <sup>3</sup>
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EH40 WEL

Name	2-(2-Butoxyethoxy)ethanol
Short term exposure limit (STEL)	15 ppm 101.2 mg/m <sup>3</sup>

Time weighted average (TWA)	10 ppm 67.5 mg/m <sup>3</sup>
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#### *Ethanol*

EH40 WEL

Name	Ethanol
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Time weighted average (TWA) 1000 ppm  
 1920 mg/m<sup>3</sup>

*Ethyl methyl ketone*

ECTLV

Name Butan-2-one  
 Limit value 8 hours 200 ppm  
 600 mg/m<sup>3</sup>

Short term (< 15 min.) 300 ppm  
 900 mg/m<sup>3</sup>

EH40 WEL

Name

Butan-2-one

Short term exposure limit (STEL) 300 ppm  
 899 mg/m<sup>3</sup>

Time weighted average (TWA) 200 ppm  
 600 mg/m<sup>3</sup>

Skin designation Can be absorbed through the skin.

**8.2 Exposure controls***Individual protection measures*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

**Eye / face protection:**

Eye protection (EN 166).

**Hand protection:**

Material: Nitrile rubber.

Thickness: 0.381 mm

Breakthrough time: > 480 min

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN 374, e.g. Franz Mensch Nitrile Professional.

This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

**Respiratory protection:**

Required when vapours/aerosols are generated. Filter A2 P2 (EN 14387).

*Hygiene measures*

Change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Form: liquid  
 Colour: pale yellow

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Odour:	perfumed
pH value	9
Melting point	not specified
Boiling point	not specified
Ignition temperature	not applicable
Flash point	> 65 °C
Explosion limits	lower > 1.3 % (Ethanol)
	upper 15 % (Ethanol)
Density (23 °C)	~ 1.0 g/cm <sup>3</sup>
Viscosity, dynamic	not specified
Solubility in water	soluble

## 9.2 Other information

None.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Forms explosive mixtures on intense heating.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

### 10.3 Possibility of hazardous reactions

Risk of explosion/exothermic reaction with:

Hydrogen peroxide, perchlorates, perchloric acid, nitric acid, mercury(II) nitrate, permanganic acid, nitriles, peroxy compounds, strong oxidizing agents, nitrosyl compounds, peroxides, sodium, potassium, halogen oxides, calcium hypochlorite, nitrogen dioxide, metallic oxides, uranium hexafluoride, iodides, chlorine, alkali metals, alkaline earth metals, alkali oxides, ethylene oxide potassium permanganate, sulfuric acid, aluminium

Risk of ignition or formation of inflammable gases or vapours with:

Halogen-halogen compounds, chromium(VI) oxide, chromyl chloride, fluorine, hydrides, oxides of phosphorus, platinum.

### 10.4 Conditions to avoid

Warming.

### 10.5 Incompatible materials

Aluminium, light metals. Rubber, various plastics. Strong oxidizing agents, strong acids.

### 10.6 Hazardous decomposition products

No information available.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

LD<sub>50</sub> rat: 5660 mg/kg (RTECS; 2-(2-Butoxyethoxy)ethanol)

Symptoms: Nausea, diarrhoea, shortness of breath.

LD<sub>50</sub> rat: 10470 mg/kg (OECD 401; Ethanol)

Symptoms: Nausea, vomiting.

LD<sub>50</sub> rat: > 2000 mg/kg (external MSDS; Ethanol)

Symptoms: Dermatitis, drying-out effect resulting in rough and chapped skin.

LD<sub>50</sub> rat: 3300 mg/kg (OECD 401; 1-Butoxy-2-propanol)

LD<sub>50</sub> rat: > 2000 mg/kg (OECD 404; Sodium p-cumenesulphonate)

LD<sub>50</sub> rat: > 2000 mg/kg (external MSDS; Tetrapotassium pyrophosphate)

LD<sub>50</sub> rat: > 4000 mg/kg (92/69/EC, B.1; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt)

LD<sub>50</sub> rat: > 5000 mg/kg (OECD 401; Alcohols, C10-12, ethoxylated propoxylated)

#### *Acute dermal toxicity*

LD<sub>50</sub> rabbit: 2764 mg/kg (ECHA; 2-(2-Butoxyethoxy)ethanol)

LD<sub>50</sub> rat: > 2000 mg/kg (OECD 402; 1-Butoxy-2-propanol)

LD<sub>50</sub> rat: > 2000 mg/kg (external MSDS; Sodium p-cumenesulphonate)

LD<sub>50</sub> rabbit: > 4000 mg/kg (OECD 402; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt)

#### *Acute inhalation toxicity*

Symptoms: Possible damages: Mucosal irritations (external MSDS; 2-(2-Butoxyethoxy)ethanol).

LC<sub>50</sub> rat: 124.7 mg/l /4 h vapour (OECD 403; Ethanol)

Symptoms: Slight mucosal irritations, absorption.

LC<sub>50</sub> rat: > 3.4 mg/l /4 h (OECD 403; 1-Butoxy-2-propanol)

LC<sub>50</sub> rat: > 5 mg/kg /232 min (external MSDS; Sodium p-cumenesulphonate)

LC<sub>50</sub> rat: > 5 mg/l (external MSDS; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt)

#### *Skin irritation*

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product (external MSDS; 2-(2-Butoxyethoxy)ethanol).

Rabbit: No irritation (OECD 404; Ethanol).

Rabbit: Skin irritation (OECD 404; 1-Butoxy-2-propanol).

Rabbit: No irritation (OECD 404; Sodium p-cumenesulphonate).

No irritation (external MSDS; Tetrapotassium pyrophosphate).

Rabbit: No irritation (OECD 404; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

Rabbit: Irritation (OECD 404; Alcohols, C10-12, ethoxylated propoxylated).

#### *Eye irritation*

Rabbit: Eye irritation. Causes serious eye irritation (RTECS; 2-(2-Butoxyethoxy)ethanol).

Rabbit: Eye irritation (OECD 405; Ethanol).

Causes serious eye irritation.

Rabbit: Eye irritation. Causes serious eye irritation (OECD 405; 1-Butoxy-2-propanol).

Rabbit: Eye irritation. Causes serious eye irritation (OECD 405; Sodium p-cumenesulphonate).

Eye irritation. (external MSDS; Tetrapotassium pyrophosphate).

Rabbit: No irritation. (OECD 405; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

Rabbit: Causes serious eye irritation (OECD 405; Alcohols, C10-12, ethoxylated propoxylated).

Causes serious eye damage.

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### *Sensitisation*

Sensitisation test (Magnusson and Kligman): Negative (IUCLID; Ethanol).  
Sensitisation test (Bühler-test): Guinea pig: Negative (OECD 406, 1-Butoxy-2-propanol).  
Sensitisation test (Buehler-Test): Negative (OECD 406; Sodium p-cumenesulphonate).  
Sensitisation test: Guinea pig: Negative (OECD 406, Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

### *Genotoxicity in vivo*

Negative (OECD 473; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

### *Genotoxicity in vitro*

Ames test: Salmonella typhimurium: Negative (National Toxicology Program; 2-(2-Butoxyethoxy)ethanol).  
Ames test: Salmonella typhimurium: Negative (National Toxicology Program; Ethanol).  
Mutagenicity (mammal cell test): Mouse lymphoma test: Negative (OECD 476; Ethanol).  
Ames test: Bacteria: Negative (OECD 471; Sodium p-cumenesulphonate).  
Mutagenicity (mammal cell test): Micronucleus: Negative (92/69/EC, B.12; Sodium p-cumenesulphonate).  
Ames Test: Negative (OECD 471; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).  
Ames Test: Negative (OECD 472; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).  
Mutagenicity (mammal cell test): Micronucleus: Negative (OECD 474; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).  
HGPR Test: Negative (OECD 476; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).  
Ames test: Salmonella typhimurium: Negative (OECD 471; Alcohols, C10-12, ethoxylated propoxylated).

### *Carcinogenicity*

Did not show carcinogenic effects in animal experiments (external MSDS; 1-Butoxy-2-propanol).  
Did not show carcinogenic effects in animal experiments (OECD 453; Sodium p-cumenesulphonate).  
Rat: Did not show carcinogenic effects in animal experiments (external MSDS; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

### *Mutagenicity*

Bacteria: No evidence of genotoxic potential (external MSDS; 1-Butoxy-2-propanol).  
Mammal cell cultures: Positive (external MSDS; 1-Butoxy-2-propanol).  
Mammals: No evidence of mutagen potential (external MSDS; 1-Butoxy-2-propanol).  
Bacteria: No evidence of genotoxic potential (external MSDS; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).  
Mammal cell cultures: Positive (external MSDS; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).  
Mammals: No evidence of mutagen potential (external MSDS; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

### *Reproductive toxicity*

No impairment of reproductive performance in animal experiments (external MSDS; 1-Butoxy-2-propanol).  
No impairment of reproductive performance in animal experiments (external MSDS; Sodium p-cumenesulphonate).



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No impairment of reproductive performance in animal experiments (OECD 421/422; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

#### *Teratogenicity*

Did not show teratogenic effects in animal experiments (external MSDS; 1-Butoxy-2-propanol).  
Did not show teratogenic effects in animal experiments (external MSDS; Sodium p-cumenesulphonate).

Did not show teratogenic effects in animal experiments (external MSDS; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

#### *Specific target organ toxicity – single exposure*

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

#### *Specific target organ toxicity – repeated exposure*

May cause Damage to: Liver, kidney (external MSDS; 1-Butoxy-2-propanol).

May cause Damage to: Kidney (OECD 453; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

#### *Aspiration hazard*

No aspiration toxicity classification.

### 11.2 Further information

Chronic intoxication: Systemic effects: CNS disorders, dizziness. Damage to: Liver, kidney.

Systemic effects: Euphoria.

After absorption of large quantities: Dizziness, inebriation, narcosis, respiratory paralysis.

Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### *Toxicity to fish*

Lepomis macrochirus LC<sub>50</sub>: 1300 mg/l /48 h (OECD 203; ECHA; 2-(2-Butoxyethoxy)ethanol)

Leuciscus idus LC<sub>50</sub>: 8140 mg/l /48 h (IUCLID; Ethanol)

Poecilia reticulata LC<sub>50</sub>: > 560 – 1000 mg/l /96 h (OECD 203; 1-Butoxy-2-propanol)

Oncorhynchus mykiss LC<sub>50</sub>: > 100 mg/l /96 h (external MSDS; Sodium p-cumenesulphonate)

Brachydanio rerio LC<sub>50</sub>: > 200 mg/l /96 h (OECD 203; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

Oncorhynchus mykiss: NOEC: >= 200 mg/l /28 d (OECD 204; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

#### *Toxicity to daphnia and other aquatic invertebrates*

Daphnia magna: EC<sub>50</sub>: >100 mg/l /48 h (OECD 202; 2-(2-Butoxyethoxy)ethanol)

Daphnia magna: EC<sub>50</sub>: 9268-14221 mg/l /48 h (IUCLID; Ethanol)

Entosiphon sulcatum: EC<sub>5</sub>: 65 mg/l /72 h (maximum permissible toxic concentration; external MSDS; Ethanol)

Daphnia magna: EC<sub>50</sub>: > 1000 mg/l /48 h (OECD 202; 1-Butoxy-2-propanol)

Daphnia magna: EC<sub>50</sub>: > 100 mg/l /48 h (OECD 202; Sodium p-cumenesulphonate)

Daphnia magna: EC<sub>50</sub>: > 200 mg/l /48 h (OECD 202; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

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Daphnia magna: NOEC:  $\geq 200$  mg/l /21 d (OECD 202; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).  
 Daphnia magna: EC<sub>50</sub>:  $> 1 - 10$  mg/l /48 h (OECD 202; Alcohols, C10-12, ethoxylated propoxylated)

#### *Toxicity to algae*

Scenedesmus quadricauda: IC<sub>5</sub>: 5000 mg/l / 7 d (maximum permissible toxic concentration; external MSDS; Ethanol)

Pseudokirchneriella subspicatus EC<sub>50</sub>:  $> 1000$  mg/l / 96 h (external MSDS; 1-Butoxy-2-propanol)

Pseudokirchneriella subspicatus EC<sub>50</sub>:  $> 100$  mg/l / 96 h (external MSDS; Sodium p-cumenesulphonate)

Scenedesmus subspicatus EC<sub>50</sub>:  $> 200$  mg/l /72 h (92/69/EC, C.3; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

Desmodesmus subspicatus: EC<sub>10</sub>:  $> 1 - 10$  mg/l /72 h (OECD 201; Alcohols, C10-12, ethoxylated propoxylated)

Desmodesmus subspicatus: EC<sub>50</sub>:  $> 10 - 100$  mg/l /72 h (OECD 201; Alcohols, C10-12, ethoxylated propoxylated)

#### *Toxicity to bacteria*

Pseudomonas putida EC<sub>5</sub>: 6500 mg/l /16 h (maximum permissible toxic concentration; IUCLID; Ethanol)

Activated sludge: EC<sub>50</sub>:  $> 1000$  mg/l /180 min (OECD 209; 1-Butoxy-2-propanol)

Activated sludge: EC<sub>10</sub>:  $> 1000$  mg/l /180 min (OECD 209; Sodium p-cumenesulphonate)

Activated sludge EC<sub>50</sub>:  $> 2000$  mg/l /0.5 h (OECD 209; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

Pseudomonas putida EC<sub>50</sub>:  $> 10000$  mg/l /17 h (ISO 10712; Alcohols, C10-12, ethoxylated propoxylated)

## 12.2 Persistence and degradability

### *Biodegradability*

The surfactants contained in this preparation 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.

Biodegradation: 85 % /28 d (OECD 301 C; 2-(2-Butoxyethoxy)ethanol)

Readily biodegradable (2-(2-Butoxyethoxy)ethanol)

Biodegradation: 94 % (OECD 301E; Ethanol)

Readily biodegradable (Ethanol)

Biodegradation: 90 % /28 d (OECD 301E; 1-Butoxy-2-propanol)

Readily biodegradable (1-Butoxy-2-propanol)

Biodegradation:  $> 60$  % /28 d (OECD 301B; Sodium p-cumenesulphonate)

Readily biodegradable (Sodium p-cumenesulphonate)

Biodegradation: 80 – 90 % /28 d (OECD 301F; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt)

Readily biodegradable (Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt)

Biodegradation:  $> 60$  % /28 d (OECD 301B; Alcohols, C10-12, ethoxylated propoxylated)

Readily biodegradable (Alcohols, C10-12, ethoxylated propoxylated)

### *Biochemical oxygen demand (BOD)*

930-1670 mg/g /5 d (external MSDS; Ethanol)

### *Theoretical oxygen demand (ThOD)*

2100 mg/g (external MSDS; Ethanol)

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**Ratio COD / ThBOD**

96 % (ECHA; 2-(2-Butoxyethoxy)ethanol)

90 % (external MSDS; Ethanol)

**12.3 Bioaccumulative potential**

Partition coefficient: n-octanol / water: log P<sub>OW</sub>: 0.56 (25 °C) (external MSDS; 2-(2-Butoxyethoxy)ethanol).

No bioaccumulation is to be expected (2-(2-Butoxyethoxy)ethanol).

Partition coefficient: n-octanol / water: log P<sub>OW</sub>: -0.31 (external MSDS; Ethanol).

No bioaccumulation is to be expected (Ethanol).

No bioaccumulation is to be expected (1-Butoxy-2-propanol).

No bioaccumulation is to be expected (Sodium p-cumenesulphonate).

No bioaccumulation is to be expected (Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

**12.4 Mobility in soil**

A binding to the solid phase of the soil is not expected (external MSDS; Reaction mass of (2S)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt and (2R)-Alanine, N,N-bis(carboxymethyl)-, trisodiumsalt).

**12.5 Results of PBT and vPvB assessment**

PBT / vPvB assessment not available as chemical safety assessment not required / not conducted.

**12.6 Other adverse effects**

*Additional ecological information:*

Do not allow to enter waters, waste water, or soil!

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

*Product:*

Chemicals must be disposed of in compliance with the respective national regulations.

Code of the waste

200129\*

070601\*

Name according to directive 2000/532/EC:

detergents containing dangerous substances.

aqueous washing liquids and mother liquors.

*Packaging:*

Product packaging must be disposed of in compliance with the country-specific regulations or must be to a packaging return system.

**SECTION 14: Transport information**

Not classified as dangerous in the meaning of transport regulations.

## **SECTION 15: Regulatory information**

### **15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture**

*Regulation (EC) No. 1907/2006*

Non-ionic surfactants: Less than 5 %

Phosphates: Less than 5 %

Perfumes.

### **15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out.

## **SECTION 16: Other information**

*Reason for revision:*

SECTION 6: Accidental release measures

SECTION 8: Exposure controls/personal protection

SECTION 13: Disposal considerations

*Full text of hazard statements referred to under sections 2 and 3:*

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H290 May be corrosive to metals.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*