

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)



Trade name : STAR US 4  
Revision date : 15.07.2019  
Print date : 15.07.2019

Version (Revision) : 5.1.0 (5.0.0)

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

**1.1 Product identifier**

STAR US 4

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

**Relevant identified uses**

PC 35 - Washing and cleaning products

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

**Supplier (manufacturer/importer/only representative/downstream user/distributor)**

Bio-Circle Surface Technology GmbH

**Street :** Berensweg 200

**Postal code/city :** 33334 Gütersloh

**Telephone :** +49 5241 9443 0

**Telefax :** +49 5241 9443 44

**Information contact :** labor@bio-circle.de

**1.4 Emergency telephone number**

+49 5241 9443 51 during normal office hours

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

Skin Corr. 1B ; H314 - Skin corrosion/irritation : Category 1B ; Causes severe skin burns and eye damage.

Eye Dam. 1 ; H318 - Serious eye damage/eye irritation : Category 1 ; Causes serious eye damage.

**2.2 Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard pictograms**



Corrosion (GHS05)

**Signal word**

Danger

**Hazard components for labelling**

DISODIUM METASILICATE ; CAS No. : 6834-92-0

**Hazard statements**

H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P310 Immediately call a POISON CENTER/doctor/...

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

**2.3 Other hazards**

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None

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

DISODIUM METASILICATE ; REACH registration No. : 01-2119449811-37-XXXX ; EC No. : 229-912-9; CAS No. : 6834-92-0

Weight fraction :  $\geq 10 - < 20$  %

Classification 1272/2008 [CLP] : Skin Corr. 1B ; H314 Eye Dam. 1 ; H318 STOT SE 3 ; H335

ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; REACH registration No. : (Polymer) ; CAS No. : 68154-97-2

Weight fraction :  $\geq 5 - < 10$  %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

2-(2-BUTOXYETHOXY)ETHANOL ; REACH registration No. : 01-2119475104-44-XXXX ; EC No. : 203-961-6; CAS No. : 112-34-5

Weight fraction :  $\geq 5 - < 10$  %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

POTASSIUM CUMENESULFONATE ; REACH registration No. : 01-2119489427-24-XXXX ; EC No. : 248-827-8; CAS No. : 28085-69-0

Weight fraction :  $\geq 1 - < 5$  %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

SODIUM CUMENESULPHONATE ; REACH registration No. : 01-2119489411-37-XXXX ; EC No. : 248-983-7; CAS No. : 28348-53-0

Weight fraction :  $\geq 1 - < 5$  %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; REACH registration No. : 01-0000016977-53-XXXX ; CAS No. : 164462-16-2

Weight fraction :  $\geq 1 - < 5$  %

Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290

#### Additional information

Full text of H- and EUH-phrases: see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice.

#### Following inhalation

In case of respiratory tract irritation, consult a physician. Remove casualty to fresh air and keep warm and at rest.

#### In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Rub greasy ointment into the skin.

#### After eye contact

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

#### After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

Causes severe skin burns and eye damage.

### 4.3 Indication of any immediate medical attention and special treatment needed

None

## SECTION 5: Firefighting measures

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**5.1 Extinguishing media**

**Suitable extinguishing media**

Water Foam Extinguishing powder Carbon dioxide (CO<sub>2</sub>) Sand Nitrogen Extinguishing blanket

**Unsuitable extinguishing media**

Full water jet

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

**Hazardous combustion products**

Carbon dioxide (CO<sub>2</sub>) Carbon monoxide

**5.3 Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

**5.4 Additional information**

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings. Fire fighting water forms corrosive alkaline solutions - slip hazard! Move undamaged containers from immediate hazard area if it can be done safely.

**SECTION 6: Accidental release measures**

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

Special danger of slipping by leaking/spilling product.

**6.2 Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

**6.3 Methods and material for containment and cleaning up**

Clear spills immediately. Wipe up with absorbent material (eg. cloth, fleece). Wash with plenty of water. Treat the recovered material as prescribed in the section on waste disposal.

**6.4 Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Do not breathe gas/fumes/vapour/spray. Keep container tightly closed.

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

Keep locked up. Keep/Store only in original container. Protect against Frost

**Hints on joint storage**

Storage class (TRGS 510) : 8B

**7.3 Specific end use(s)**

Observe technical data sheet. Observe instructions for use.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limit values**

2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5

Limit value type (country of origin) : TRGS 900 ( D )

Limit value : 10 ppm / 67 mg/m<sup>3</sup>

Peak limitation : 1,5(l)

Remark : Y

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Version : 07.06.2018  
Limit value type (country of origin) : STEL ( EC )  
Limit value : 15 ppm / 101,2 mg/m<sup>3</sup>  
Version : 31.01.2018  
Limit value type (country of origin) : TWA ( EC )  
Limit value : 10 ppm / 67,5 mg/m<sup>3</sup>  
Version : 31.01.2018

**DNEL/DMEL and PNEC values**

**DNEL/DMEL**

Limit value type : DNEL worker (systemic) ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 6,22 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )  
Exposure route : Dermal  
Exposure frequency : Long-term (repeated)  
Limit value : 1,49 mg/kg  
Limit value type : DNEL worker (local) ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 67,5 mg/m<sup>3</sup>  
Limit value type : DNEL worker (local) ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Exposure route : Inhalation  
Exposure frequency : Short-term (acute)  
Limit value : 101,2 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 67,5 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Exposure route : Dermal  
Exposure frequency : Long-term (repeated)  
Limit value : 20 mg/kg  
Limit value type : DNEL worker (systemic) ( POTASSIUM CUMENESULFONATE ; CAS No. : 28085-69-0 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 53,6 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 53,6 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Exposure route : Dermal  
Exposure frequency : Long-term (repeated)  
Limit value : 7,6 mg/kg  
Limit value type : DNEL worker (systemic) ( POTASSIUM CUMENESULFONATE ; CAS No. : 28085-69-0 )  
Exposure route : Dermal  
Exposure frequency : Long-term (repeated)  
Limit value : 7,6 mg/kg  
Limit value type : DNEL worker (local) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Inhalation  
Exposure frequency : Short-term (acute)  
Limit value : 40 mg/m<sup>3</sup>

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Limit value type : DNEL worker (local) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 4 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Inhalation  
Exposure frequency : Short-term (acute)  
Limit value : 40 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 40 mg/m<sup>3</sup>

## PNEC

Limit value type : PNEC (Aquatic, freshwater) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Water (Including sewage plant)  
Limit value : 2 mg/l  
Limit value type : PNEC (Aquatic, marine water) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Water (Including sewage plant)  
Limit value : 0,2 mg/l  
Limit value type : PNEC (Sediment, freshwater) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Limit value : 24 mg/kg  
Limit value type : PNEC soil, freshwater ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Soil  
Limit value : 2,5 mg/kg  
Limit value type : PNEC (Sewage treatment plant) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Water (Including sewage plant)  
Limit value : 100 mg/l

## 8.2 Exposure controls

### Personal protection equipment

#### Eye/face protection



Wear suitable safety goggles in case of splash.

**Suitable eye protection**  
EN 166.

#### Skin protection

##### Hand protection



Wear protective gloves in case of longer lasting skin contact.

**Suitable gloves type** : EN 374.

**Suitable material** : NBR (Nitrile rubber)

**Breakthrough time (maximum wearing time)** : 480 min.

**Thickness of the glove material** : 0.4 mm

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**Remark** : The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

## Respiratory protection



Respiratory protection necessary at: exceeding exposure limit values

### Suitable respiratory protection apparatus

Combination filtering device (EN 14387)

Type : A

### Remark

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

## General health and safety measures

Do not put any product-impregnated cleaning rags into your trouser pockets. Do not put any product-impregnated cleaning rags into your trouser pockets. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. P362+P364 - Take off contaminated clothing and wash it before reuse. P264 - Wash hands thoroughly after handling.

## 8.3 Additional information

No tests have been performed. Selection made for preparations according to the best available knowledge and information on ingredients. In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance** : Liquid

**Colour** : translucent

**Odour** : odourless

### Safety relevant basis data

<b>Initial boiling point and boiling range</b> ( 1013 hPa )	approx.	95 °C
<b>Flash point</b> :		not relevant
<b>Ignition temperature</b> :		not relevant
<b>Lower explosion limit</b> :		not relevant
<b>Upper explosion limit</b> :		not relevant
<b>Density</b> : ( 20 °C )	approx.	1,09 g/cm <sup>3</sup>
<b>pH</b> :		13 - 14
<b>Maximum VOC content (EC)</b> :		0 Wt %
<b>Maximum VOC content (Switzerland)</b> :		5 Wt %

### 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

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**10.3 Possibility of hazardous reactions**

Exothermic reaction with: Acid

**10.4 Conditions to avoid**

No information available.

**10.5 Incompatible materials**

No information available.

**10.6 Hazardous decomposition products**

No information available.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute effects**

**Acute oral toxicity**

Parameter : LD50 ( ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2 )  
Exposure route : Oral  
Species : Rat  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Oral  
Species : Rat  
Effective dose : > 4000 mg/kg  
Parameter : LD50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 28085-69-0 )  
Exposure route : Oral  
Species : Rat  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Exposure route : Oral  
Species : Rat  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )  
Exposure route : Oral  
Species : Mouse  
Effective dose : 770 - 820 mg/kg  
Parameter : LD50 ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 1152 - 1349 mg/kg  
Parameter : LD50 ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Exposure route : Oral  
Species : Mouse  
Effective dose : 5530 mg/kg  
Method : OECD 401

**Acute dermal toxicity**

Parameter : LD50 ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Dermal  
Species : Rat  
Effective dose : > 4000 mg/kg  
Method : OECD 402  
Parameter : LD50 ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Exposure route : Dermal

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Species : Rat  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )  
Exposure route : Dermal  
Species : Rat  
Effective dose : > 5000 mg/kg  
Parameter : LD50 ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 2764 mg/kg  
Method : OECD 402

### Acute inhalation toxicity

Parameter : LC50 ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 5 mg/l  
Parameter : LC50 ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 2,06 mg/l  
Exposure time : 4 h  
Parameter : LC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 5 mg/l  
Exposure time : 4 h

### Irritant and corrosive effects

#### Primary irritation to the skin

No further relevant information available.

#### Irritation to eyes

No further relevant information available.

### Sensitisation

#### In case of skin contact

No further relevant information available.

#### In case of inhalation

No further relevant information available.

### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

#### Carcinogenicity

No further relevant information available.

#### Germ cell mutagenicity

No further relevant information available.

#### Reproductive toxicity

No further relevant information available.

### STOT-single exposure

No further relevant information available.

### STOT-repeated exposure

No further relevant information available.

### Aspiration hazard

No further relevant information available.

### 11.2 Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

### 11.3 Other adverse effects



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May be absorbed through the skin. Has degreasing effect on the skin.

#### 11.4 Additional information

Preparation not tested. The statement is derived from the properties of the single components.

### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Aquatic toxicity

###### Acute (short-term) fish toxicity

Parameter :	Acute (short-term) fish toxicity ( ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2 )
Species :	Brachydanio rerio (zebra-fish)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 1 - 10 mg/l
Exposure time :	96 h
Method :	OECD 203
Parameter :	LC50 ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )
Species :	Brachydanio rerio (zebra-fish)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 110 mg/l
Exposure time :	96 h
Method :	Regulation (EC) No. 440/2008, Annex, C.1
Parameter :	LC50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 28085-69-0 )
Species :	Cyprinus carpio (Common Carp)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 100 mg/l
Exposure time :	96 h
Parameter :	LC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )
Species :	Cyprinus carpio (Common Carp)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 100 mg/kg
Exposure time :	96 h
Parameter :	LC50 ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )
Species :	Lepomis macrochirus (Bluegill)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	1300 mg/l
Exposure time :	96 h
Method :	OECD 203
Parameter :	LC50 ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )
Species :	Fish
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	2320 mg/l
Exposure time :	96 h

###### Chronic (long-term) fish toxicity

Parameter :	NOEC ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	= 100 mg/l
Exposure time :	28 d
Method :	OECD 204

###### Acute (short-term) daphnia toxicity

Parameter :	EC50 ( ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2 )
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Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 1 - 10 mg/l  
Exposure time : 48 h  
Method : OECD 202  
Parameter : EC50 ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )

Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h  
Method : Regulation (EC) No. 440/2008, Annex, C.2  
Parameter : EC50 ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )

Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 1700 mg/l  
Exposure time : 48 h  
Method : OECD 202  
Parameter : EC50 ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )

Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 207 mg/l  
Exposure time : 72 h  
Method : DIN 38412 / part 9  
Parameter : EC50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 28085-69-0 )

Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )

Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h  
Method : OECD 202

**Chronic (long-term) daphnia toxicity**  
Parameter : NOEC ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : >= 100 mg/l  
Exposure time : 21 d  
Method : Regulation (EC) No. 440/2008, Annex, C.20

**Acute (short-term) algae toxicity**  
Parameter : ErC50 ( ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2 )  
Species : Selenastrum capricornutum  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 1 - 10 mg/l  
Exposure time : 72 h  
Parameter : EC50 ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 200 mg/l  
Exposure time : 72 h

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Parameter : EC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Species : Desmodesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 100 mg/l  
Exposure time : 72 h  
Parameter : EC50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 28085-69-0 )  
Species : Desmodesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 100 mg/l  
Exposure time : 72 h  
Parameter : EC50 ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h  
Method : OECD 201

## Bacteria toxicity

Parameter : EC50 ( DISODIUM METASILICATE ; CAS No. : 6834-92-0 )  
Species : Bacteria toxicity  
Effective dose : > 100 mg/l  
Exposure time : 3 h  
Parameter : EC50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 28085-69-0 )  
Species : Bacteria toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 3 h  
Parameter : EC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Species : Bacteria toxicity  
Effective dose : > 1000 mg/l  
Parameter : EC10 ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Species : Bacteria toxicity  
Effective dose : > 1995 mg/l  
Exposure time : 30 min

## 12.2 Persistence and degradability

### Biodegradation

Parameter : Biodegradation ( ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Degradation rate : > 60 %  
Test duration : 28 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 301B  
Parameter : BOD (% of ThOD) ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2 )  
Inoculum : Degree of elimination  
Evaluation parameter : Aerobic  
Degradation rate : > 80 - 90 %  
Test duration : 28 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 301F  
Parameter : DOC reduction ( ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN

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WATER ; CAS No. : 164462-16-2 )  
Inoculum : Degree of elimination  
Evaluation parameter : Aerobic  
Degradation rate : > 90 - 100 %  
Test duration : 28 d  
Method : OECD 301F  
Parameter : Biodegradation ( POTASSIUM CUMENESULFONATE ; CAS No. : 28085-69-0 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Degradation rate : 99,8 %  
Test duration : 28 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 301B  
Parameter : Biodegradation ( SODIUM CUMENESULPHONATE ; CAS No. : 28348-53-0 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Degradation rate : 99,8 %  
Test duration : 28 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 301B  
Parameter : Biodegradation ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Inoculum : Biodegradation  
Degradation rate : 90 - 100 %  
Test duration : 14 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 301E  
Parameter : Biodegradation ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Inoculum : Biodegradation  
Degradation rate : 90 - 100 %  
Test duration : 8 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 302B

According to the recipe, contains no AOX. The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

## 12.3 Bioaccumulative potential

No indication of bioaccumulation potential.

## 12.4 Mobility in soil

No information available.

## 12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

## 12.6 Other adverse effects

No information available.

## 12.7 Additional ecotoxicological information

After neutralisation, reduction in toxic effects is observed.

## SECTION 13: Disposal considerations

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. List of proposed waste codes/waste designations in accordance with EWC

### 13.1 Waste treatment methods

#### Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

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07 06 01\* - aqueous washing liquids and mother liquors  
20 01 29\* - detergents containing dangerous substances.

**Waste code packaging**

15 01 02 - plastic packaging.

**Waste treatment options**

**Appropriate disposal / Package**

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Handle contaminated packages in the same way as the substance itself.

**Other disposal recommendations**

P501 - Dispose of contents/container to industrial incineration plant.

**13.2 Additional information**

These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use.

**SECTION 14: Transport information**

**14.1 UN number**

UN 1760

**14.2 UN proper shipping name**

**Land transport (ADR/RID)**

CORROSIVE LIQUID, N.O.S. ( DISODIUM TRIOXOSILICATE )

**Sea transport (IMDG)**

CORROSIVE LIQUID, N.O.S. ( DISODIUM TRIOXOSILICATE )

**Air transport (ICAO-TI / IATA-DGR)**

CORROSIVE LIQUID, N.O.S. ( DISODIUM TRIOXOSILICATE )

**14.3 Transport hazard class(es)**

**Land transport (ADR/RID)**

Class(es) : 8  
Classification code : C9  
Hazard identification number (Kemler No.) : 80  
Tunnel restriction code : E  
Special provisions : LQ 5 I · E 1  
Hazard label(s) :



8

**Sea transport (IMDG)**

Class(es) : 8  
EmS-No. : F-A / S-B  
Special provisions : LQ 5 I · E 1  
Hazard label(s) :



8

**Air transport (ICAO-TI / IATA-DGR)**

Class(es) : 8  
Special provisions : E 1

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Hazard label(s) :



8

#### 14.4 Packing group

III

#### 14.5 Environmental hazards

Land transport (ADR/RID) : No

Sea transport (IMDG) : No

Air transport (ICAO-TI / IATA-DGR) : No

#### 14.6 Special precautions for user

None

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No transport as bulk according to IBC Code.

### SECTION 15: Regulatory information

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

##### EU legislation

##### Authorisations and/or restrictions on use

##### Restrictions on use

Use restriction according to REACH annex XVII, no. : 3, 55

##### Restrictions of occupation

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).  
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

##### Other regulations (EU)

##### Labelling for contents according to regulation (EC) No. 648/2004

5 - 15 % non-ionic surfactants

5 - 15 % anionic surfactants

##### National regulations

AT: Labelling according to Austrian regulations (Chemikaliengesetz/ChemV).

CH: Chemikalienverordnung (ChemV) and Chemikalien-Risikoreduktions-Verordnung (Chem RRV) are complied.

##### Water hazard class (WGK)

Classification according to AwSV - Class : 2 (Significant hazardous to water)

#### 15.2 Chemical safety assessment

No information available.

### SECTION 16: Other information

#### 16.1 Indication of changes

15. Restrictions on use

#### 16.2 Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (Europäisches Übereinkommen über die Beförderung gefährlicher Güter auf der Straße)

AOX: adsorbierbare organisch gebundene Halogene

AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen

CAS: Chemical Abstracts Service (Unterabteilung der American Chemical Society)

CLP: Verordnung (EG) Nr. 1272/2008 über die Einstufung, Kennzeichnung und Verpackung von Stoffen und Gemischen (Classification Labelling and Packaging)

EAK / AVV: europäischer Abfallartenkatalog / Abfallverzeichnis-Verordnung

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ECHA: Europäische Chemikalienagentur (European Chemicals Agency)  
EINECS: : Altstoffverzeichnis (European Inventory of Existing Commercial Chemical Substances)  
GHS: Global harmonisiertes System zur Einstufung und Kennzeichnung von Chemikalien (Globally Harmonized System of Classification and Labelling of Chemicals)  
IATA: Internationale Luftverkehrs-Vereinigung (International Air Transport Association)  
ICAO: Internationale Zivilluftfahrtorganisation (International Civil Aviation Organization)  
IMDG: Gefahrgutkennzeichnung für gefährliche Güter im Seeschiffverkehr (International Maritime Code for Dangerous Goods)  
RID: Regelung zur internationalen Beförderung gefährlicher Güter im Schienenverkehr (Règlement concernant le transport international ferroviaire de marchandises dangereuses)  
TRGS: Technische Regel für den Umgang mit Gefahrstoffen  
VbF: Verordnung über brennbare Flüssigkeiten  
VOC: flüchtige organische Verbindung (volatile organic compound)  
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe  
WGK: Wassergefährdungsklasse

## 16.3 Key literature references and sources for data

DGUV: GESTIS-Stoffdatenbank  
ECHA: Classification And Labelling Inventory  
ECHA: Pre-registered Substances  
ECHA: Registered Substances  
EC\_Safety Data Sheet of Suppliers  
ESIS: European Chemical Substances Information System  
GDL: Gefahrstoffdatenbank der Länder  
UBA Rigoletto: Wassergefährdende Stoffe  
Regulation (EC) No. 1907/2006 of the European Parliament and of the Council  
Regulation (EC) No. 1272/2008 of the European Parliament and of the Council

## 16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

No information available.

## 16.5 Relevant H- and EUH-phrases (Number and full text)

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

## 16.6 Training advice

None

## 16.7 Additional information

None

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.