

# Safety Data Sheet

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



Trade name : STAR 100  
Revision date : 19.08.2019  
Print date : 21.08.2019

Version (Revision) : 4.0.1 (4.0.0)

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

### 1.1 Product identifier

STAR 100

### 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 Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.

Eye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.

### 2.2 Label elements

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

##### Hazard pictograms



Exclamation mark (GHS07)

##### Signal word

Warning

##### Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

##### Precautionary statements

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

P332+P313 If skin irritation occurs: Get medical advice/attention.

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

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

P302+P352 IF ON SKIN: Wash with plenty of water/....

### 2.3 Other hazards

None

## SECTION 3: Composition/information on ingredients

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## 3.2 Mixtures

### Hazardous ingredients

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

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

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

2-AMINOETHANOL ; REACH registration No. : 01-2119486455-28-XXXX ; EC No. : 205-483-3; CAS No. : 141-43-5

Weight fraction :  $\geq 1 - < 3 \%$

Classification 1272/2008 [CLP] : Skin Corr. 1B ; H314 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Acute Tox. 4 ; H312 Acute Tox. 4 ; H332 STOT SE 3 ; H335 Aquatic Chronic 3 ; H412

Specific Conc. Limits : STOT SE 3 ; H335: C  $\geq 5 \%$

### Further ingredients

2,2',2''-NITRILOTRIETHANOL ; REACH registration No. : 01-2119486482-31-XXXX ; EC No. : 203-049-8; CAS No. : 102-71-6

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

### 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 skin irritation. Causes serious eye irritation.

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

None

## SECTION 5: Firefighting measures

### 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.

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## 5.4 Additional information

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings. 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

Keep container tightly closed.

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

Keep/Store only in original container. Protect against Frost

#### Hints on joint storage

Storage class (TRGS 510) : 12

### 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  
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

2-AMINOETHANOL ; CAS No. : 141-43-5

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 0,2 ppm / 0,5 mg/m<sup>3</sup>  
Peak limitation : 1(l)  
Remark : H, Sh, Y  
Version : 07.06.2018

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Limit value type (country of origin) : STEL ( EC )  
Limit value : 3 ppm / 7,6 mg/m<sup>3</sup>  
Remark : H  
Version : 31.01.2018  
Limit value type (country of origin) : TWA ( EC )  
Limit value : 1 ppm / 2,5 mg/m<sup>3</sup>  
Remark : H  
Version : 31.01.2018

2,2',2''-NITRILOTRIETHANOL ; CAS No. : 102-71-6

Limit value type (country of origin) : TRGS 900 ( D )  
Parameter : E: inhalable fraction  
Limit value : 1 mg/m<sup>3</sup>  
Peak limitation : 1(l)  
Remark : Y  
Version : 07.06.2018

## DNEL/DMEL and PNEC values

### DNEL/DMEL

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 (local) ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 3,3 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )  
Exposure route : Dermal  
Exposure frequency : Long-term (repeated)  
Limit value : 1 mg/kg

## 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**

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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

**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  
Usually no personal respirative protection necessary.

**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. 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** : colourless

**Odour** : characteristic

#### Safety relevant basis data

|   |           |         |                        |
|---|-----------|---------|------------------------|
| <b>Initial boiling point and boiling range</b> ( 1013 hPa ) | approx.   | 100     | °C                     |
| <b>Flash point</b> :  |           |         | not relevant           |
| <b>Lower explosion limit</b> :                              |           |         | not relevant           |
| <b>Upper explosion limit</b> :                              |           |         | not relevant           |
| <b>Vapour pressure</b> :                                    |           |         | not relevant           |
| <b>Density</b> :  | ( 50 °C ) |         |                        |
|   | ( 20 °C ) | approx. | 1,01 g/cm <sup>3</sup> |
| <b>pH</b> :   |           | approx. | 10,5                   |
| <b>Maximum VOC content (EC)</b> :                           |           |         | 0 Wt %                 |
| <b>Maximum VOC content (Switzerland)</b> :                  |           |         | 5,5 Wt %               |

### 9.2 Other information

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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.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 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 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )            |
| Exposure route : | Oral  |
| Species :        | Rat   |
| Effective dose : | 1515 mg/kg  |
| Method :         | OECD 401  |
| 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 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )            |
| Exposure route : | Dermal  |
| Species :        | Rabbit  |
| Effective dose : | 2504 - 2881 mg/kg                                       |
| Method :         | OECD 402  |
| 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 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 ) |
| Exposure route : | Inhalation                                   |
| Species :        | Rat  |
| Effective dose : | > 1,3 mg/l                                   |
| Exposure time :  | 6 h  |

#### Irritant and corrosive effects

##### Primary irritation to the skin

No further relevant information available.

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#### **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**

Has degreasing effect on the skin. Causes skin irritation. Causes serious eye irritation.

#### **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 :            | LC50 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )            |
| Species :              | Cyprinus carpio (Common Carp)                           |
| Evaluation parameter : | Acute (short-term) fish toxicity                        |
| Effective dose :       | 349 mg/l  |
| 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 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )            |
| Species :              | Fish  |
| Evaluation parameter : | Chronic (long-term) fish toxicity                       |
| Effective dose :       | > 100 mg/l  |
| Exposure time :        | 14 d  |
| Method :               | OECD 204  |

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

|             |  |
|-------------|--|
| Parameter : | NOEC ( 2-AMINOETHANOL ; CAS No. : 141-43-5 ) |
| Species :   | Fish   |

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Evaluation parameter : Chronic (long-term) fish toxicity  
Effective dose : > 100 mg/l  
Exposure time : 14 d  
Method : OECD 204

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

Parameter : EC50 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 65 mg/l  
Exposure time : 48 h

Parameter : EC50 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 2,5 mg/l  
Exposure time : 21 d  
Method : OECD 211

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 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 0,85 mg/l  
Exposure time : 21 d  
Method : OECD 211

**Acute (short-term) algae toxicity**

Parameter : EC50 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 22 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

**Chronic (long-term) algae toxicity**

Parameter : NOEC ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 4 mg/l  
Exposure time : 72 h

**Bacteria toxicity**

Parameter : EC50 ( 2-AMINOETHANOL ; CAS No. : 141-43-5 )  
Species : Pseudomonas putida  
Evaluation parameter : Bacteria toxicity  
Effective dose : 110 mg/l  
Exposure time : 17 h  
Method : DIN 38412 / part 8  
Parameter : EC10 ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Species : Bacteria toxicity



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Effective dose : > 1995 mg/l  
Exposure time : 30 min

## 12.2 Persistence and degradability

### Biodegradation

|                        |  |
|------------------------|--|
| 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  |
| Parameter :            | CO <sub>2</sub> formation (% of the theoretical value) ( 2-AMINOETHANOL ; CAS No. : 141-43-5 ) |
| Inoculum :             | Biodegradation   |
| Evaluation parameter : | Aerobic  |
| Degradation rate :     | > 80 %   |
| Test duration :        | 31 d   |
| Evaluation :           | Readily biodegradable (according to OECD criteria).  |
| Method :               | OECD 301B  |

## 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

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.

### 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.

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## SECTION 14: Transport information

### 14.1 UN number

No dangerous good in sense of these transport regulations.

### 14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

### 14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

### 14.4 Packing group

No dangerous good in sense of these transport regulations.

### 14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

### 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

##### Other regulations (EU)

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

< 5 % non-ionic surfactants

##### National regulations

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

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

##### Technische Anleitung Luft (TA-Luft)

Weight fraction (Number 5.2.5. I) : < 5 %

##### Water hazard class (WGK)

Classification according to AwSV - Class : 1 (Slightly hazardous to water)

### 15.2 Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### 16.1 Indication of changes

03. Further ingredients

### 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)

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EAK / AVV: europäischer Abfallartenkatalog / Abfallverzeichnis-Verordnung  
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)

|      |  |
|------|--|
| H302 | Harmful if swallowed.                              |
| H312 | Harmful in contact with skin.                      |
| H314 | Causes severe skin burns and eye damage.           |
| H318 | Causes serious eye damage.                         |
| H319 | Causes serious eye irritation.                     |
| H332 | Harmful if inhaled.                                |
| H335 | May cause respiratory irritation.                  |
| H412 | Harmful to aquatic life with long lasting effects. |

## 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.