

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 16.09.2021




Version number 17

Revision: 16.09.2021

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

- 1.1 Product identifier
- Trade name: **CRISTALLFUGE-EPOX (B-Komp.)**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
No further relevant information available.
- **Application of the substance / the mixture** Hardener component
- 1.3 Details of the supplier of the safety data sheet
- **Manufacturer/Supplier:**  
SCHOMBURG GmbH & Co. KG  
Aquafinstr. 2-8  
D-32760 Detmold  
Germany  
-----  
Tel: ++49 (0)5231/953-00  
email: info@schomburg.de
- **Informing department:**  
Product Safety Department  
  
Tel: ++49 (0)5231/953-770  
email: SDB@schomburg.de

**SECTION 2: Hazards identification**

- 2.1 Classification of the substance or mixture
- **Classification according to Regulation (EC) No 1272/2008**
  -  corrosion  
Skin Corr. 1A     H314 Causes severe skin burns and eye damage.  
Eye Dam. 1        H318 Causes serious eye damage.
  -  environment  
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
  -   
Skin Sens. 1        H317 May cause an allergic skin reaction.
- 2.2 Label elements
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS05, GHS07, GHS09
- **Signal word** Danger
- **Hazard-determining components of labelling:**  
polyamines adduct  
3-aminomethyl-3,5,5-trimethylcyclohexylamine  
Polyethylenpolyamin (Teta - Fraktion)  
3,6,9 Triazaundecan, 1,11-diamin  
3-(2-Aminoethylamino)-propyltrimethoxysilan

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**Trade name: CRISTALLFUGE-EPOX (B-Komp.)**

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**Hazard statements**

H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P260 Do not breathe dusts or mists.  
P273 Avoid release to the environment.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards****Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients****3.2 Chemical characterisation: Mixtures**

· **Description:** Hardener, aminformulation

**Dangerous components:**

CAS: 68410-23-1 EC number: 614-452-7	polyamines adduct ☠ Eye Dam. 1, H318; ☠ Aquatic Chronic 2, H411; ☠ Skin Irrit. 2, H315; Skin Sens. 1, H317	50-100%
CAS: 2855-13-2 EINECS: 220-666-8 Index number: 612-067-00-9	3-aminomethyl-3,5,5-trimethylcyclohexylamine ☠ Skin Corr. 1B, H314; ☠ Eye Dam. 1, H318; ☠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-25%
CAS: 90640-67-8	Polyethylenpolyamin (Teta - Fraktion) ☠ Skin Corr. 1B, H314; ☠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-25%
CAS: 90640-66-7 EINECS: 292-587-7	3,6,9 Triazaundecan, 1,11-diamin ☠ Skin Corr. 1A, H314; ☠ Eye Dam. 1, H318; ☠ Aquatic Chronic 2, H411; ☠ Acute Tox. 4, H312; Skin Sens. 1, H317	10-25%
CAS: 1760-24-3 EINECS: 217-164-6	3-(2-Aminoethylamino)-propyltrimethoxysilan ☠ Eye Dam. 1, H318; ☠ Skin Sens. 1, H317; Aquatic Chronic 3, H412	<2.5%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information**

Instantly remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Personal protection for the First Aider.  
It is possible to choke in case of vomiting in unconsciousness.  
Bring unconscious persons into a stable position on side.  
Keep the respiratory tract free (remove dentures and vomiting).  
Check the pulse. In case of heart failure you have to make a cardiac massage. In case of stoppage of breathing: artificial respiration.

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- Take up a doctor immediately!
- **After inhalation**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact**  
Instantly wash with water and soap and rinse thoroughly.  
Change immediately contaminated clothes.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing**  
Drink copious amounts of water and provide fresh air. Instantly call for doctor.  
Show the pack or the label to the doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of poisonous gases during heating or in fires.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Follow the emergency-plan.  
Burst- and explosion-danger by increasing pressure.  
In case of fire chill the container with water spray.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Bring persons out of danger.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
- **6.3 Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Keep away from children.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.

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- **Information about storage in one common storage facility:**  
Please follow the rules of the VCI-Storage-Concept for chemicals.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in a locked cabinet and out of the reach of children.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical systems:**  
It must be possible to wash the skin in the working area.  
Eye-wash bottle must be available.
- **Components with critical values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to in handling the chemicals.  
Instantly remove any soiled and impregnated garments.  
Avoid contact with the eyes and skin.  
Be sure to clean skin thoroughly after work and before breaks.
- **Breathing equipment:**  
In not so good ventilated space the filter combination A2B2E2K1HgP3RD is to be used.
- **Protection of hands:** Hand Protection: Nitril-rubber-latex-gloves.
- **Material of gloves**  
Nitril-rubber-latex-gloves II R: Thickness  $\geq 0,5\text{mm}$ ; Penetration time  $\geq 480$  min  
  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:**  
Protective work clothing.  
Contaminated protection clothes must be cleaned carefully before reuse.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Colour:	Yellowish
Smell:	Amine-like
Odour threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/freezing point:	Not determined
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<b>Initial boiling point and boiling range:</b> >200 °C	
· <b>Flash point:</b>	Not applicable
· <b>Inflammability (solid, gaseous)</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Self-inflammability:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive.
· <b>Critical values for explosion:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Steam pressure:</b>	Not determined.
· <b>Density at 20 °C</b>	0.95 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
<b>dynamic at 20 °C:</b>	139 mPas
<b>kinematic:</b>	Not determined.
· <b>9.2 Other information</b>	No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity** Based on available data, the classification criteria are not met.
  - **LD/LC50 values that are relevant for classification:**
- 
- 68410-23-1 polyamines adduct**  
Oral LD50 >2,000 mg/kg (rats) (OECD 423 method B1)  
Dermal LD50 >2,000 mg/kg (rats) (OECD 402)
- 2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine**  
Oral LD50 1,030 mg/kg (rats) (OECD 401)  
Dermal LD50 1,840 mg/kg (rabbit)  
>2,000 mg/kg (rats)

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**90640-67-8 Polyethylenpolyamin (Teta - Fraktion)**

Oral LD50 1,716 mg/kg (rats) (OECD 401)

Dermal LD50 1,465 mg/kg (Kan) (OECD 402)

**90640-66-7 3,6,9 Triazaundecan, 1,11-diamin**

Oral LD50 3,221 mg/kg (rats) (experimental study)

Dermal LD50 1,260 mg/kg (rabbit) (experimental study)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**· **12.1 Toxicity**· **Aquatic toxicity:****68410-23-1 polyamines adduct**

LC50/96h 7.07 mg/l (zebra danio) (OECD 203)

EC50 (3h) 314 mg/l (activated sludge bacteria) (OECD 209)

EC50 5.18 mg/l /48h (Daphnia magna) (OECD 202)

ERC50 4.11 mg/l (Pseudokirchneriella subcapitata) (OECD 201)

NOEC 2.5 mg/l (Daphnia magna)

1.25 mg/l (Pseudokirchneriella subcapitata)

5 mg/l (zebra danio)

**2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine**

LC50/96h 110 mg/l (Leuciscus idus) (OECD 203)

EC50 (48h) 23 mg/l (Daphnia magna) (OECD TG 202)

EC/10/18h 1,120 mg/l (Pseudomas putida) (Bringmann and Kühn 10, 87-98 (1977))

ERC50 &gt;50 mg/l (Scenedesmus subspicatus) (EG 88/302 (72h))

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**· **Remark:** Harmful to fish· **Additional ecological information:**· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even small quantities leak into soil.

Harmful to aquatic organisms

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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |   |   |
|---|---|
| · <b>14.1 UN-Number</b><br>· <b>ADR, IMDG, IATA</b>   | UN2735  |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR</b><br><br>· <b>IMDG, IATA</b>  | 2735 AMINES, LIQUID, CORROSIVE, N.O.S.<br>(Polyethylenpolyamin (Teta - Fraktion),<br>ISOPHORONEDIAMINE), ENVIRONMENTALLY<br>HAZARDOUS<br>AMINES, LIQUID, CORROSIVE, N.O.S.<br>(Polyethylenpolyamin (Teta - Fraktion),<br>ISOPHORONEDIAMINE) |
| · <b>14.3 Transport hazard class(es)</b><br><br>· <b>ADR</b>  |   |
|    |   |
| · <b>Class</b><br>· <b>Label</b>  | 8 Corrosive substances.<br>8  |
| · <b>IMDG, IATA</b>   |   |
|    |   |
| · <b>Class</b><br>· <b>Label</b>  | 8 Corrosive substances.<br>8  |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>   | II  |
| · <b>14.5 Environmental hazards:</b><br><br>· <b>Special marking (ADR):</b>   | Product contains environmentally hazardous<br>substances: polyamines adduct<br>Symbol (fish and tree)   |
| · <b>14.6 Special precautions for user</b><br>· <b>Kemler Number:</b><br>· <b>EMS Number:</b><br>· <b>Segregation groups</b><br>· <b>Stowage Category</b> | Warning: Corrosive substances.<br>80<br>F-A,S-B<br>Alkalis<br>A   |

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· <b>Segregation Code</b>	SG35 Stow "separated from" SGG1-acids
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (POLYETHYLENPOLYAMIN (TETA - FRAKTION), ISOPHORONEDIAMINE), 8, II, ENVIRONMENTALLY HAZARDOUS

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category E2** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

- **Department issuing data specification sheet:** Environment protection department.

- **Contact:** Environment protection department.

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

GB