

Page 1 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 31.03.2021 / 0013
Replacing version dated / version: 22.02.2019 / 0012
Valid from: 31.03.2021
PDF print date: 01.04.2021
Epoxy-Kleber

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

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

Relevant identified uses of the substance or mixture:

Resin
Adhesive

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH
Jerg-Wieland-Str. 4
89081 Ulm-Lehr
Tel.: (+49) 0731-1420-0
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

| Hazard class | Hazard category | Hazard statement |
|-----------------|-----------------|---|
| Eye Irrit. | 2 | H319-Causes serious eye irritation. |
| Skin Irrit. | 2 | H315-Causes skin irritation. |
| Skin Sens. | 1 | H317-May cause an allergic skin reaction. |
| Aquatic Chronic | 2 | H411-Toxic to aquatic life with long lasting effects. |

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 31.03.2021 / 0013

Replacing version dated / version: 22.02.2019 / 0012

Valid from: 31.03.2021

PDF print date: 01.04.2021

Epoxy-Kleber



Warning

H319-Causes serious eye irritation. H315-Causes skin irritation. H317-May cause an allergic skin reaction. H411-Toxic to aquatic life with long lasting effects.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.

P261-Avoid breathing vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves / eye protection / face protection.

P302+P352-IF ON SKIN: Wash with plenty of water / soap. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. P314-Get medical advice / attention if you feel unwell.

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

Reaction product: bisphenol-A-(epichlorhydrin)

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

| | |
|---|--|
| Reaction product: bisphenol-A-(epichlorhydrin) | |
| Registration number (REACH) | --- |
| Index | 603-074-00-8 |
| EINECS, ELINCS, NLP | 500-033-5 (NLP) |
| CAS | 25068-38-6 |
| content % | 80-<100 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411 |

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

Inhalation

Page 3 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 31.03.2021 / 0013
Replacing version dated / version: 22.02.2019 / 0012
Valid from: 31.03.2021
PDF print date: 01.04.2021
Epoxy-Kleber

Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact

Remove contact lenses.
Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

Ingestion

Rinse the mouth thoroughly with water.
Do not induce vomiting - give copious water to drink. Consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray
CO₂
Foam
Extinction powder

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:
Hydrogen chloride
Oxides of carbon
Halogenated compounds

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.
Avoid contact with eyes or skin.
If applicable, caution - risk of slipping.

6.2 Environmental precautions

If leakage occurs, dam up.
Resolve leaks if this possible without risk.
Prevent from entering drainage system.
Prevent surface and ground-water infiltration, as well as ground penetration.
If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

Page 4 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 31.03.2021 / 0013
Replacing version dated / version: 22.02.2019 / 0012
Valid from: 31.03.2021
PDF print date: 01.04.2021
Epoxy-Kleber

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid contact with eyes or skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Not to be stored in gangways or stair wells.
Store product closed and only in original packing.
Do not store with oxidizing agents.
Do not store with acids.
Protect from direct sunlight and warming.
Store in a well ventilated place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Reaction product: bisphenol-A-(epichlorhydrin) | | | | | | |
|--|--|------------------------------|------------|--------|--------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| | Environment - freshwater | | PNEC | 0,003 | mg/l | |
| | Environment - marine | | PNEC | 0,0003 | mg/l | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 0,018 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 10 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 0,5 | mg/kg dw | |
| | Environment - sediment, marine | | PNEC | 0,5 | mg/kg dw | |
| | Environment - soil | | PNEC | 0,05 | mg/kg dw | |
| | Environment - oral (animal feed) | | PNEC | 11 | mg/kg | |
| Consumer | Human - dermal | Short term, systemic effects | DNEL | 3,571 | mg/kg bw/day | |
| Consumer | Human - oral | Short term, systemic effects | DNEL | 0,75 | mg/kg bw/day | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 0,75 | mg/kg bw/day | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 0,75 | mg/m3 | |
| Consumer | Human - inhalation | Short term, systemic effects | DNEL | 0,75 | mg/m3 | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 3,6 | mg/kg bw/day | |

Page 5 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 31.03.2021 / 0013
 Replacing version dated / version: 22.02.2019 / 0012
 Valid from: 31.03.2021
 PDF print date: 01.04.2021
 Epoxy-Kleber

| | | | | | | |
|---------------------|--------------------|------------------------------|------|-------|--------------|--|
| Workers / employees | Human - dermal | Short term, systemic effects | DNEL | 8,33 | mg/kg bw/day | |
| Workers / employees | Human - inhalation | Short term, systemic effects | DNEL | 12,25 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 8,3 | mg/kg bw/day | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 12,3 | mg/m3 | |

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
 If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
 Applies only if maximum permissible exposure values are listed here.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
 Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:
 Chemical resistant protective gloves (EN 374).
 Recommended
 With short-term contact:
 Protective gloves in butyl rubber (EN 374).
 Minimum layer thickness in mm:
 > 0,4
 Permeation time (penetration time) in minutes:
 > 120
 With long-term contact:
 Protective gloves in butyl rubber (EN 374).
 Minimum layer thickness in mm:
 > 0,4
 Permeation time (penetration time) in minutes:
 > 480
 Protective hand cream recommended.
 The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
 The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:
 Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
 Normally not necessary.
 If fumes build up, use suitable breathing mask.
 Filter A2 P2 (EN 14387), code colour brown, white
 Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
 Not applicable

Additional information on hand protection - No tests have been performed.
 In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
 Selection of materials derived from glove manufacturer's indications.
 Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
 Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
 In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
 The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

Page 6 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 31.03.2021 / 0013
 Replacing version dated / version: 22.02.2019 / 0012
 Valid from: 31.03.2021
 PDF print date: 01.04.2021
 Epoxy-Kleber

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|--|
| Physical state: | Viscous |
| Colour: | Colourless |
| Odour: | Mild |
| Odour threshold: | Not determined |
| pH-value: | Not determined |
| Melting point/freezing point: | Not determined |
| Initial boiling point and boiling range: | Not determined |
| Flash point: | >250 °C |
| Evaporation rate: | Not determined |
| Flammability (solid, gas): | Not determined |
| Lower explosive limit: | Not determined |
| Upper explosive limit: | Not determined |
| Vapour pressure: | Not determined |
| Vapour density (air = 1): | Not determined |
| Density: | 1,1-1,17 g/ml |
| Bulk density: | n.a. |
| Solubility(ies): | Not determined |
| Water solubility: | Insoluble |
| Partition coefficient (n-octanol/water): | Not determined |
| Auto-ignition temperature: | Not determined |
| Decomposition temperature: | >300 °C |
| Viscosity: | 8000-16000 mPas (25°C, RV Spindel 6 (50 rpm)) |
| Explosive properties: | Not determined |
| Oxidising properties: | Not determined |

9.2 Other information

| | |
|---------------------------|----------------|
| Miscibility: | Not determined |
| Fat solubility / solvent: | Not determined |
| Conductivity: | Not determined |
| Surface tension: | Not determined |
| Solvents content: | Not determined |

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

See also section 7.

Strong heat

10.5 Incompatible materials

See also section 7.

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

Avoid contact with strong alkalis.

10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

SECTION 11: Toxicological information

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 31.03.2021 / 0013

Replacing version dated / version: 22.02.2019 / 0012

Valid from: 31.03.2021

PDF print date: 01.04.2021

Epoxy-Kleber

11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

| Epoxy-Kleber | | | | | | |
|---|----------|-------|------|----------|-------------|--------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | | | | | | n.d.a. |
| Acute toxicity, by dermal route: | | | | | | n.d.a. |
| Acute toxicity, by inhalation: | | | | | | n.d.a. |
| Skin corrosion/irritation: | | | | | | n.d.a. |
| Serious eye damage/irritation: | | | | | | n.d.a. |
| Respiratory or skin sensitisation: | | | | | | n.d.a. |
| Germ cell mutagenicity: | | | | | | n.d.a. |
| Carcinogenicity: | | | | | | n.d.a. |
| Reproductive toxicity: | | | | | | n.d.a. |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | n.d.a. |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | n.d.a. |
| Aspiration hazard: | | | | | | n.d.a. |
| Symptoms: | | | | | | n.d.a. |

| Reaction product: bisphenol-A-(epichlorhydrin) | | | | | | |
|--|----------|--------|-------|------------|---|-------------------------------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | >11400 | mg/kg | Rat | | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Skin Irrit. 2 |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Eye Irrit. 2 |
| Respiratory or skin sensitisation: | | | | Mouse | OECD 429 (Skin Sensitisation - Local Lymph Node Assay) | Sensitising (skin contact) |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | Sensitising (skin contact) |
| Germ cell mutagenicity: | | | | | OECD 472 (Genetic Toxicology - Escherichia coli, Reverse Assay) | Negative |
| Carcinogenicity: | | | | Rat | OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies) | Negative |
| Reproductive toxicity: | NOEL | 540 | mg/kg | | OECD 416 (Two-generation Reproduction Toxicity Study) | |
| Reproductive toxicity: | | | | Rat | OECD 414 (Prenatal Developmental Toxicity Study) | Negative |
| Aspiration hazard: | | | | | | No |
| Symptoms: | | | | | | diarrhoea, weight loss |
| Symptoms: | | | | | | eyes, reddened, watering eyes |

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

| Epoxy-Kleber | | | | | | | |
|-------------------------|----------|------|-------|------|----------|-------------|--------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to fish: | | | | | | | n.d.a. |

Page 8 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 31.03.2021 / 0013
Replacing version dated / version: 22.02.2019 / 0012
Valid from: 31.03.2021
PDF print date: 01.04.2021
Epoxy-Kleber

| | | | | | | | |
|--|--|--|--|--|--|--|--------|
| 12.1. Toxicity to daphnia: | | | | | | | n.d.a. |
| 12.1. Toxicity to algae: | | | | | | | n.d.a. |
| 12.2. Persistence and degradability: | | | | | | | n.d.a. |
| 12.3. Bioaccumulative potential: | | | | | | | n.d.a. |
| 12.4. Mobility in soil: | | | | | | | n.d.a. |
| 12.5. Results of PBT and vPvB assessment | | | | | | | n.d.a. |
| 12.6. Other adverse effects: | | | | | | | n.d.a. |

| Reaction product: bisphenol-A-(epichlorhydrin) | | | | | | | |
|--|-----------|------|-------|------|---------------------------|--|---|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |
| 12.1. Toxicity to algae: | NOEC/NOEL | 72h | 2,4 | mg/l | Selenastrum capricornutum | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.1. Toxicity to fish: | LC50 | 96h | 2 | mg/l | Leuciscus idus | | |
| 12.1. Toxicity to fish: | LC50 | 96h | 1,5 | mg/l | Oncorhynchus mykiss | OECD 203 (Fish, Acute Toxicity Test) | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | 1,1 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d | 0,3 | mg/l | Daphnia magna | OECD 211 (Daphnia magna Reproduction Test) | |
| 12.1. Toxicity to algae: | EC50 | 72h | 9,4 | mg/l | Selenastrum capricornutum | U.S. EPA ECOTOX Database | |
| 12.1. Toxicity to algae: | EC50 | 96h | 220 | mg/l | Scenedesmus subspicatus | | |
| 12.2. Persistence and degradability: | | 28d | 5 | % | | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Not readily biodegradable |
| 12.3. Bioaccumulative potential: | Log Pow | | 3,242 | | | Regulation (EC) 440/2008 A.8 (PARTITION COEFFICIENT) | |
| Other information: | | | | | | | Contains organically bound halogens, which may contribute to the AOX value in wastewater. |
| Toxicity to bacteria: | IC50 | 3h | >100 | mg/l | activated sludge | | |

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be

Page 9 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 31.03.2021 / 0013
 Replacing version dated / version: 22.02.2019 / 0012
 Valid from: 31.03.2021
 PDF print date: 01.04.2021
 Epoxy-Kleber

allocated under certain circumstances. (2014/955/EU)
 08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances
 Recommendation:
 Sewage disposal shall be discouraged.
 Pay attention to local and national official regulations.
 E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations.
 Empty container completely.
 Uncontaminated packaging can be recycled.
 Dispose of packaging that cannot be cleaned in the same manner as the substance.
 15 01 02 plastic packaging
 15 01 04 metallic packaging

SECTION 14: Transport information

General statements

14.1. UN number: 3082

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:
 UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
 14.3. Transport hazard class(es): 9
 14.4. Packing group: III
 Classification code: M6
 LQ: 5 L
 14.5. Environmental hazards: environmentally hazardous
 Tunnel restriction code: -



Transport by sea (IMDG-code)

14.2. UN proper shipping name:
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
 14.3. Transport hazard class(es): 9
 14.4. Packing group: III
 EmS: F-A, S-F
 Marine Pollutant: Yes
 14.5. Environmental hazards: environmentally hazardous



Transport by air (IATA)

14.2. UN proper shipping name:
 Environmentally hazardous substance, liquid, n.o.s. (EPOXY RESIN)
 14.3. Transport hazard class(es): 9
 14.4. Packing group: III
 14.5. Environmental hazards: environmentally hazardous



14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.
 Precautions must be taken to prevent damage.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Freighted as packaged goods rather than in bulk, therefore not applicable.
 Minimum amount regulations have not been taken into account.
 Danger code and packing code on request.
 Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:
 Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
 Comply with trade association/occupational health regulations.

Page 10 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 31.03.2021 / 0013
 Replacing version dated / version: 22.02.2019 / 0012
 Valid from: 31.03.2021
 PDF print date: 01.04.2021
 Epoxy-Kleber

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

| Hazard categories | Notes to Annex I | Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements | Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements |
|-------------------|------------------|---|---|
| E2 | | 200 | 500 |

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 0 %

Observe incident regulations.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 15
 Employee training in handling dangerous goods is required.
 These details refer to the product as it is delivered.
 Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used |
|---|--|
| Eye Irrit. 2, H319 | Classification according to calculation procedure. |
| Skin Irrit. 2, H315 | Classification according to calculation procedure. |
| Skin Sens. 1, H317 | Classification according to calculation procedure. |
| Aquatic Chronic 2, H411 | Classification according to calculation procedure. |

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H411 Toxic to aquatic life with long lasting effects.

Eye Irrit. — Eye irritation
 Skin Irrit. — Skin irritation
 Skin Sens. — Skin sensitization
 Aquatic Chronic — Hazardous to the aquatic environment - chronic

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOX Adsorbable organic halogen compounds
 approx. approximately
 Art., Art. no. Article number
 ASTM ASTM International (American Society for Testing and Materials)
 ATE Acute Toxicity Estimate
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

Page 11 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 31.03.2021 / 0013
 Replacing version dated / version: 22.02.2019 / 0012
 Valid from: 31.03.2021
 PDF print date: 01.04.2021
 Epoxy-Kleber

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
 BSEF The International Bromine Council
 bw body weight
 CAS Chemical Abstracts Service
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductive toxic
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EC European Community
 ECHA European Chemicals Agency
 EEC European Economic Community
 EINECS European Inventory of Existing Commercial Chemical Substances
 ELINCS European List of Notified Chemical Substances
 EN European Norms
 EPA United States Environmental Protection Agency (United States of America)
 etc. et cetera
 EU European Union
 EVAL Ethylene-vinyl alcohol copolymer
 Fax. Fax number
 gen. general
 GHS Globally Harmonized System of Classification and Labelling of Chemicals
 GWP Global warming potential
 IARC International Agency for Research on Cancer
 IATA International Air Transport Association
 IBC (Code) International Bulk Chemical (Code)
 IMDG-code International Maritime Code for Dangerous Goods
 incl. including, inclusive
 IUCI International Uniform Chemical Information Database
 IUPAC International Union for Pure Applied Chemistry
 LC50 Lethal Concentration to 50 % of a test population
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
 LQ Limited Quantities
 MARPOL International Convention for the Prevention of Marine Pollution from Ships
 n.a. not applicable
 n.av. not available
 n.c. not checked
 n.d.a. no data available
 OECD Organisation for Economic Co-operation and Development
 org. organic
 PBT persistent, bioaccumulative and toxic
 PE Polyethylene
 PNEC Predicted No Effect Concentration
 ppm parts per million
 PVC Polyvinylchloride
 REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
 REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
 RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
 SVHC Substances of Very High Concern
 Tel. Telephone
 UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
 VOC Volatile organic compounds
 vPvB very persistent and very bioaccumulative
 wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
 No responsibility.
 These statements were made by:

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 31.03.2021 / 0013

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Epoxy-Kleber

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Page 13 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 31.03.2021 / 0013
 Replacing version dated / version: 22.02.2019 / 0012
 Valid from: 31.03.2021
 PDF print date: 01.04.2021
 Epoxy-Kleber

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Epoxy-Kleber

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

Relevant identified uses of the substance or mixture:

Adhesive
 Hardener

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH
 Jerg-Wieland-Str. 4
 89081 Ulm-Lehr
 Tel.: (+49) 0731-1420-0
 Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

| Hazard class | Hazard category | Hazard statement |
|--------------|-----------------|---|
| Skin Sens. | 1 | H317-May cause an allergic skin reaction. |

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



Warning

Page 14 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 11.03.2019 / 0011
 Replacing version dated / version: 30.08.2018 / 0010
 Valid from: 11.03.2019
 PDF print date: 01.04.2021
 Epoxy-Kleber

H317-May cause an allergic skin reaction.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.
 P280-Wear protective gloves.
 P302+P352-IF ON SKIN: Wash with plenty of water / soap. P333+P313-If skin irritation or rash occurs: Get medical advice / attention.
 P501-Dispose of contents / container to an approved waste disposal facility.

3-trimethoxysilylpropane-1-thiol

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
 The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

| | |
|--|---|
| 3-trimethoxysilylpropane-1-thiol | |
| Registration number (REACH) | --- |
| Index | --- |
| EINECS, ELINCS, NLP | 224-588-5 |
| CAS | 4420-74-0 |
| content % | 1-<2,5 |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Acute Tox. 4, H302 Skin Sens. 1, H317 Aquatic Chronic 2, H411 |

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

Page 15 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 11.03.2019 / 0011
Replacing version dated / version: 30.08.2018 / 0010
Valid from: 11.03.2019
PDF print date: 01.04.2021
Epoxy-Kleber

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO₂
Water jet spray
Dry extinguisher
Alcohol resistant foam

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon
Oxides of sulphur
Hydrogen sulphide
Toxic gases

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Cool container at risk with water.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep unprotected persons away.
Ensure sufficient supply of air.
Avoid contact with eyes or skin.
If applicable, caution - risk of slipping.

6.2 Environmental precautions

If leakage occurs, dam up.
Resolve leaks if this possible without risk.
Prevent surface and ground-water infiltration, as well as ground penetration.
Prevent from entering drainage system.
If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid contact with eyes or skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.

Page 16 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 11.03.2019 / 0011
Replacing version dated / version: 30.08.2018 / 0010
Valid from: 11.03.2019
PDF print date: 01.04.2021
Epoxy-Kleber

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Not to be stored in gangways or stair wells.
Store product closed and only in original packing.
Do not store with oxidizing agents.
Do not store with acids.
Protect from direct sunlight and warming.
Store in a well ventilated place.
Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Chemical Name | Methanol | Content %: |
|--|--|---------------------------------|
| WEL-TWA: 200 ppm (266 mg/m ³) (WEL), 200 ppm (260 mg/m ³) (EU) | WEL-STEL: 250 ppm (333 mg/m ³) (WEL) | --- |
| Monitoring procedures: | | |
| <ul style="list-style-type: none"> - Draeger - Alcohol 25/a Methanol (81 01 631) - Compur - KITA-119 SA (549 640) - Compur - KITA-119 U (549 657) - DFG Meth. Nr. 6 (D) (Lösungsmittelgemische 6), DFG (E) (Solvent mixtures 6) - 2013, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 65-1 (2004) - NIOSH 2000 (METHANOL) - 1998 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996 - NIOSH 3800 (ORGANIC AND INORGANIC GASES BY EXTRACTIVE FTIR SPECTROMETRY) - 2016 - Draeger - Alcohol 100/a (CH 29 701) | | |
| BMGV: --- | | Other information: Sk (WEL, EU) |

| Methanol | | | | | | |
|---------------------|--|------------------------------|------------|-------|-----------------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| | Environment - freshwater | | PNEC | 154 | mg/l | |
| | Environment - marine | | PNEC | 15,4 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 570,4 | mg/kg | |
| | Environment - sediment, marine | | PNEC | 57,04 | mg/kg | |
| | Environment - soil | | PNEC | 23,5 | mg/kg | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 1540 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 100 | mg/l | |
| Consumer | Human - inhalation | Long term, local effects | DNEL | 50 | mg/m ³ | |
| Consumer | Human - inhalation | Short term, local effects | DNEL | 50 | mg/m ³ | |
| Consumer | Human - dermal | Short term, systemic effects | DNEL | 8 | mg/kg body weight/day | |
| Consumer | Human - inhalation | Short term, systemic effects | DNEL | 50 | mg/m ³ | |
| Consumer | Human - oral | Short term, systemic effects | DNEL | 8 | mg/kg body weight/day | |

Page 17 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 11.03.2019 / 0011
 Replacing version dated / version: 30.08.2018 / 0010
 Valid from: 11.03.2019
 PDF print date: 01.04.2021
 Epoxy-Kleber

| | | | | | | |
|---------------------|--------------------|------------------------------|------|-----|-----------------------|--|
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 8 | mg/kg body weight/day | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 50 | mg/m3 | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 8 | mg/kg body weight/day | |
| Workers / employees | Human - dermal | Short term, systemic effects | DNEL | 40 | mg/kg body weight/day | |
| Workers / employees | Human - inhalation | Short term, systemic effects | DNEL | 260 | mg/m3 | |
| Workers / employees | Human - inhalation | Short term, local effects | DNEL | 260 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 40 | mg/kg body weight/day | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 260 | mg/m3 | |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 260 | mg/m3 | |

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
 (8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE).
 (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. EN 14042.

EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN 374).

Recommended

With short-term contact:

Protective gloves in butyl rubber (EN 374).

Minimum layer thickness in mm:

> 0,7

Page 18 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 11.03.2019 / 0011
 Replacing version dated / version: 30.08.2018 / 0010
 Valid from: 11.03.2019
 PDF print date: 01.04.2021
 Epoxy-Kleber

Permeation time (penetration time) in minutes:
 > 120
 With long-term contact:
 Protective gloves in butyl rubber (EN 374).
 Minimum layer thickness in mm:
 > 0,7
 Permeation time (penetration time) in minutes:
 > 480
 Protective hand cream recommended.
 The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
 The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:
 Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
 Normally not necessary.
 If fumes build up, use suitable breathing mask.
 Filter A2 P2 (EN 14387), code colour brown, white
 Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
 Not applicable

Additional information on hand protection - No tests have been performed.
 In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
 Selection of materials derived from glove manufacturer's indications.
 Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
 Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
 In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
 The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|--|
| Physical state: | Viscous |
| Colour: | Light yellow |
| Odour: | Characteristic |
| Odour threshold: | Not determined |
| pH-value: | n.a. |
| Melting point/freezing point: | Not determined |
| Initial boiling point and boiling range: | Not determined |
| Flash point: | n.a. |
| Evaporation rate: | Not determined |
| Flammability (solid, gas): | Not determined |
| Lower explosive limit: | Not determined |
| Upper explosive limit: | Not determined |
| Vapour pressure: | Not determined |
| Vapour density (air = 1): | Not determined |
| Density: | 1,0-1,2 g/ml |
| Bulk density: | n.a. |
| Solubility(ies): | Not determined |
| Water solubility: | Insoluble |
| Partition coefficient (n-octanol/water): | Not determined |
| Auto-ignition temperature: | Not determined |
| Decomposition temperature: | >150 °C |
| Viscosity: | 8000-16000 mPas (25°C, RV Spindel 6 (50 rpm)) |
| Explosive properties: | Not determined |
| Oxidising properties: | No |

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 11.03.2019 / 0011

Replacing version dated / version: 30.08.2018 / 0010

Valid from: 11.03.2019

PDF print date: 01.04.2021

Epoxy-Kleber

9.2 Other information

| | |
|---------------------------|----------------|
| Miscibility: | Not determined |
| Fat solubility / solvent: | Not determined |
| Conductivity: | Not determined |
| Surface tension: | Not determined |
| Solvents content: | Not determined |

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

See also section 7.

Strong heat

10.5 Incompatible materials

See also section 7.

Avoid contact with strong alkalis.

Avoid contact with strong acids.

Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

| Epoxy-Kleber | | | | | | |
|---|----------|-------|-------|----------|-------------|------------------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | ATE | >2000 | mg/kg | | | calculated value |
| Acute toxicity, by dermal route: | | | | | | n.d.a. |
| Acute toxicity, by inhalation: | | | | | | n.d.a. |
| Skin corrosion/irritation: | | | | | | n.d.a. |
| Serious eye damage/irritation: | | | | | | n.d.a. |
| Respiratory or skin sensitisation: | | | | | | n.d.a. |
| Germ cell mutagenicity: | | | | | | n.d.a. |
| Carcinogenicity: | | | | | | n.d.a. |
| Reproductive toxicity: | | | | | | n.d.a. |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | n.d.a. |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | n.d.a. |
| Aspiration hazard: | | | | | | n.d.a. |
| Symptoms: | | | | | | n.d.a. |

| 3-trimethoxysilylpropane-1-thiol | | | | | | |
|----------------------------------|----------|-------|-------|----------|--|---------------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | 1940 | mg/kg | Rat | | |
| Acute toxicity, by dermal route: | LD50 | 6000 | mg/kg | Rabbit | | |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant |
| Serious eye damage/irritation: | | | | | OECD 405 (Acute Eye Irritation/Corrosion) | Mild irritant |

Page 20 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 11.03.2019 / 0011
 Replacing version dated / version: 30.08.2018 / 0010
 Valid from: 11.03.2019
 PDF print date: 01.04.2021
 Epoxy-Kleber

| | | | | | | |
|------------------------------------|--|--|--|--|-------------------------------|----------------------------|
| Respiratory or skin sensitisation: | | | | | OECD 406 (Skin Sensitisation) | Sensitising (skin contact) |
| Germ cell mutagenicity: | | | | | | Negative |
| Symptoms: | | | | | | mucous membrane irritation |

| Methanol | | | | | | |
|---|----------|-------|---------|------------------------|--|---|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | ATE | 300 | mg/kg | Human being | | Experiences on persons. |
| Acute toxicity, by dermal route: | LD50 | 17100 | mg/kg | Rabbit | | Does not conform with EU classification. |
| Acute toxicity, by inhalation: | LC50 | 85 | mg/l/4h | Rat | | Not relevant for classification., Vapours |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Not irritant |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | No (skin contact) |
| Germ cell mutagenicity: | | | | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test) | Negative |
| Germ cell mutagenicity: | | | | Mouse | OECD 474 (Mammalian Erythrocyte Micronucleus Test) | Negative |
| Carcinogenicity: | | | | Mouse | OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies) | Negative |
| Reproductive toxicity: | NOAEL | 1,3 | mg/l | Mouse | OECD 416 (Two-generation Reproduction Toxicity Study) | |
| Specific target organ toxicity - repeated exposure (STOT-RE): | NOAEL | 0,13 | mg/l | Rat | OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies) | |
| Symptoms: | | | | | | abdominal pain, vomiting, headaches, gastrointestinal disturbances, drowsiness, visual disturbances, watering eyes, nausea, mental confusion, intoxication, dizziness |

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

| Epoxy-Kleber | | | | | | | |
|--------------------------------------|----------|------|-------|------|----------|-------------|--------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to fish: | | | | | | | n.d.a. |
| 12.1. Toxicity to daphnia: | | | | | | | n.d.a. |
| 12.1. Toxicity to algae: | | | | | | | n.d.a. |
| 12.2. Persistence and degradability: | | | | | | | n.d.a. |

Page 21 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 11.03.2019 / 0011
Replacing version dated / version: 30.08.2018 / 0010
Valid from: 11.03.2019
PDF print date: 01.04.2021
Epoxy-Kleber

| | | | | | | | |
|--|--|--|--|--|--|--|--------|
| 12.3. Bioaccumulative potential: | | | | | | | n.d.a. |
| 12.4. Mobility in soil: | | | | | | | n.d.a. |
| 12.5. Results of PBT and vPvB assessment | | | | | | | n.d.a. |
| 12.6. Other adverse effects: | | | | | | | n.d.a. |

| 3-trimethoxysilylpropane-1-thiol | | | | | | | |
|--------------------------------------|----------|------|-------|------|-------------------------|-------------|---------------------------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to fish: | LC50 | 96h | 439 | mg/l | Brachydanio rerio | | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | 6,7 | mg/l | Daphnia magna | | |
| 12.1. Toxicity to algae: | EC50 | 72h | 267 | mg/l | Scenedesmus subspicatus | | |
| 12.2. Persistence and degradability: | | | 51 | % | | | Not readily biodegradable |
| Toxicity to bacteria: | EC10 | 3h | 440 | mg/l | activated sludge | | |

| Methanol | | | | | | | |
|--|----------|------|-------|------|---------------------------------|--|-------------------------------------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |
| 12.1. Toxicity to fish: | LC50 | 96h | 15400 | mg/l | Lepomis macrochirus | | EPA-660/3-75-009 |
| 12.1. Toxicity to daphnia: | EC50 | 96h | 18260 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to algae: | EC50 | 96h | 22000 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.2. Persistence and degradability: | | 28d | 99 | % | | OECD 301 D (Ready Biodegradability - Closed Bottle Test) | Readily biodegradable |
| 12.3. Bioaccumulative potential: | BCF | | 28400 | | Chlorella vulgaris | | Not to be expected |
| Toxicity to bacteria: | IC50 | 3h | >1000 | mg/l | activated sludge | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) | |
| Other information: | Log Pow | | -0,77 | | | | |
| Other information: | DOC | | <70 | % | | | |
| Other information: | BOD | | >60 | % | | | |

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

Page 22 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 11.03.2019 / 0011
 Replacing version dated / version: 30.08.2018 / 0010
 Valid from: 11.03.2019
 PDF print date: 01.04.2021
 Epoxy-Kleber

E.g. suitable incineration plant.
 E.g. dispose at suitable refuse site.

For contaminated packing material

Pay attention to local and national official regulations.
 Empty container completely.
 Uncontaminated packaging can be recycled.
 Dispose of packaging that cannot be cleaned in the same manner as the substance.
 15 01 02 plastic packaging
 15 01 04 metallic packaging

SECTION 14: Transport information

General statements

14.1. UN number: n.a.

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 Classification code: n.a.
 LQ: n.a.
 14.5. Environmental hazards: Not applicable
 Tunnel restriction code:

Transport by sea (IMDG-code)

14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 Marine Pollutant: n.a.
 14.5. Environmental hazards: Not applicable

Transport by air (IATA)

14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 14.5. Environmental hazards: Not applicable

14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Non-dangerous material according to Transport Regulations.

SECTION 15: Regulatory information

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

Observe restrictions:
 Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
 Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
 Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): n.a.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 2, 15
 These details refer to the product as it is delivered.
 Employee instruction/training in handling hazardous materials is required.

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 11.03.2019 / 0011
Replacing version dated / version: 30.08.2018 / 0010
Valid from: 11.03.2019
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Epoxy-Kleber

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used |
|---|--|
| Skin Sens. 1, H317 | Classification according to calculation procedure. |

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Skin Sens. — Skin sensitization

Acute Tox. — Acute toxicity - oral

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ASTM ASTM International (American Society for Testing and Materials)

ATE Acute Toxicity Estimate

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BSEF The International Bromine Council

bw body weight

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community

ECHA European Chemicals Agency

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

etc. et cetera

EU European Union

EVAL Ethylene-vinyl alcohol copolymer

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC (Code) International Bulk Chemical (Code)

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

Page 24 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 11.03.2019 / 0011
Replacing version dated / version: 30.08.2018 / 0010
Valid from: 11.03.2019
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Epoxy-Kleber

IUPAC International Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
OECD Organisation for Economic Co-operation and Development
org. organic
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.

These statements were made by:

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