

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

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SDS No.: 659485

V002.0 Revision: 03.10.2019

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Replaces version from: 12.04.2019

Loctite Extreme Epoxy

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

1.1. Product identifier

Loctite Epoxy Liq 1 Min Comp A

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

Intended use:

2-Component epoxy adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000 Fax-no.: +44 (1442) 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation Category 2

H315 Causes skin irritation.

Skin sensitizer Category 1

H317 May cause an allergic skin reaction.

Serious eye irritation Category 2

H319 Causes serious eye irritation.

Chronic hazards to the aquatic environment Category 2

H411 Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular

weight≤700)

Signal word: Warning

Hazard statement: 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.

Precautionary statement: P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

Precautionary statement:

Prevention

P280 Wear protective gloves/eye protection.

Precautionary statement:

Disposal

P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

Persons suffering from allergic reactions to epoxides should avoid contact with the product. Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:

Reaction resin

Base substances of preparation:

Epoxy resin

Declaration of the ingredients according to CLP (EC) No 1272/2008:

| Hazardous components CAS-No. | EC Number REACH-Reg No. | content | Classification |
|---------------------------------------|----------------------------|-----------|-------------------|
| reaction product: bisphenol-A- | 01-2119456619-26 | 80-<100 % | Skin Irrit. 2 |
| (epichlorhydrin); epoxy resin (number | | | H315 |
| average molecular weight≤700) | | | Skin Sens. 1 |
| 25068-38-6 | | | H317 |
| | | | Eye Irrit. 2 |
| | | | H319 |
| | | | Aquatic Chronic 2 |
| | | | H411 |

For full text of the H - statements and other abbreviations see section 16 "Other information". Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

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

SKIN: Redness, inflammation.

Causes serious eye irritation.

May cause an allergic skin reaction.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO2) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment.

Danger of slipping on spilled product.

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

Hygiene measures:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Store frost-free.

Temperatures between + 5 $^{\circ}C$ and + 30 $^{\circ}C$

Store protected from heat influence.

Keep only in original container.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)

2-Component epoxy adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Great Britain

None

Occupational Exposure Limits

Valid for

Ireland

None

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental | Exposure | Value | | Remarks | | |
|--|------------------------------------|----------|------------|-----|----------------|--------|--|
| | Compartment | period | | | | | |
| | | | mg/l | ppm | mg/kg | others | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | aqua (freshwater) | | 0,006 mg/l | | | | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | aqua (marine water) | | 0,001 mg/l | | | | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | sewage treatment plant (STP) | | 10 mg/l | | | | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | sediment (freshwater) | | | | 0,996 mg/kg | | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | sediment (marine water) | | | | 0,1 mg/kg | | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | Soil | | | | 0,196 mg/kg | | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | oral | | | | 11 mg/kg | | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | aqua (intermittent releases) | | 0,018 mg/l | | | | |

Derived No-Effect Level (DNEL):

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|--|-----------------------|----------------------|--|------------------|-------------|---------|
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | Workers | dermal | Acute/short term exposure - systemic effects | | 8,33 mg/kg | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | Workers | Inhalation | Acute/short term exposure - systemic effects | | 12,25 mg/m3 | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | Workers | dermal | Long term exposure - systemic effects | | 8,33 mg/kg | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | Workers | Inhalation | Long term exposure - systemic effects | | 12,25 mg/m3 | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | General population | dermal | Acute/short term exposure - systemic effects | | 3,571 mg/kg | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | General population | dermal | Long term exposure - systemic effects | | 3,571 mg/kg | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | General population | oral | Acute/short term exposure - systemic effects | | 0,75 mg/kg | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | General population | oral | Long term exposure - systemic effects | | 0,75 mg/kg | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | General population | inhalation | Acute/short term exposure - systemic effects | | 0,75 mg/m3 | |
| reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6 | General population | inhalation | Long term exposure - systemic effects | | 0,75 mg/m3 | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Respiratory protection:

Not needed.

Hand protection:

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374. material thickness > 0.1 mm

Perforation time > 480 minutes

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:

Suitable protective clothing

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance liquid

high viscosity transparent

Odor typical

Odour threshold No data available / Not applicable

pH Not available.

Melting point
No data available / Not applicable
Solidification temperature
No data available / Not applicable
Initial boiling point
No data available / Not applicable

Flash point Not available.

Evaporation rate No data available / Not applicable Flammability No data available / Not applicable Explosive limits No data available / Not applicable Vapour pressure No data available / Not applicable Relative vapour density: No data available / Not applicable

Density 1,1 - 1,2 g/cm3

(23 °C (73.4 °F))

Bulk density

No data available / Not applicable
Solubility

No data available / Not applicable

Solubility (qualitative) Insoluble

(20 °C (68 °F); Solvent: Water)

Partition coefficient: n-octanol/water

Auto-ignition temperature

No data available / Not applicable

No data available / Not applicable

No data available / Not applicable

Viscosity 14.000 - 24.000 mPa.s

(Brookfield; 23 °C (73.4 °F))

Viscosity (kinematic)

Explosive properties

Oxidising properties

No data available / Not applicable
No data available / Not applicable
No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

None if used for intended purpose.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

General toxicological information:

Persons suffering from allergic reactions to epoxides should avoid contact with the product. Cross-reactions with other epoxide compounds possible.

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|--|---------------|---------------|---------|--|
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 420 (Acute Oral Toxicity) |

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|--|---------------|---------------|---------|--|
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Result | Exposure | Species | Method |
|--|--------------------------|----------|---------|-------------|
| CAS-No. | | time | | |
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | moderately irritating | 24 h | rabbit | Draize Test |

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|--|----------------|---------------|---------|---|
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight < 700) 25068-38-6 | not irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances | Result | Test type | Species | Method |
|-------------------------|-------------|-----------------------|---------|---|
| CAS-No. | | | | |
| reaction product: | sensitising | Mouse local lymphnode | mouse | OECD Guideline 429 (Skin Sensitisation: |
| bisphenol-A- | | assay (LLNA) | | Local Lymph Node Assay) |
| (epichlorhydrin); epoxy | | | | |
| resin (number average | | | | |
| molecular weight≤700) | | | | |
| 25068-38-6 | | | | |

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|--|----------|--|--|---------|---|
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay) |
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | negative | oral: gavage | | mouse | not specified |

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous components CAS-No. | Result | Route of application | Exposure time / Frequency of treatment | Species | Sex | Method |
|--|------------------|----------------------|---|---------|-------------|--|
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | not carcinogenic | dermal | 2 y daily | mouse | male | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | not carcinogenic | oral: gavage | 2 y daily | rat | male/female | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances | Result / Value | Test type | Route of | Species | Method |
|-------------------------|---------------------------------|------------|--------------|---------|--------------------------|
| CAS-No. | | | application | | |
| reaction product: | NOAEL P >= 50 mg/kg | Two | oral: gavage | rat | OECD Guideline 416 (Two- |
| bisphenol-A- | | generation | | | Generation Reproduction |
| (epichlorhydrin); epoxy | NOAEL F1 $>= 750 \text{ mg/kg}$ | study | | | Toxicity Study) |
| resin (number average | | | | | |
| molecular weight≤700) | NOAEL F2 $>= 750 \text{ mg/kg}$ | | | | |
| 25068-38-6 | | | | | |

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|--|----------------|----------------------|--|---------|--|
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | NOAEL 50 mg/kg | oral: gavage | 14 w daily | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|--|-------|-----------|---------------|---------|---|
| CAS-No. | type | | | | |
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular | LC50 | 1,75 mg/l | 96 h | , | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| weight≤700) 25068-38-6 | | | | | |

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| GLG N | Value | Value | Exposure time | Species | Method |
|--------------------------------|-------|----------|---------------|---------------|----------------------|
| CAS-No. | type | | | | |
| reaction product: bisphenol-A- | EC50 | 1,7 mg/l | 48 h | Daphnia magna | OECD Guideline 202 |
| (epichlorhydrin); epoxy resin | | | | | (Daphnia sp. Acute |
| (number average molecular | | | | | Immobilisation Test) |
| weight≤700) | | | | | |
| 25068-38-6 | | | | | |

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|--------------------------------|-------|----------|---------------|---------------|---------------------------|
| CAS-No. | type | | | | |
| reaction product: bisphenol-A- | NOEC | 0,3 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia |
| (epichlorhydrin); epoxy resin | | | | | magna, Reproduction Test) |
| (number average molecular | | | | | |
| weight≤700) | | | | | |
| 25068-38-6 | | | | | |

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|---|-------|-----------|---------------|---------------------------|--|
| CAS-No. | type | | | | |
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | EC50 | > 11 mg/l | 72 h | Scenedesmus capricornutum | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | NOEC | 4,2 mg/l | 72 h | Scenedesmus capricornutum | OECD Guideline 201 (Alga, Growth Inhibition Test) |

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|--------------------------------|-------|------------|---------------|------------------------------|------------------|
| CAS-No. | type | | | | |
| reaction product: bisphenol-A- | IC50 | > 100 mg/l | 3 h | activated sludge, industrial | other guideline: |
| (epichlorhydrin); epoxy resin | | | | | |
| (number average molecular | | | | | |
| weight≤700) | | | | | |
| 25068-38-6 | | | | | |

12.2. Persistence and degradability

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|---|----------------------------|-----------|---------------|---------------|---|
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | not readily biodegradable. | aerobic | 5 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

| Hazardous substances | LogPow | Temperature | Method |
|---|--------|-------------|---------------------------------------|
| CAS-No. | | | |
| reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6 | 3,242 | 25 °C | EU Method A.8 (Partition Coefficient) |

12.5. Results of PBT and vPvB assessment

| Hazardous substances | PBT / vPvB |
|---|--|
| CAS-No. | |
| reaction product: bisphenol-A-(epichlorhydrin); | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| epoxy resin (number average molecular | Bioaccumulative (vPvB) criteria. |
| weight≤700) | |
| 25068-38-6 | |

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code 080409

SECTION 14: Transport information

14.1. UN number

| ADR | 3082 |
|------|------|
| RID | 3082 |
| ADN | 3082 |
| IMDG | 3082 |
| IATA | 3082 |

14.2. UN proper shipping name

| Y DD | | VIIIVANDONIC | CITOCTANCE | |
|------|----------------|--------------|------------|----------------|
| ADR | ENVIRONMENTALI | A HAZAKIJUUS | SOUBSTANCE | LIOUID. N.O.S. |

(Bisphenol-A Epichlorhydrin resin)

RID ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Bisphenol-A Epichlorhydrin resin)

ADN ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Bisphenol-A Epichlorhydrin resin)

IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Bisphenol-A Epichlorhydrin resin)

IATA Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin

resin)

14.3. Transport hazard class(es)

| ADR | 9 |
|------|---|
| RID | 9 |
| ADN | 9 |
| IMDG | 9 |
| IATA | 9 |

14.4. Packing group

| ADR | III |
|------|-----|
| RID | III |
| ADN | III |
| IMDG | III |
| IATA | III |

14.5. Environmental hazards

| ADR | not applicable |
|------|------------------|
| RID | not applicable |
| ADN | not applicable |
| IMDG | Marine pollutant |
| IATA | not applicable |

14.6. Special precautions for user

ADR not applicable

| | Tunnelcode: |
|------|----------------|
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), 197 (IATA), 969 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

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

not applicable

SECTION 15: Regulatory information

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

VOC content 0 % (VOCV 814.018 VOC regulation CH)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

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.

Further information:

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.



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

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Loctite Extreme Epoxy

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

1.1. Product identifier

Loctite Epoxy Liq 1 Min Comp B

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

Intended use:

Part B of 2-Component Epoxy Adhesive.

1.3. Details of the supplier of the safety data sheet

Henkel Ltd Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000 Fax-no.: +44 (1442) 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation Category 2

H315 Causes skin irritation.

Serious eye damage Category 1

H318 Causes serious eye damage.

Chronic hazards to the aquatic environment Category 3

H412 Harmful to aquatic life with long lasting effects.

Skin sensitizer Sub-category 1B

H317 May cause an allergic skin reaction.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains Pentaerythritol-PO-mercaptoglycerol

1,3-bis[3-(dimethylamino)propyl]urea

Signal word: Danger

Hazard statement: H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement: P102 Keep out of reach of children.

P101 If medical advice is needed, have product container or label at hand.

Precautionary statement:

Prevention

P280 Wear protective gloves/eye protection.

Precautionary statement:

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

Precautionary statement:

Disposal

P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:

Hardener

Base substances of preparation:

Polymercaptan

Declaration of the ingredients according to CLP (EC) No 1272/2008:

| Hazardous components CAS-No. | EC Number REACH-Reg No. | content | Classification |
|--|-------------------------------|-------------|---|
| Pentaerythritol-PO-mercaptoglycerol 72244-98-5 | 701-196-7 01-2120118957-46 | 80- < 100 % | Skin Sens. 1B H317 Aquatic Chronic 3 H412 |
| 1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1 | 257-861-2 01-2120781639-37 | 5-< 10 % | Eye Dam. 1 H318 Aquatic Chronic 3 H412 |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | 229-713-7 01-2119977097-24 | 1-< 3% | Acute Tox. 3; Oral H301 Skin Corr. 1B H314 Eye Dam. 1 H318 |

For full text of the H - statements and other abbreviations see section 16 "Other information". Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact

Rinse with running water and soap. Skin care. Remove contaminated clothes immediately.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

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

SKIN: Redness, inflammation.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

May cause an allergic skin reaction.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO2) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment.

Danger of slipping on spilled product.

Ensure adequate ventilation.

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust). Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure that workrooms are adequately ventilated.

Avoid skin and eye contact.

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly sealed.

Temperatures between + 10 °C and + 25 °C

Store at room temperature.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)

Part B of 2-Component Epoxy Adhesive.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Great Britain

None

Occupational Exposure Limits

Valid for

Ireland

None

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|---|------------------------------------|-----------------|----------------|-----|-----------------|--------|---------|
| | | | mg/l | ppm | mg/kg | others | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | aqua (freshwater) | | 0,07 mg/l | | | | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | aqua (intermittent releases) | | 0,12 mg/l | | | | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | aqua (marine water) | | 0,007 mg/l | | | | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | sediment (freshwater) | | | | 322 mg/kg | | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | sediment (marine water) | | | | 32 mg/kg | | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | sewage treatment plant (STP) | | 10 mg/l | | | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | aqua (freshwater) | | 0,093 mg/l | | | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | aqua (marine water) | | 0,0093 mg/l | | | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | aqua (intermittent releases) | | 0,93 mg/l | | | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | sewage treatment plant (STP) | | 1,8 mg/l | | | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | sediment (freshwater) | | | | 0,372 mg/kg | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | sediment (marine water) | | | | 0,0372 mg/kg | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | Air | | | | | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | Predator | | | | | | |
| 1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1 | Soil | | | | 0,0198 mg/kg | | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | aqua (freshwater) | | 0,24 mg/l | | | | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | aqua (marine water) | | 0,024 mg/l | | | | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | aqua (intermittent releases) | | 0,5 mg/l | | | | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | sewage treatment plant (STP) | | 13 mg/l | | | | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | sediment (freshwater) | | | | 137 mg/kg | | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | sediment (marine water) | | | | 13,7 mg/kg | | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | Soil | | | | 27,2 mg/kg | | |

Derived No-Effect Level (DNEL):

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|---|-----------------------|----------------------|---|------------------|------------|---------|
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | Workers | inhalation | Long term exposure - systemic effects | | 22 mg/m3 | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | Workers | dermal | Long term exposure - systemic effects | | 2,7 mg/kg | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | General population | inhalation | Long term exposure - systemic effects | | 6,52 mg/m3 | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | General population | dermal | Long term exposure - systemic effects | | 1,61 mg/kg | |
| Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5 | General population | oral | Long term exposure - systemic effects | | 1,9 mg/kg | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | Workers | inhalation | Long term exposure - systemic effects | | 10,6 mg/m3 | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | Workers | dermal | Long term exposure - systemic effects | | 3 mg/kg | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | General population | inhalation | Long term exposure - systemic effects | | 2,6 mg/m3 | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | General population | dermal | Long term exposure - systemic effects | | 1,5 mg/kg | |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 | General population | oral | Long term exposure - systemic effects | | 1,5 mg/kg | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Respiratory protection:

Not needed.

Hand protection:

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374. material thickness > 0.1 mm

Perforation time > 480 minutes

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:

Suitable protective clothing

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance liquid

high viscosity transparent

Odor typical

Odour threshold No data available / Not applicable

pH No data available / Not applicable
Melting point No data available / Not applicable
Solidification temperature No data available / Not applicable
Initial boiling point No data available / Not applicable
Flash point Not available.

Evaporation rate

Evaporation rate

No data available.

No data available / Not applicable

Flammability

No data available / Not applicable

Explosive limits

No data available / Not applicable

Vapour pressure

No data available / Not applicable

Relative vapour density: No data available / Not applicable

Density 1,09 - 1,19 g/cm3

(20 °C (68 °F))

Bulk density No data available / Not applicable Solubility No data available / Not applicable

Solubility (qualitative) Insoluble

(23 °C (73.4 °F); Solvent: Water)

Partition coefficient: n-octanol/water No data available / Not applicable Auto-ignition temperature No data available / Not applicable Decomposition temperature No data available / Not applicable

Viscosity 15.000 - 20.000 Pa*s

(Brookfield; 23 °C (73.4 °F); speed of rotation:

20 min-1; Spindle No: 6)

Viscosity (kinematic)

Explosive properties

No data available / Not applicable
No data available / Not applicable
No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

None if used for intended purpose.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

General toxicological information:

Persons suffering from allergic reactions to amines should avoid contact with the product.

Cross-reactions with other amine compounds are possible.

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Species | Method |
|--|-------|--------------------|---------|--|
| CAS-No. | type | | | |
| Pentaerythritol-PO- mercaptoglycerol 72244-98-5 | LD50 | 2.600 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 1,3-bis[3- (dimethylamino)propyl]ur ea 52338-87-1 | LD50 | 5.126 mg/kg | rat | not specified |
| 1,8- Diazabicyclo[5.4.0]undec -7-ene 6674-22-2 | LD50 | 251 - 300 mg/kg | rat | not specified |

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Species | Method |
|--|-------|----------------|---------|--|
| CAS-No. | type | | | |
| Pentaerythritol-PO- mercaptoglycerol 72244-98-5 | LD50 | > 10.200 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| 1,3-bis[3- (dimethylamino)propyl]ur ea 52338-87-1 | LD50 | > 2.050 mg/kg | rat | other guideline: |

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

No data available.

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Result | Exposure | Species | Method |
|--------------------------|----------------|----------|---------|---|
| CAS-No. | | time | | |
| 1,3-bis[3- | Category 1 | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| (dimethylamino)propyl]ur | (irreversible | | | |
| ea | effects on the | | | |
| 52338-87-1 | eye) | | | |

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Test type | Species | Method |
|--|-----------------|---------------------------------------|------------|---|
| Pentaerythritol-PO- mercaptoglycerol 72244-98-5 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| 1,3-bis[3- (dimethylamino)propyl]ur ea 52338-87-1 | not sensitising | Guinea pig maximisation test | guinea pig | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances | Result | Type of study / | Metabolic | Species | Method |
|--|----------|--|------------------|---------|--|
| CAS-No. | | Route of | activation / | | |
| | | administration | Exposure time | | |
| 1,3-bis[3- (dimethylamino)propyl]ur ea 52338-87-1 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 1,3-bis[3- (dimethylamino)propyl]ur ea 52338-87-1 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |

Carcinogenicity

No data available.

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances | Result / Value | Test type | Route of | Species | Method |
|--------------------------|--------------------|-----------|--------------|---------|---------------|
| CAS-No. | | | application | | |
| 1,3-bis[3- | NOAEL P 500 mg/kg | screening | oral: gavage | rat | not specified |
| (dimethylamino)propyl]ur | | | | | _ |
| ea | NOAEL F1 500 mg/kg | | | | |
| 52338-87-1 | | | | | |

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|------------------------------|-------------------|----------------------|--|---------|---------------------------|
| 1,3-bis[3- | NOAEL > 500 mg/kg | oral: gavage | 28 d | rat | OECD Guideline 407 |
| (dimethylamino)propyl]ur | | | daily | | (Repeated Dose 28-Day |
| ea | | | | | Oral Toxicity in Rodents) |
| 52338-87-1 | | | | | |

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|--|-------|------------------|---------------|-----------------|---|
| CAS-No. | type | | | | |
| Pentaerythritol-PO- mercaptoglycerol 72244-98-5 | LC50 | 87 mg/l | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 1,3-bis[3- (dimethylamino)propyl]urea 52338-87-1 | LC50 | > 1.000 mg/l | 96 h | Oryzias latipes | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2 | LC50 | > 100 - 220 mg/l | 96 h | Leuciscus idus | DIN 38412-15 |

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|-------------------------------|-------|---------|---------------|---------------|----------------------|
| CAS-No. | type | | | | |
| Pentaerythritol-PO- | EC50 | 12 mg/l | 48 h | Daphnia magna | OECD Guideline 202 |
| mercaptoglycerol | | | | | (Daphnia sp. Acute |
| 72244-98-5 | | | | | Immobilisation Test) |
| 1,3-bis[3- | EC50 | 93 mg/l | 48 h | Daphnia magna | OECD Guideline 202 |
| (dimethylamino)propyl]urea | | | | | (Daphnia sp. Acute |
| 52338-87-1 | | | | | Immobilisation Test) |
| 1,8-Diazabicyclo[5.4.0]undec- | EC50 | 50 mg/l | 48 h | Daphnia magna | OECD Guideline 202 |
| 7-ene | | | | | (Daphnia sp. Acute |
| 6674-22-2 | | | | | Immobilisation Test) |

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|---|-------|-----------|---------------|---------|--|
| CAS-No. | type | | | | |
| Pentaerythritol-PO- mercaptoglycerol 72244-98-5 | NOEC | 3,5 mg/l | 21 d | 1 & | OECD 211 (Daphnia magna, Reproduction Test) |
| 1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2 | NOEC | > 12 mg/l | 21 day | 1 0 | OECD 211 (Daphnia magna, Reproduction Test) |

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|-------------------------------|-------|------------|---------------|---------------------------------|---------------------------|
| CAS-No. | type | | | | |
| Pentaerythritol-PO- | EC50 | > 733 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, |
| mercaptoglycerol | | | | | Growth Inhibition Test) |
| 72244-98-5 | | | | | |
| Pentaerythritol-PO- | NOEC | 338 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, |
| mercaptoglycerol | | | | | Growth Inhibition Test) |
| 72244-98-5 | | | | | |
| 1,3-bis[3- | EC50 | > 100 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, |
| (dimethylamino)propyl]urea | | | | | Growth Inhibition Test) |
| 52338-87-1 | | | | | |
| 1,3-bis[3- | EC10 | > 100 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, |
| (dimethylamino)propyl]urea | | | | | Growth Inhibition Test) |
| 52338-87-1 | | | | | |
| 1,8-Diazabicyclo[5.4.0]undec- | EC50 | > 100 mg/l | 72 h | Desmodesmus subspicatus | EU Method C.3 (Algal |
| 7-ene | | | | (reported as Scenedesmus | Inhibition test) |
| 6674-22-2 | | | | subspicatus) | |
| 1,8-Diazabicyclo[5.4.0]undec- | NOEC | > 100 mg/l | 72 h | Desmodesmus subspicatus | EU Method C.3 (Algal |
| 7-ene | | | | (reported as Scenedesmus | Inhibition test) |
| 6674-22-2 | | | | subspicatus) | |

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|-------------------------------|-------|--------------|---------------|-------------------------------|------------------------------|
| CAS-No. | type | | | | |
| Pentaerythritol-PO- | EC50 | > 1.000 mg/l | 3 h | activated sludge of a | OECD Guideline 209 |
| mercaptoglycerol | | | | predominantly domestic sewage | (Activated Sludge, |
| 72244-98-5 | | | | | Respiration Inhibition Test) |
| 1,3-bis[3- | EC50 | 820 mg/l | 3 h | activated sludge of a | OECD Guideline 209 |
| (dimethylamino)propyl]urea | | | | predominantly domestic sewage | (Activated Sludge, |
| 52338-87-1 | | | | | Respiration Inhibition Test) |
| 1,8-Diazabicyclo[5.4.0]undec- | EC 50 | 330 mg/l | 17 h | | not specified |
| 7-ene | | | | | |
| 6674-22-2 | | | | | |

12.2. Persistence and degradability

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|--|---------------------------------|-----------|---------------|---------------|--|
| Pentaerythritol-PO- mercaptoglycerol 72244-98-5 | not readily biodegradable. | aerobic | 5 % | 28 d | OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test) |
| 1,3-bis[3- (dimethylamino)propyl]urea 52338-87-1 | not readily biodegradable. | aerobic | 1 % | 28 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| 1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2 | not inherently biodegradable | aerobic | < 20 % | 28 day | OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test) |
| 1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2 | not readily biodegradable. | aerobic | < 20 % | 28 day | OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test) |

12.3. Bioaccumulative potential

| Hazardous substances | Bioconcentratio | Exposure time | Temperature | Species | Method |
|-------------------------------|-----------------|---------------|-------------|-----------------|---------------------------------|
| CAS-No. | n factor (BCF) | | | | |
| 1,3-bis[3- | < 2,3 | 28 d | 25 °C | Cyprinus carpio | OECD Guideline 305 |
| (dimethylamino)propyl]urea | | | | | (Bioconcentration: Flow-through |
| 52338-87-1 | | | | | Fish Test) |
| 1,8-Diazabicyclo[5.4.0]undec- | < 0,4 | 42 day | | Cyprinus carpio | OECD Guideline 305 C |
| 7-ene | | | | | (Bioaccumulation: Test for the |
| 6674-22-2 | | | | | Degree of Bioconcentration in |
| | | | | | Fish) |

12.4. Mobility in soil

| Hazardous substances CAS-No. | LogPow | Temperature | Method |
|--|--------|-------------|--|
| Pentaerythritol-PO- mercaptoglycerol 72244-98-5 | 1,2 | 20 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| 1,3-bis[3- (dimethylamino)propyl]urea 52338-87-1 | 0,817 | 20 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |

12.5. Results of PBT and vPvB assessment

| Hazardous substances | PBT / vPvB |
|--------------------------------------|--|
| CAS-No. | |
| Pentaerythritol-PO-mercaptoglycerol | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 72244-98-5 | Bioaccumulative (vPvB) criteria. |
| 1,3-bis[3-(dimethylamino)propyl]urea | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 52338-87-1 | Bioaccumulative (vPvB) criteria. |
| 1,8-Diazabicyclo[5.4.0]undec-7-ene | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 6674-22-2 | Bioaccumulative (vPvB) criteria. |

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages: Use packages for recycling only when totally empty.

Waste code 080409

SECTION 14: Transport information

14.1. UN number

ADR Not dangerous goods
RID Not dangerous goods
ADN Not dangerous goods
IMDG Not dangerous goods

IATA 3334

14.2. UN proper shipping name

ADR Not dangerous goods
RID Not dangerous goods
ADN Not dangerous goods
IMDG Not dangerous goods

IATA Aviation regulated liquid, n.o.s. (Mercaptan polymer)

14.3. Transport hazard class(es)

ADR Not dangerous goods
RID Not dangerous goods
ADN Not dangerous goods
IMDG Not dangerous goods

IATA 9

14.4. Packing group

ADR Not dangerous goods
RID Not dangerous goods
ADN Not dangerous goods
IMDG Not dangerous goods

IATA III

14.5. Environmental hazards

ADR not applicable RID not applicable ADN not applicable IMDG not applicable IATA not applicable

14.6. Special precautions for user

ADR not applicable RID not applicable ADN not applicable IMDG not applicable

IATA No dangerous good according to ADR/RID/ADN. Carriage in accordance with

1.1.4.2.1 ADR/RID/ADN.

Primary packs containing less than 500ml are unregulated by this mode of transport

and may be shipped unrestricted.

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

not applicable

SECTION 15: Regulatory information

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

VOC content

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text

of all abbreviations indicated by codes in this safety data sheet are as follows:

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H412 Harmful to aquatic life with long lasting effects.

Further information:

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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.