



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

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LOCTITE EA 9450 DC400ML EGFD

SDS No. : 178446  
V001.0

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Replaces version from: -

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

#### 1.1. Product identifier

LOCTITE EA 9450 DC400ML EGFD

#### Contains:

Epichlorohyd.-bisphenol A resin MW<=700  
Bisphenol-F epichlorhydrin resin; MW<700

#### 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 AG & Co. KGaA  
Henkelstr. 67  
40589 Düsseldorf

Germany

Phone: +49 211 797 0  
Fax-no.: +49 211 798 2009

ua-productsafety.de@henkel.com

#### 1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (CLP):

|   |            |
|---|------------|
| Skin irritation                                       | Category 2 |
| H315 Causes skin irritation.                          |            |
| Serious eye irritation                                | Category 2 |
| H319 Causes serious eye irritation.                   |            |
| Skin sensitizer                                       | Category 1 |
| H317 May cause an allergic skin reaction.             |            |
| 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:****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:  
Prevention**

P273 Avoid release to the environment.  
 P280 Wear protective gloves.

**Precautionary statement:  
Response**

P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P337+P313 If eye irritation persists: Get medical advice/attention.

**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:**

Epoxy resin

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

| Hazardous components<br>CAS-No.                          | EC Number<br>REACH-Reg No.                 | content   | Classification   |
|--|--|-----------|--|
| Epichlorohyd.-bisphenol A resin<br>MW<=700<br>25068-38-6 | 01-2119456619-26                           | 50- 100 % | Skin Irrit. 2<br>H315<br>Skin Sens. 1<br>H317<br>Eye Irrit. 2<br>H319<br>Aquatic Chronic 2<br>H411 |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5    | 500-006-8<br>500-006-8<br>01-2119454392-40 | 20- 40 %  | Skin Irrit. 2; Dermal<br>H315<br>Skin Sens. 1A<br>H317<br>Aquatic Chronic 2<br>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****Inhalation:**

Move to fresh air. If symptoms persist, seek medical advice.

**Skin contact:**

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

SKIN: Redness, inflammation.

SKIN: Rash, Urticaria.

EYE: Irritation, conjunctivitis.

#### **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

##### **Extinguishing media which must not be used for safety reasons:**

None known

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

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) can be released.

#### **5.3. Advice for firefighters**

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

##### **Additional information:**

In case of fire, keep containers cool with water spray.

### **SECTION 6: Accidental release measures**

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

Avoid contact with skin and eyes.

Ensure adequate ventilation.

Wear protective equipment.

#### **6.2. Environmental precautions**

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

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

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

Wash spillage site thoroughly with soap and water or detergent solution.

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.

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

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

Store in a cool, well-ventilated place.

Refer to Technical Data Sheet

**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  
Germany

None

**Predicted No-Effect Concentration (PNEC):**

| Name on list   | Environmental Compartment    | Exposure period | Value       |     |              |        | Remarks |
|--|------------------------------|-----------------|-------------|-----|--------------|--------|---------|
|  |                              |                 | mg/l        | ppm | mg/kg        | others |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | aqua (freshwater)            |                 | 0,006 mg/l  |     |              |        |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | aqua (marine water)          |                 | 0,001 mg/l  |     |              |        |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | sewage treatment plant (STP) |                 | 10 mg/l     |     |              |        |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | sediment (freshwater)        |                 |             |     | 0,996 mg/kg  |        |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | sediment (marine water)      |                 |             |     | 0,1 mg/kg    |        |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | soil                         |                 |             |     | 0,196 mg/kg  |        |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | oral                         |                 |             |     | 11 mg/kg     |        |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | aqua (intermittent releases) |                 | 0,018 mg/l  |     |              |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | aqua (freshwater)            |                 | 0,003 mg/l  |     |              |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | aqua (marine water)          |                 | 0,0003 mg/l |     |              |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | sewage treatment plant (STP) |                 | 10 mg/l     |     |              |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | sediment (freshwater)        |                 |             |     | 0,294 mg/kg  |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | sediment (marine water)      |                 |             |     | 0,0294 mg/kg |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | soil                         |                 |             |     | 0,237 mg/kg  |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | aqua (intermittent releases) |                 | 0,0254 mg/l |     |              |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | Air                          |                 |             |     |              |        |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | Predator                     |                 |             |     |              |        |         |

**Derived No-Effect Level (DNEL):**

| Name on list   | Application Area   | Route of Exposure | Health Effect                                | Exposure Time | Value        | Remarks |
|--|--------------------|-------------------|--|---------------|--------------|---------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | Workers            | dermal            | Acute/short term exposure - systemic effects |               | 8,33 mg/kg   |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | Workers            | Inhalation        | Acute/short term exposure - systemic effects |               | 12,25 mg/m3  |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | Workers            | dermal            | Long term exposure - systemic effects        |               | 8,33 mg/kg   |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | Workers            | Inhalation        | Long term exposure - systemic effects        |               | 12,25 mg/m3  |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | General population | dermal            | Acute/short term exposure - systemic effects |               | 3,571 mg/kg  |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | General population | dermal            | Long term exposure - systemic effects        |               | 3,571 mg/kg  |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | General population | oral              | Acute/short term exposure - systemic effects |               | 0,75 mg/kg   |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | General population | oral              | Long term exposure - systemic effects        |               | 0,75 mg/kg   |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | General population | inhalation        | Acute/short term exposure - systemic effects |               | 0,75 mg/m3   |         |
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>25068-38-6 | General population | inhalation        | Long term exposure - systemic effects        |               | 0,75 mg/m3   |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | Workers            | dermal            | Long term exposure - systemic effects        |               | 104,15 mg/kg |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | Workers            | Inhalation        | Long term exposure - systemic effects        |               | 29,39 mg/m3  |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | General population | dermal            | Long term exposure - systemic effects        |               | 62,5 mg/kg   |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | General population | Inhalation        | Long term exposure - systemic effects        |               | 8,7 mg/m3    |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | General population | oral              | Long term exposure - systemic effects        |               | 6,25 mg/kg   |         |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)<br>9003-36-5  | Workers            | dermal            | Long term exposure - local effects           |               | 8,3 µg/cm2   |         |

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:  
Ensure good ventilation/extraction.

Respiratory protection:  
Ensure adequate ventilation.  
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area  
Filter type: A (EN 14387)

Hand protection:  
Chemical-resistant protective gloves (EN 374).  
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):  
nitrile rubber (NBR; >= 0.4 mm thickness)  
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):  
nitrile rubber (NBR; >= 0.4 mm thickness)  
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:  
Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.  
Protective eye equipment should conform to EN166.

Skin protection:  
Wear 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<br>white                    |
| Odor                                | None                               |
| 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               | > 148 °C (> 298.4 °F)              |
| Flash point                         | > 93 °C (> 199.4 °F)               |
| Evaporation rate                    | No data available / Not applicable |
| Flammability                        | No data available / Not applicable |
| Explosive limits                    | No data available / Not applicable |
| Vapour pressure<br>(50 °C (122 °F)) | < 700 mbar                         |
| Relative vapour density:            | No data available / Not applicable |
| Density<br>( )                      | 1,2 g/cm <sup>3</sup>              |

|  |                                    |
|--|------------------------------------|
| Bulk density                                 | No data available / Not applicable |
| Solubility                                   | No data available / Not applicable |
| Solubility (qualitative)<br>(Solvent: Water) | Insoluble                          |
| 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                                    | No data available / Not applicable |
| Viscosity (kinematic)                        | No data available / Not applicable |
| Explosive properties                         | No data available / Not applicable |
| Oxidising properties                         | No data available / Not applicable |

**9.2. Other information**

No data available / Not applicable

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Reaction with oxidants.  
Reaction with strong acids.  
Reaction with strong bases

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

See section reactivity

**10.4. Conditions to avoid**

No decomposition if used according to specifications.

**10.5. Incompatible materials**

See section reactivity.

**10.6. Hazardous decomposition products**

carbon oxides.

**SECTION 11: Toxicological information****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<br>CAS-No.                             | Value<br>type | Value         | Species | Method                                   |
|---|---------------|---------------|---------|--|
| Epichlorohyd.-bisphenol<br>A resin MW<=700<br>25068-38-6    | LD50          | > 2.000 mg/kg | rat     | OECD Guideline 420 (Acute Oral Toxicity) |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5 | LD50          | > 5.000 mg/kg | rat     | OECD Guideline 401 (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<br>CAS-No.                             | Value<br>type | Value         | Species | Method                                     |
|---|---------------|---------------|---------|--|
| Epichlorohyd.-bisphenol<br>A resin MW<=700<br>25068-38-6    | LD50          | > 2.000 mg/kg | rat     | not specified                              |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5 | 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<br>CAS-No.                             | Result                   | Exposure<br>time | Species | Method   |
|---|--------------------------|------------------|---------|--|
| Epichlorohyd.-bisphenol<br>A resin MW<=700<br>25068-38-6    | moderately<br>irritating | 24 h             | rabbit  | Draize Test  |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5 | irritating               | 4 h              | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

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

| Hazardous substances<br>CAS-No.                             | Result         | Exposure<br>time | Species | Method  |
|---|----------------|------------------|---------|---|
| Epichlorohyd.-bisphenol<br>A resin MW<=700<br>25068-38-6    | not irritating |                  | rabbit  | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5 | 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<br>CAS-No.                             | Result      | Test type                             | Species | Method   |
|---|-------------|---------------------------------------|---------|--|
| Epichlorohyd.-bisphenol<br>A resin MW<=700<br>25068-38-6    | sensitising | Mouse local lymphnode<br>assay (LLNA) | mouse   | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5 | sensitising | Mouse local lymphnode<br>assay (LLNA) | mouse   | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |

**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   |
|---|----------|--|--------------------------------------|---------|--|
| Epichlorohyd.-bisphenol A resin MW<=700<br>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)            |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | positive | bacterial reverse mutation assay (e.g Ames test) | with and without                     |         | OECD Guideline 471 (Bacterial Reverse Mutation Assay)  |
| Epichlorohyd.-bisphenol A resin MW<=700<br>25068-38-6 | negative | oral: gavage                                     |                                      | mouse   | not specified  |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | negative | oral: gavage                                     |                                      | mouse   | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)                                 |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | negative | oral: gavage                                     |                                      | rat     | OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo) |

**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   |
|---|------------------|----------------------|--|---------|-------------|--|
| Epichlorohyd.-bisphenol A resin MW<=700<br>25068-38-6 | not carcinogenic | dermal               | 2 y daily                              | mouse   | male        | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| Epichlorohyd.-bisphenol A resin MW<=700<br>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 CAS-No.                          | Result / Value  | Test type            | Route of application | Species | Method  |
|---|---|----------------------|----------------------|---------|---|
| Epichlorohyd.-bisphenol A resin MW<=700<br>25068-38-6 | NOAEL P >= 50 mg/kg<br>NOAEL F1 >= 750 mg/kg<br>NOAEL F2 >= 750 mg/kg | Two generation study | oral: gavage         | rat     | OECD Guideline 416 (Two-Generation Reproduction Toxicity Study) |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | NOAEL P > 750 mg/kg<br>NOAEL F1 750 mg/kg<br>NOAEL F2 750 mg/kg       | two-generation study | oral: gavage         | rat     | OECD Guideline 416 (Two-Generation Reproduction Toxicity Study) |

**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   |
|---|-----------------|----------------------|--|---------|--|
| Epichlorohyd.-bisphenol A resin MW<=700<br>25068-38-6 | NOAEL 50 mg/kg  | oral: gavage         | 14 w daily                             | rat     | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | NOAEL 250 mg/kg | oral: gavage         | 13 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 / surface water / ground 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 CAS-No.                          | Value type | Value     | Exposure time | Species             | Method   |
|---|------------|-----------|---------------|---------------------|--|
| Epichlorohyd.-bisphenol A resin MW<=700<br>25068-38-6 | LC50       | 1,75 mg/l | 96 h          | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | LC50       | 5,7 mg/l  | 96 h          | Leuciscus idus      | OECD Guideline 203 (Fish, Acute Toxicity Test) |

**Toxicity (Daphnia):**

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

| Hazardous substances CAS-No.                          | Value type | Value     | Exposure time | Species       | Method   |
|---|------------|-----------|---------------|---------------|--|
| Epichlorohyd.-bisphenol A resin MW<=700<br>25068-38-6 | EC50       | 1,7 mg/l  | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | EC50       | 2,55 mg/l | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute 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 CAS-No.                          | Value type | Value    | Exposure time | Species       | Method                                      |
|---|------------|----------|---------------|---------------|---|
| Epichlorohyd.-bisphenol A resin MW<=700<br>25068-38-6 | NOEC       | 0,3 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | NOEC       | 0,3 mg/l | 21 d          | Daphnia magna | 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<br>CAS-No.                          | Value<br>type | Value     | Exposure time | Species                         | Method   |
|--|---------------|-----------|---------------|---------------------------------|--|
| Epichlorohyd.-bisphenol A<br>resin MW<=700<br>25068-38-6 | EC50          | > 11 mg/l | 72 h          | Scenedesmus capricornutum       | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Epichlorohyd.-bisphenol A<br>resin MW<=700<br>25068-38-6 | NOEC          | 4,2 mg/l  | 72 h          | Scenedesmus capricornutum       | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>9003-36-5 | EC50          | 1,8 mg/l  | 72 h          | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga,<br>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<br>CAS-No.                          | Value<br>type | Value      | Exposure time | Species                      | Method           |
|--|---------------|------------|---------------|------------------------------|------------------|
| Epichlorohyd.-bisphenol A<br>resin MW<=700<br>25068-38-6 | IC50          | > 100 mg/l | 3 h           | activated sludge, industrial | other guideline: |
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>9003-36-5 | IC50          | > 100 mg/l | 3 h           | activated sludge, industrial | other guideline: |

#### 12.2. Persistence and degradability

The product is not biodegradable.

| Hazardous substances<br>CAS-No.                          | Result                     | Test type | Degradability | Exposure<br>time | Method  |
|--|----------------------------|-----------|---------------|------------------|---|
| Epichlorohyd.-bisphenol A<br>resin MW<=700<br>25068-38-6 | not readily biodegradable. | aerobic   | 5 %           | 28 d             | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>9003-36-5 | not readily biodegradable. | aerobic   | 0 %           | 28 d             | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)           |

#### 12.3. Bioaccumulative potential

No data available.

No substance data available.

#### 12.4. Mobility in soil

Cured adhesives are immobile.

| Hazardous substances<br>CAS-No.                          | LogPow    | Temperature | Method   |
|--|-----------|-------------|--|
| Epichlorohyd.-bisphenol A<br>resin MW<=700<br>25068-38-6 | 3,242     | 25 °C       | EU Method A.8 (Partition Coefficient)  |
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>9003-36-5 | 2,7 - 3,6 |             | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC<br>Method) |

#### 12.5. Results of PBT and vPvB assessment

| Hazardous substances<br>CAS-No.                       | PBT / vPvB   |
|---|--|
| Epichlorohyd.-bisphenol A resin MW<=700<br>25068-38-6 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very<br>Bioaccumulative (vPvB) criteria. |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very<br>Bioaccumulative (vPvB) criteria. |

#### 12.6. Other adverse effects

No data available.

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**SECTION 13: Disposal considerations**

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**13.1. Waste treatment methods**

Product disposal:

Collection and delivery to recycling enterprise or other registered elimination institution.

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Disposal must be made according to official regulations.

Waste code

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

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

|  |
|--|
| <b>SECTION 14: Transport information</b> |
|--|

**14.1. UN number**

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

**14.2. UN proper shipping name**

|      |   |
|------|---|
| ADR  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Bisphenol-A Epichlorhydrin resin) |
| RID  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Bisphenol-A Epichlorhydrin resin) |
| ADN  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Bisphenol-A Epichlorhydrin resin) |
| IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(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<br>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 < 3,00 %  
(2010/75/EC)

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**National regulations/information (Germany):**

WGK: WGK = 2, water endangering product. Classification according to the mixture rules in German VwVwS regulation annex 4 from 27.July 2005.

WGK: WGK = 2, significantly water endangering mixture. Classification according to the mixture rules in German AwSV regulation annex 1, number 5.2 from 18. April 2017.

Storage class according to TRGS 510: 10

**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 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.

**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

Page 1 of 15

LOCTITE EA 9450 DC400ML EGFD

SDS No. : 152802  
V001.0

Revision: 03.07.2018  
printing date: 31.03.2021  
Replaces version from: -

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

#### 1.1. Product identifier

LOCTITE EA 9450 DC400ML EGFD

#### Contains:

Pentaerythritol-PO-mercaptoglycerol  
Benzyltrimethylamine  
2-aminoethanol

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

Intended use:  
Epoxy Hardener

#### 1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA  
Henkelstr. 67  
40589 Düsseldorf

Germany

Phone: +49 211 797 0  
Fax-no.: +49 211 798 2009

ua-productsafety.de@henkel.com

#### 1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (CLP):

|   |             |
|---|-------------|
| Acute toxicity  | Category 4  |
| H332 Harmful if inhaled.                                |             |
| Route of Exposure: Inhalation                           |             |
| Skin corrosion  | Category 1B |
| H314 Causes severe skin burns and eye damage.           |             |
| Serious eye damage                                      | Category 1  |
| H318 Causes serious eye damage.                         |             |
| Skin sensitizer   | Category 1  |
| H317 May cause an allergic skin reaction.               |             |
| Chronic hazards to the aquatic environment              | Category 3  |
| H412 Harmful to aquatic life with long lasting effects. |             |

#### 2.2. Label elements

Label elements (CLP):

**Hazard pictogram:****Signal word:**

Danger

**Hazard statement:**

H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H332 Harmful if inhaled.  
 H412 Harmful to aquatic life with long lasting effects.

**Precautionary statement:  
Prevention**

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

**Precautionary statement:  
Response**

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER or doctor.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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

| Hazardous components<br>CAS-No.                   | EC Number<br>REACH-Reg No.    | content   | Classification  |
|---|-------------------------------|-----------|---|
| Pentaerythritol-PO-mercaptoglycerol<br>72244-98-5 | 01-2120118957-46              | 50- 100 % | Skin Sens. 1B<br>H317<br>Aquatic Chronic 3<br>H412  |
| Benzyltrimethylamine<br>103-83-3                  | 203-149-1<br>01-2119529232-48 | 5- < 10 % | Acute Tox. 4<br>H312<br>Skin Corr. 1B<br>H314<br>Flam. Liq. 3<br>H226<br>Aquatic Chronic 2<br>H411<br>Acute Tox. 4<br>H302<br>Acute Tox. 3<br>H331                        |
| 2-aminoethanol<br>141-43-5                        | 205-483-3<br>01-2119486455-28 | 1- < 5 %  | Acute Tox. 4; Oral<br>H302<br>Acute Tox. 4; Dermal<br>H312<br>Skin Corr. 1B<br>H314<br>Acute Tox. 4; Inhalation<br>H332<br>Aquatic Chronic 3<br>H412<br>STOT SE 3<br>H335 |

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

**Inhalation:**

Move to fresh air. If symptoms persist, seek medical advice.

**Skin contact:**

Rinse with running water and soap.

Obtain medical attention if irritation persists.

**Eye contact:**

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

**Ingestion:**

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

Causes burns.

SKIN: Rash, Urticaria.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

### 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

**Extinguishing media which must not be used for safety reasons:**

None known

### 5.2. Special hazards arising from the substance or mixture

None

carbon oxides.

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

**Additional information:**

In case of fire, keep containers cool with water spray.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Avoid skin and eye contact.

Wear protective equipment.

### 6.2. Environmental precautions

Do not let product enter drains.

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

For large spills absorb onto inert absorbent material and place in sealed container for disposal.  
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.  
Use only in well-ventilated areas.  
Gloves and safety glasses should be worn  
Do not inhale vapors and fumes.  
See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.  
Good industrial hygiene practices should be observed.  
Do not eat, drink or smoke while working.

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

Store in sealed original container.  
Store in a cool, well-ventilated place.

**7.3. Specific end use(s)**

Epoxy Hardener

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational Exposure Limits**

Valid for  
Germany

| Ingredient [Regulated substance]               | ppm | mg/m <sup>3</sup> | Value type                          | Short term exposure limit category / Remarks   | Regulatory list |
|--|-----|-------------------|-------------------------------------|--|-----------------|
| 2-Aminoethanol<br>141-43-5<br>[2-AMINOETHANOL] | 3   | 7,6               | Short Term Exposure Limit (STEL):   | Indicative   | ECLTV           |
| 2-Aminoethanol<br>141-43-5<br>[2-AMINOETHANOL] | 1   | 2,5               | Time Weighted Average (TWA):        | Indicative   | ECLTV           |
| 2-Aminoethanol<br>141-43-5                     |     |                   | Short Term Exposure Classification: | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. | TRGS 900        |
| 2-Aminoethanol<br>141-43-5                     | 0,2 | 0,5               | Exposure limit(s):                  | 1<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).                             | TRGS 900        |
| 2-Aminoethanol<br>141-43-5                     |     |                   | Skin designation:                   | Can be absorbed through the skin.  | TRGS 900        |

**Predicted No-Effect Concentration (PNEC):**

| Name on list                     | Environmental Compartment          | Exposure period | Value           |     |                 |        | Remarks |
|----------------------------------|------------------------------------|-----------------|-----------------|-----|-----------------|--------|---------|
|                                  |                                    |                 | mg/l            | ppm | mg/kg           | others |         |
| Benzyl dimethylamine<br>103-83-3 | aqua<br>(freshwater)               |                 | 0,0048<br>mg/l  |     |                 |        |         |
| Benzyl dimethylamine<br>103-83-3 | aqua (marine<br>water)             |                 | 0,00048<br>mg/l |     |                 |        |         |
| Benzyl dimethylamine<br>103-83-3 | aqua<br>(intermittent<br>releases) |                 | 0,0134<br>mg/l  |     |                 |        |         |
| Benzyl dimethylamine<br>103-83-3 | sewage<br>treatment plant<br>(STP) |                 | 534 mg/l        |     |                 |        |         |
| Benzyl dimethylamine<br>103-83-3 | sediment<br>(freshwater)           |                 |                 |     | 0,071<br>mg/kg  |        |         |
| Benzyl dimethylamine<br>103-83-3 | sediment<br>(marine water)         |                 |                 |     | 0,0071<br>mg/kg |        |         |
| Benzyl dimethylamine<br>103-83-3 | soil                               |                 |                 |     | 0,0114<br>mg/kg |        |         |
| 2-Aminoethanol<br>141-43-5       | aqua<br>(freshwater)               |                 | 0,085 mg/l      |     |                 |        |         |
| 2-Aminoethanol<br>141-43-5       | aqua (marine<br>water)             |                 | 0,0085<br>mg/l  |     |                 |        |         |
| 2-Aminoethanol<br>141-43-5       | aqua<br>(intermittent<br>releases) |                 | 0,028 mg/l      |     |                 |        |         |
| 2-Aminoethanol<br>141-43-5       | sediment<br>(freshwater)           |                 |                 |     | 0,434<br>mg/kg  |        |         |
| 2-Aminoethanol<br>141-43-5       | sediment<br>(marine water)         |                 |                 |     | 0,0434<br>mg/kg |        |         |
| 2-Aminoethanol<br>141-43-5       | soil                               |                 |                 |     | 0,037<br>mg/kg  |        |         |
| 2-Aminoethanol<br>141-43-5       | sewage<br>treatment plant<br>(STP) |                 | 100 mg/l        |     |                 |        |         |

**Derived No-Effect Level (DNEL):**

| Name on list                     | Application Area   | Route of Exposure | Health Effect                             | Exposure Time | Value                   | Remarks |
|----------------------------------|--------------------|-------------------|---|---------------|-------------------------|---------|
| Benzyl dimethylamine<br>103-83-3 | Workers            | dermal            | Long term exposure - systemic effects     |               | 2,3 mg/kg               |         |
| Benzyl dimethylamine<br>103-83-3 | Workers            | inhalation        | Long term exposure - systemic effects     |               | 14,6 mg/m <sup>3</sup>  |         |
| Benzyl dimethylamine<br>103-83-3 | Workers            | inhalation        | Long term exposure - local effects        |               | 1 mg/m <sup>3</sup>     |         |
| Benzyl dimethylamine<br>103-83-3 | General population | dermal            | Long term exposure - systemic effects     |               | 1,25 mg/kg              |         |
| Benzyl dimethylamine<br>103-83-3 | General population | oral              | Long term exposure - systemic effects     |               | 1,25 mg/kg              |         |
| Benzyl dimethylamine<br>103-83-3 | General population | inhalation        | Long term exposure - systemic effects     |               | 43,75 mg/m <sup>3</sup> |         |
| 2-Aminoethanol<br>141-43-5       | Workers            | dermal            | Long term exposure - systemic effects     |               | 1 mg/kg                 |         |
| 2-Aminoethanol<br>141-43-5       | Workers            | inhalation        | Long term exposure - local effects        |               | 3,3 mg/m <sup>3</sup>   |         |
| 2-Aminoethanol<br>141-43-5       | General population | dermal            | Long term exposure - systemic effects     |               | 0,24 mg/kg              |         |
| 2-Aminoethanol<br>141-43-5       | General population | inhalation        | Acute/short term exposure - local effects |               | 2 mg/m <sup>3</sup>     |         |
| 2-Aminoethanol<br>141-43-5       | General population | oral              | Long term exposure - systemic effects     |               | 3,75 mg/kg              |         |
| 2-Aminoethanol<br>141-43-5       | General population | inhalation        | Long term exposure - local effects        |               | 2 mg/m <sup>3</sup>     |         |
| 2-Aminoethanol<br>141-43-5       | General population | inhalation        | Long term exposure - systemic effects     |               | 2 mg/m <sup>3</sup>     |         |
| 2-Aminoethanol<br>141-43-5       | Workers            | inhalation        | Long term exposure - systemic effects     |               | 3,3 mg/m <sup>3</sup>   |         |

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

**Hand protection:**

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR;  $\geq$  0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR;  $\geq$  0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

**Eye protection:**

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

**Skin protection:**

Wear 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                             | paste<br>light yellow              |
| Odor                                   | of amine                           |
| 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                  | > 180 °C (> 356 °F)                |
| Flash point                            | 75 °C (167 °F)                     |
| Evaporation rate                       | No data available / Not applicable |
| Flammability                           | No data available / Not applicable |
| Explosive limits                       | No data available / Not applicable |
| Vapour pressure<br>(50 °C (122 °F))    | < 700 mbar                         |
| Relative vapour density:               | No data available / Not applicable |
| Density<br>( )                         | 1,16 g/cm <sup>3</sup>             |
| Bulk density                           | No data available / Not applicable |
| Solubility                             | No data available / Not applicable |
| Solubility (qualitative)               | No data available / Not applicable |
| 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                              | No data available / Not applicable |
| Viscosity (kinematic)                  | No data available / Not applicable |
| Explosive properties                   | No data available / Not applicable |
| Oxidising properties                   | 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

Stable under normal conditions of storage and use.

### 10.5. Incompatible materials

No data available.

### 10.6. Hazardous decomposition products

carbon oxides.

## SECTION 11: Toxicological information

### 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<br>CAS-No.                       | Value<br>type | Value       | Species | Method                                   |
|---|---------------|-------------|---------|--|
| Pentaerythritol-PO-<br>mercaptoglycerol<br>72244-98-5 | LD50          | 2.600 mg/kg | rat     | OECD Guideline 401 (Acute Oral Toxicity) |
| Benzylidimethylamine<br>103-83-3                      | LD50          | 579 mg/kg   | rat     | not specified                            |
| 2-aminoethanol<br>141-43-5                            | LD50          | 1.515 mg/kg | rat     | OECD Guideline 401 (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<br>CAS-No.                       | Value<br>type | Value          | Species | Method                                     |
|---|---------------|----------------|---------|--|
| Pentaerythritol-PO-<br>mercaptoglycerol<br>72244-98-5 | LD50          | > 10.200 mg/kg | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity) |
| 2-aminoethanol<br>141-43-5                            | LD50          | 1.025 mg/kg    | rabbit  | not specified                              |

**Acute inhalative toxicity:**

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

| Hazardous substances<br>CAS-No.  | Value<br>type                          | Value      | Test atmosphere | Exposure<br>time | Species | Method           |
|----------------------------------|--|------------|-----------------|------------------|---------|------------------|
| Benzyltrimethylamine<br>103-83-3 | LC50                                   | 2,052 mg/l |                 | 4 h              | rat     | not specified    |
| 2-aminoethanol<br>141-43-5       | Acute<br>toxicity<br>estimate<br>(ATE) | 1,5 mg/l   | dust/mist       |                  |         | Expert judgement |
| 2-aminoethanol<br>141-43-5       | LC50                                   | 1 - 5 mg/l |                 | 4 h              | rat     |                  |

**Skin corrosion/irritation:**

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

| Hazardous substances<br>CAS-No. | Result    | Exposure<br>time | Species | Method   |
|---------------------------------|-----------|------------------|---------|--|
| 2-aminoethanol<br>141-43-5      | corrosive | 4 h              | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

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

| Hazardous substances<br>CAS-No. | Result    | Exposure<br>time | Species | Method  |
|---------------------------------|-----------|------------------|---------|---|
| 2-aminoethanol<br>141-43-5      | corrosive |                  | 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<br>CAS-No.                       | Result          | Test type                             | Species    | Method   |
|---|-----------------|---------------------------------------|------------|--|
| Pentaerythritol-PO-<br>mercaptoglycerol<br>72244-98-5 | sensitising     | Mouse local lymphnode<br>assay (LLNA) | mouse      | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |
| 2-aminoethanol<br>141-43-5                            | not sensitising | Guinea pig maximisation<br>test       | guinea pig | not specified  |

**Germ cell mutagenicity:**

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

| Hazardous substances<br>CAS-No. | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method   |
|---------------------------------|----------|--|--|---------|--|
| 2-aminoethanol<br>141-43-5      | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)              |
| 2-aminoethanol<br>141-43-5      | negative | in vitro mammalian<br>chromosome<br>aberration test    | without                                    |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test) |
| 2-aminoethanol<br>141-43-5      | negative | mammalian cell<br>gene mutation assay                  | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)    |
| 2-aminoethanol<br>141-43-5      | negative | oral: gavage   |  | mouse   | OECD Guideline 474<br>(Mammalian Erythrocyte<br>Micronucleus 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<br>CAS-No. | Result / Value  | Test type                  | Route of<br>application | Species | Method   |
|---------------------------------|---|----------------------------|-------------------------|---------|--|
| 2-aminoethanol<br>141-43-5      | NOAEL P 300 mg/kg<br>NOAEL F1 1.000 mg/kg<br>NOAEL F2 1.000 mg/kg | Two<br>generation<br>study | oral: feed              | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study) |

**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<br>CAS-No. | Result / Value  | Route of<br>application | Exposure time /<br>Frequency of<br>treatment | Species | Method           |
|---------------------------------|-----------------|-------------------------|--|---------|------------------|
| 2-aminoethanol<br>141-43-5      | NOAEL 300 mg/kg | oral: feed              | > 75 d<br>daily                              | rat     | other guideline: |

**Aspiration hazard:**

No data available.

## SECTION 12: Ecological information

### General ecological information:

Do not empty into drains / surface water / ground 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 CAS-No.                      | Value type | Value      | Exposure time | Species                                   | Method   |
|---|------------|------------|---------------|---|--|
| Pentaerythritol-PO-mercaptoglycerol<br>72244-98-5 | LC50       | 87 mg/l    | 96 h          | Danio rerio                               | OECD Guideline 203 (Fish, Acute Toxicity Test)           |
| Benzylidimethylamine<br>103-83-3                  | LC50       | 37,8 mg/l  | 96 h          | Pimephales promelas                       | OECD Guideline 203 (Fish, Acute Toxicity Test)           |
| 2-aminoethanol<br>141-43-5                        | LC50       | > 250 mg/l | 48 h          | Leuciscus idus                            | DIN 38412-15   |
| 2-aminoethanol<br>141-43-5                        | NOEC       | 1.221 mg/l |               | Brachydanio rerio (new name: Danio rerio) | OECD Guideline 210 (fish early lite stage toxicity test) |

#### Toxicity (Daphnia):

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

| Hazardous substances CAS-No.                      | Value type | Value      | Exposure time | Species       | Method   |
|---|------------|------------|---------------|---------------|--|
| Pentaerythritol-PO-mercaptoglycerol<br>72244-98-5 | EC50       | 12 mg/l    | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Benzylidimethylamine<br>103-83-3                  | EC50       | > 100 mg/l | 48 h          | Daphnia magna | EU Method C.2 (Acute Toxicity for Daphnia)                 |
| 2-aminoethanol<br>141-43-5                        | EC50       | 85 mg/l    | 24 h          | Daphnia magna | not specified  |

#### Chronic toxicity to aquatic invertebrates

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

| Hazardous substances CAS-No.                      | Value type | Value      | Exposure time | Species       | Method                                      |
|---|------------|------------|---------------|---------------|---|
| Pentaerythritol-PO-mercaptoglycerol<br>72244-98-5 | NOEC       | 3,5 mg/l   | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Benzylidimethylamine<br>103-83-3                  | NOEC       | 0,789 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| 2-aminoethanol<br>141-43-5                        | NOEC       | 0,85 mg/l  | 21 d          | Daphnia magna | 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<br>CAS-No.                       | Value<br>type | Value      | Exposure time | Species   | Method   |
|---|---------------|------------|---------------|---|--|
| Pentaerythritol-PO-<br>mercaptoglycerol<br>72244-98-5 | EC50          | > 733 mg/l | 72 h          | Desmodesmus subspicatus   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Pentaerythritol-PO-<br>mercaptoglycerol<br>72244-98-5 | NOEC          | 338 mg/l   | 72 h          | Desmodesmus subspicatus   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Benzyltrimethylamine<br>103-83-3                      | EC50          | 1,34 mg/l  | 72 h          | Desmodesmus subspicatus<br>(reported as Scenedesmus<br>subspicatus)         | EU Method C.3 (Algal<br>Inhibition test)             |
| Benzyltrimethylamine<br>103-83-3                      | NOEC          | 0,24 mg/l  | 72 h          | Desmodesmus subspicatus<br>(reported as Scenedesmus<br>subspicatus)         | EU Method C.3 (Algal<br>Inhibition test)             |
| 2-aminoethanol<br>141-43-5                            | EC50          | 2,5 mg/l   | 72 h          | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2-aminoethanol<br>141-43-5                            | NOEC          | 1 mg/l     | 72 h          | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>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<br>CAS-No.                       | Value<br>type | Value        | Exposure time | Species  | Method   |
|---|---------------|--------------|---------------|--|--|
| Pentaerythritol-PO-<br>mercaptoglycerol<br>72244-98-5 | EC50          | > 1.000 mg/l | 3 h           | activated sludge of a<br>predominantly domestic sewage | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |
| Benzyltrimethylamine<br>103-83-3                      | EC10          | 534 mg/l     | 17 h          | Pseudomonas putida                                     | DIN 38412, part 8<br>(Pseudomonas<br>Zellvermehrungshemm-<br>Test)       |
| 2-aminoethanol<br>141-43-5                            | EC 50         | > 1.000 mg/l | 3 h           |  | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |

#### 12.2. Persistence and degradability

The product is not biodegradable.

| Hazardous substances<br>CAS-No.                       | Result                     | Test type | Degradability | Exposure<br>time | Method  |
|---|----------------------------|-----------|---------------|------------------|---|
| Pentaerythritol-PO-<br>mercaptoglycerol<br>72244-98-5 | not readily biodegradable. | aerobic   | 5 %           | 28 d             | OECD Guideline 301 B (Ready<br>Biodegradability: CO2 Evolution<br>Test)     |
| Benzyltrimethylamine<br>103-83-3                      | not readily biodegradable. | aerobic   | 0 - 2 %       | 28 d             | OECD Guideline 301 C (Ready<br>Biodegradability: Modified MITI<br>Test (I)) |
| 2-aminoethanol<br>141-43-5                            | readily biodegradable      | aerobic   | > 80 %        | 19 d             | OECD Guideline 301 B (Ready<br>Biodegradability: CO2 Evolution<br>Test)     |

#### 12.3. Bioaccumulative potential

| Hazardous substances<br>CAS-No.  | Bioconcentratio<br>n factor (BCF) | Exposure time | Temperature | Species         | Method   |
|----------------------------------|-----------------------------------|---------------|-------------|-----------------|--|
| Benzyltrimethylamine<br>103-83-3 | > 2,1 - 22                        | 42 d          |             | Cyprinus carpio | OECD Guideline 305 C<br>(Bioaccumulation: Test for the<br>Degree of Bioconcentration in<br>Fish) |

#### 12.4. Mobility in soil

Cured adhesives are immobile.

| Hazardous substances<br>CAS-No.                   | LogPow | Temperature | Method   |
|---|--------|-------------|--|
| Pentaerythritol-PO-mercaptoglycerol<br>72244-98-5 | 1,2    | 20 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Benzyltrimethylamine<br>103-83-3                  | 1,98   |             | EU Method A.8 (Partition Coefficient)  |
| 2-aminoethanol<br>141-43-5                        | -1,91  | 25 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |

### 12.5. Results of PBT and vPvB assessment

| Hazardous substances<br>CAS-No.                   | PBT / vPvB  |
|---|---|
| Pentaerythritol-PO-mercaptoglycerol<br>72244-98-5 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Benzyltrimethylamine<br>103-83-3                  | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 2-aminoethanol<br>141-43-5                        | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

### 12.6. Other adverse effects

No data available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

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

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

## SECTION 14: Transport information

### 14.1. UN number

|      |      |
|------|------|
| ADR  | 2735 |
| RID  | 2735 |
| ADN  | 2735 |
| IMDG | 2735 |
| IATA | 2735 |

### 14.2. UN proper shipping name

|      |   |
|------|---|
| ADR  | AMINES, LIQUID, CORROSIVE, N.O.S. (Benzylidimethylamine,Ethanolamine) |
| RID  | AMINES, LIQUID, CORROSIVE, N.O.S. (Benzylidimethylamine,Ethanolamine) |
| ADN  | AMINES, LIQUID, CORROSIVE, N.O.S. (Benzylidimethylamine,Ethanolamine) |
| IMDG | AMINES, LIQUID, CORROSIVE, N.O.S. (Benzylidimethylamine,Ethanolamine) |
| IATA | Amines, liquid, corrosive, n.o.s. (Benzylidimethylamine,Ethanolamine) |

### 14.3. Transport hazard class(es)

|      |   |
|------|---|
| ADR  | 8 |
| RID  | 8 |
| ADN  | 8 |
| IMDG | 8 |
| IATA | 8 |

### 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 | not applicable |
| IATA | not applicable |

### 14.6. Special precautions for user

|      |                                   |
|------|-----------------------------------|
| ADR  | not applicable<br>Tunnelcode: (E) |
| RID  | not applicable                    |
| ADN  | not applicable                    |
| IMDG | not applicable                    |
| IATA | not applicable                    |

### 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<br>(2010/75/EC) | < 3,00 % Combined A/B |
|-----------------------------|-----------------------|

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**National regulations/information (Germany):**

|                                      |  |
|--------------------------------------|--|
| WGK:                                 | WGK = 2, water endangering product. Classification according to the mixture rules in German VwVwS regulation annex 4 from 27.July 2005.                            |
| WGK:                                 | WGK = 2, significantly water endangering mixture. Classification according to the mixture rules in German AwSV regulation annex 1, number 5.2 from 18. April 2017. |
| Storage class according to TRGS 510: | 8A   |

**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:

- H226 Flammable liquid and vapor.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

**Further information:**

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.

**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.**