



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

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LOCTITE EA 3430 known as LOCTITE EpoxyRapida 24ml IT,GR

SDS No. : 178207

V005.0

Revision: 14.07.2023

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Replaces version from: 25.10.2022

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

#### 1.1. Product identifier

LOCTITE EA 3430 known as LOCTITE EpoxyRapida 24ml IT,GR

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

Intended use:

Epoxy adhesive

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

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

### 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:



##### Contains

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight  $\leq 700$ )

Bisphenol-F epichlorhydrin resin; MW<700  
Bisphenol A diglycidyl ether polymer

**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:** "\*\*\*\*" \*\*\*For consumer use only: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P501 Dispose of contents/container in accordance with national regulation.\*\*\*

**Precautionary statement:** P273 Avoid release to the environment.  
**Prevention** P280 Wear protective gloves.

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

### 2.3. Other hazards

None if used properly.

Following substances are present in a concentration  $\geq$  the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration  $\geq$  the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

## 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.<br>EC Number<br>REACH-Reg No.                                                          | Concentration | Classification                                                                             | Specific Conc. Limits, M-factors and ATEs                             | Add. Information |
|------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------|
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700)<br>25068-38-6 | 20- 40 %      | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411<br>Eye Irrit. 2, H319 | Skin Irrit. 2; H315; C $\geq$ 5 %<br>Eye Irrit. 2; H319; C $\geq$ 5 % |                  |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5<br>01-2119454392-40                                              | 20- 40 %      | Skin Irrit. 2, Dermal, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411               |                                                                       |                  |
| Bisphenol A diglycidyl ether polymer<br>25085-99-8                                                                     | 20- 40 %      | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411<br>Eye Irrit. 2, H319 |                                                                       |                  |

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.

For full text of the H - statements and other abbreviations see section 16 "Other information".

## 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: Rash, Urticaria.

SKIN: Redness, inflammation.

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:**

water, carbon dioxide, foam, powder

**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), 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.

Wear protective equipment.

Ensure adequate ventilation.

### 6.2. Environmental precautions

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

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

Dispose of contaminated material as waste according to Section 13.

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.

### 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)

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 |                                  |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | aqua (freshwater)            |                 | 0,003 mg/l  |     |              |        |                                  |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | aqua (marine water)          |                 | 0,0003 mg/l |     |              |        |                                  |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | sewage treatment plant (STP) |                 | 10 mg/l     |     |              |        |                                  |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | sediment (freshwater)        |                 |             |     | 0,294 mg/kg  |        |                                  |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | sediment (marine water)      |                 |             |     | 0,0294 mg/kg |        |                                  |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | Soil                         |                 |             |     | 0,237 mg/kg  |        |                                  |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | aqua (intermittent releases) |                 | 0,0254 mg/l |     |              |        |                                  |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | Air                          |                 |             |     |              |        | no hazard identified             |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | Predator                     |                 |             |     |              |        | no potential for bioaccumulation |

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

| Name on list                                                                                                             | Application Area   | Route of Exposure | Health Effect                             | Exposure Time | Value                     | Remarks              |
|--------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|-------------------------------------------|---------------|---------------------------|----------------------|
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | Workers            | Inhalation        | Long term exposure - systemic effects     |               | 29,39 mg/m <sup>3</sup>   | no hazard identified |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | Workers            | dermal            | Long term exposure - systemic effects     |               | 104,15 mg/kg              | no hazard identified |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | Workers            | dermal            | Acute/short term exposure - local effects |               | 0,0083 mg/cm <sup>2</sup> | no hazard identified |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | General population | Inhalation        | Long term exposure - systemic effects     |               | 8,7 mg/m <sup>3</sup>     | no hazard identified |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | General population | dermal            | Long term exposure - systemic effects     |               | 62,5 mg/kg                | no hazard identified |
| Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq$ 700) (old) 9003-36-5 | General population | oral              | Long term exposure - systemic effects     |               | 6,25 mg/kg                | no hazard identified |

**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 &gt; 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 &gt; 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**

|                                                                                                                                                              |                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Delivery form                                                                                                                                                | liquid                                                                                                                              |
| Colour                                                                                                                                                       | transparent                                                                                                                         |
| Odor                                                                                                                                                         | odourless                                                                                                                           |
| Physical state                                                                                                                                               | liquid                                                                                                                              |
| Melting point                                                                                                                                                | Not applicable, Product is a liquid                                                                                                 |
| Solidification temperature                                                                                                                                   | $< 5\text{ }^{\circ}\text{C}$ ( $< 41\text{ }^{\circ}\text{F}$ )                                                                    |
| Initial boiling point                                                                                                                                        | $> 250\text{ }^{\circ}\text{C}$ ( $> 482\text{ }^{\circ}\text{F}$ )no method / method unknown                                       |
| Flammability                                                                                                                                                 | The product is not flammable.                                                                                                       |
| Explosive limits                                                                                                                                             | Not applicable, The product is not flammable.                                                                                       |
| Flash point                                                                                                                                                  | $> 100,0\text{ }^{\circ}\text{C}$ ( $> 212\text{ }^{\circ}\text{F}$ )                                                               |
| Auto-ignition temperature                                                                                                                                    | $> 300\text{ }^{\circ}\text{C}$ ( $> 572\text{ }^{\circ}\text{F}$ )                                                                 |
| Decomposition temperature                                                                                                                                    | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH                                                                                                                                                           | Not applicable, Product is non-soluble (in water).                                                                                  |
| Viscosity (kinematic)<br>( $25\text{ }^{\circ}\text{C}$ ( $77\text{ }^{\circ}\text{F}$ ); )                                                                  | 18.800 mm <sup>2</sup> /s                                                                                                           |
| Viscosity, dynamic<br>(Cone and plate; $25\text{ }^{\circ}\text{C}$ ( $77\text{ }^{\circ}\text{F}$ ); speed of rotation:<br>1 min-1; Shear gradient: 10 s-1) | 19.000 - 25.000 mPa.s LCT STM 740; cone & plate viscosity                                                                           |
| Solubility (qualitative)<br>( $20\text{ }^{\circ}\text{C}$ ( $68\text{ }^{\circ}\text{F}$ ); Solvent: Water)                                                 | Not soluble                                                                                                                         |
| Partition coefficient: n-octanol/water                                                                                                                       | Not applicable                                                                                                                      |

|                                      |                                       |
|--------------------------------------|---------------------------------------|
| Vapour pressure<br>(21 °C (69.8 °F)) | Mixture<br>< 1,33 hPa                 |
| Density<br>(25 °C (77 °F))           | 1,17 g/cm <sup>3</sup> None           |
| Relative vapour density:<br>(20 °C)  | > 1                                   |
| Particle characteristics             | Not applicable<br>Product is a liquid |

**9.2. Other information**

Other information not applicable for this product

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

Reaction with strong acids.  
Reacts with strong oxidants.

**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**

See section reactivity.

**10.6. Hazardous decomposition products**

carbon oxides.

## SECTION 11: Toxicological information

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****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                                                            |
|------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------|-------------------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤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     | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| Bisphenol A diglycidyl<br>ether polymer<br>25085-99-8                                                                        | LD50          | > 2.000 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<br>CAS-No.                                                                                              | Value<br>type | Value         | Species | Method                                                              |
|------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------|---------------------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | LD50          | > 2.000 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity)                          |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5                                                                  | LD50          | > 2.000 mg/kg | rat     | equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity) |
| Bisphenol A diglycidyl<br>ether polymer<br>25085-99-8                                                                        | LD50          | > 2.000 mg/kg | rabbit  | not specified                                                       |

**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                                                                            |
|------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|---------|-----------------------------------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | not irritating | 4 h              | rabbit  | not specified                                                                     |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5                                                                  | irritating     | 4 h              | rabbit  | equivalent or similar to 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                                                                         |
|------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|---------|--------------------------------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤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  | equivalent or similar to 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                                                             |
|------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------|---------|--------------------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤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<br>CAS-No.                                                                                              | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------|--------------------------------------------|---------|-----------------------------------------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 472 (Genetic<br>Toxicology: Escherichia coli,<br>Reverse Mutation Assay) |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5                                                                  | positive | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)                             |

**Carcinogenicity**

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

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

**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                                                                 |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------|-------------------------|---------|------------------------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | NOAEL P >= 50 mg/kg<br>NOAEL F1 >= 750 mg/kg<br>NOAEL F2 >= 750 mg/kg | Two<br>generation<br>study  | oral: gavage            | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study) |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5                                                                  | NOAEL P > 750 mg/kg<br>NOAEL F1 750 mg/kg<br>NOAEL F2 750 mg/kg       | two-<br>generation<br>study | oral: gavage            | 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                                                                   |
|------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------|----------------------------------------------|---------|--------------------------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | NOAEL 50 mg/kg  | oral: gavage            | 14 w<br>daily                                | rat     | OECD Guideline 408<br>(Repeated Dose 90-Day<br>Oral Toxicity in Rodents) |
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>9003-36-5                                                                  | NOAEL 250 mg/kg | oral: gavage            | 13 w<br>daily                                | rat     | OECD Guideline 408<br>(Repeated Dose 90-Day<br>Oral Toxicity in Rodents) |

**Aspiration hazard:**

No data available.

**11.2 Information on other hazards**

not applicable

## 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.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                           | Value<br>type | Value     | Exposure time | Species             | Method                                            |
|---------------------------------------------------------------------------------------------------------------------------|---------------|-----------|---------------|---------------------|---------------------------------------------------|
| reaction product: bisphenol-A-<br>(epichlorhydrin); epoxy resin<br>(number average molecular<br>weight≤700)<br>25068-38-6 | LC50          | 1,75 mg/l | 96 h          | Oncorhynchus mykiss | OECD Guideline 203 (Fish,<br>Acute Toxicity Test) |
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>9003-36-5                                                                  | LC50          | 5,7 mg/l  | 96 h          | Leuciscus idus      | OECD Guideline 203 (Fish,<br>Acute Toxicity Test) |
| Bisphenol A diglycidyl ether<br>polymer<br>25085-99-8                                                                     | LC50          | 2 mg/l    | 96 h          | not specified       | OECD Guideline 203 (Fish,<br>Acute Toxicity Test) |

#### Toxicity (aquatic invertebrates):

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

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                           | Value<br>type | Value     | Exposure time | Species       | Method                                                           |
|---------------------------------------------------------------------------------------------------------------------------|---------------|-----------|---------------|---------------|------------------------------------------------------------------|
| reaction product: bisphenol-A-<br>(epichlorhydrin); epoxy resin<br>(number average molecular<br>weight≤700)<br>25068-38-6 | EC50          | 1,7 mg/l  | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>9003-36-5                                                                  | EC50          | 2,55 mg/l | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |
| Bisphenol A diglycidyl ether<br>polymer<br>25085-99-8                                                                     | EC50          | 2 mg/l    | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |

#### Chronic toxicity (aquatic invertebrates):

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                           | Value<br>type | Value    | Exposure time | Species       | Method                                         |
|---------------------------------------------------------------------------------------------------------------------------|---------------|----------|---------------|---------------|------------------------------------------------|
| reaction product: bisphenol-A-<br>(epichlorhydrin); epoxy resin<br>(number average molecular<br>weight≤700)<br>25068-38-6 | NOEC          | 0,3 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia<br>magna, Reproduction Test) |
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>9003-36-5                                                                  | NOEC          | 0,3 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia<br>magna, Reproduction Test) |
| Bisphenol A diglycidyl ether<br>polymer<br>25085-99-8                                                                     | NOEC          | 0,3 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia<br>magna, Reproduction Test) |

#### Toxicity (Algae):

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

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                           | Value<br>type | Value     | Exposure time | Species                         | Method                                               |
|---------------------------------------------------------------------------------------------------------------------------|---------------|-----------|---------------|---------------------------------|------------------------------------------------------|
| reaction product: bisphenol-A-<br>(epichlorhydrin); epoxy resin<br>(number average molecular<br>weight≤700)<br>25068-38-6 | EC50          | > 11 mg/l | 72 h          | Scenedesmus capricornutum       | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| reaction product: bisphenol-A-<br>(epichlorhydrin); epoxy resin<br>(number average molecular<br>weight≤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) |
| Bisphenol A diglycidyl ether<br>polymer<br>25085-99-8                                                                     | EC50          | > 11 mg/l | 72 h          | not specified                   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Bisphenol A diglycidyl ether<br>polymer<br>25085-99-8                                                                     | NOEC          | 4,2 mg/l  | 72 h          | not specified                   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |

#### Toxicity (microorganisms):

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

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                           | Value<br>type | Value      | Exposure time | Species                      | Method           |
|---------------------------------------------------------------------------------------------------------------------------|---------------|------------|---------------|------------------------------|------------------|
| reaction product: bisphenol-A-<br>(epichlorhydrin); epoxy resin<br>(number average molecular<br>weight≤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 table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                           | Result                     | Test type | Degradability | Exposure<br>time | Method                                                                            |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|---------------|------------------|-----------------------------------------------------------------------------------|
| reaction product: bisphenol-A-<br>(epichlorhydrin); epoxy resin<br>(number average molecular<br>weight≤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)           |
| Bisphenol A diglycidyl ether<br>polymer<br>25085-99-8                                                                     | not readily biodegradable. | aerobic   | 5 %           | 28 d             | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |

#### 12.3. Bioaccumulative potential

No data available.

**12.4. Mobility in soil**

The table below presents the data of the classified substances present in the mixture.

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

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

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                 | PBT / vPvB                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700)<br>25068-38-6 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Bisphenol-F epichlorhydrin resin; MW<700<br>9003-36-5                                                           | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

**12.6. Endocrine disrupting properties**

not applicable

**12.7. Other adverse effects**

No data available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

Product disposal:

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

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 or ID 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-F Epichlorhydrin resin,Bisphenol-A Epichlorhydrin resin) |
| RID  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Bisphenol-F Epichlorhydrin resin,Bisphenol-A Epichlorhydrin resin) |
| ADN  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Bisphenol-F Epichlorhydrin resin,Bisphenol-A Epichlorhydrin resin) |
| IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Bisphenol-F Epichlorhydrin resin,Bisphenol-A Epichlorhydrin resin) |
| IATA | Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-F Epichlorhydrin resin,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  | Environmentally Hazardous |
| RID  | Environmentally Hazardous |
| ADN  | Environmentally Hazardous |
| IMDG | Marine Pollutant          |
| IATA | Environmentally Hazardous |

**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), A197 (IATA), 2.10.2.7 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

## SECTION 15: Regulatory information

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

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):     | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021):      | Not applicable |
| VOC content<br>(2010/75/EC)                                     | < 3,00 %       |

**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.

|             |                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------|
| ED:         | Substance identified as having endocrine disrupting properties                                                    |
| EU OEL:     | Substance with a Union workplace exposure limit                                                                   |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148                                                               |
| EU EXPLD 2  | Substance listed in Annex II, Reg (EC) No. 2019/1148                                                              |
| SVHC:       | Substance of very high concern (REACH Candidate List)                                                             |
| PBT:        | Substance fulfilling persistent, bioaccumulative and toxic criteria                                               |
| PBT/vPvB:   | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB:       | Substance fulfilling very persistent and very bioaccumulative criteria                                            |

**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 (SDSinfo.Adhesive@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.

Dear Customer,

Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your\_company.com).

**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 (EC) No 1907/2006 as amended

SDS No. : 205861

V005.0

LOCTITE EA 3430 known as LOCTITE EpoxyRapida 24ml IT,GR

Revision: 14.07.2023

printing date: 18.10.2023

Replaces version from: 14.07.2023

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

#### 1.1. Product identifier

LOCTITE EA 3430 known as LOCTITE EpoxyRapida 24ml IT,GR

#### 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 Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

### SECTION 2: Hazards identification

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

##### Classification (CLP):

Acute toxicity

Category 4

H302 Harmful if swallowed.

Route of Exposure: Oral

Skin corrosion

Sub-category 1A

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 2

H411 Toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### Label elements (CLP):

##### Hazard pictogram:



##### Contains

2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)

3,3'-Oxybis(ethyleneoxy)bis(propylamine)  
N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight  $\leq 700$ )

**Signal word:** Danger

**Hazard statement:**  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statement:** "\*\*\*\*\*" \*\*\*For consumer use only: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P501 Dispose of contents/container in accordance with national regulation.\*\*\*

**Precautionary statement:** P273 Avoid release to the environment.  
**Prevention** P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement:** P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
**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.  
P310 Immediately call a POISON CENTER or doctor.

### 2.3. Other hazards

None if used properly.

Following substances are present in a concentration  $\geq$  the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration  $\geq$  the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

## 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.<br>EC Number<br>REACH-Reg No.                                                   | Concentration | Classification                                                                                                                                                   | Specific Conc. Limits, M-factors and ATEs                   | Add. Information |
|-----------------------------------------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------|
| 2,2'-(1,2-ethanediylbis(oxy))bis(ethanethiol)<br>14970-87-7<br>239-044-2<br>01-2120768482-47                    | 10- 20 %      | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Acute Tox. 3, Oral, H301<br>Acute Tox. 4, Inhalation, H332                                                   | M acute = 1<br>M chronic = 1                                |                  |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9<br>224-207-2<br>01-2119963377-26                          | 5- < 10 %     | Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317                                                                                                    | dermal:ATE = 2.500 mg/kg                                    |                  |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8<br>234-148-4<br>01-2119970376-29               | 5- < 10 %     | Acute Tox. 4, Oral, H302<br>Skin Corr. 1A, H314<br>Skin Sens. 1B, H317<br>Acute Tox. 4, Dermal, H312<br>Eye Dam. 1, H318                                         |                                                             |                  |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700)<br>25068-38-6 | 1- < 5 %      | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411<br>Eye Irrit. 2, H319                                                                       | Skin Irrit. 2; H315; C ≥ 5 %<br>Eye Irrit. 2; H319; C ≥ 5 % |                  |
| Benzyl dimethylamine<br>103-83-3<br>203-149-1<br>01-2119529232-48                                               | 0,1- < 1 %    | Acute Tox. 4, Dermal, H312<br>Skin Corr. 1B, H314<br>Flam. Liq. 3, H226<br>Aquatic Chronic 2, H411<br>Acute Tox. 4, Oral, H302<br>Acute Tox. 3, Inhalation, H331 |                                                             |                  |

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.

For full text of the H - statements and other abbreviations see section 16 "Other information".

## 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: Rash, Urticaria.

INGESTION: Nausea, vomiting, diarrhea, abdominal pain.

Causes burns.

**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:**

water, carbon dioxide, foam, powder

**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), 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.

Wear protective equipment.

Ensure adequate ventilation.

**6.2. Environmental precautions**

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

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

Dispose of contaminated material as waste according to Section 13.

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.

**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 sealed original container.

Store in a cool, well-ventilated place.

Refer to Technical Data Sheet

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

Epoxy Hardener

**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 |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol) 14970-87-7      | aqua (freshwater)            |                 | 0,00076 mg/l  |     |               |        |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol) 14970-87-7      | aqua (marine water)          |                 | 0,000076 mg/l |     |               |        |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol) 14970-87-7      | sewage treatment plant (STP) |                 | 6,74 mg/l     |     |               |        |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol) 14970-87-7      | sediment (freshwater)        |                 |               |     | 0,0047 mg/kg  |        |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol) 14970-87-7      | sediment (marine water)      |                 |               |     | 0,00047 mg/kg |        |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol) 14970-87-7      | Soil                         |                 |               |     | 0,0005 mg/kg  |        |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol) 14970-87-7      | aqua (intermittent releases) |                 | 0,0076 mg/l   |     |               |        |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9            | aqua (freshwater)            |                 | 0,22 mg/l     |     |               |        |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9            | aqua (marine water)          |                 | 0,022 mg/l    |     |               |        |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9            | aqua (intermittent releases) |                 | 2,2 mg/l      |     |               |        |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9            | sewage treatment plant (STP) |                 | 125 mg/l      |     |               |        |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9            | sediment (freshwater)        |                 |               |     | 1,1 mg/kg     |        |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9            | sediment (marine water)      |                 |               |     | 0,11 mg/kg    |        |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9            | Soil                         |                 |               |     | 0,091 mg/kg   |        |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine 10563-29-8 | aqua (freshwater)            |                 | 9,2 µg/l      |     |               |        |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine 10563-29-8 | aqua (marine water)          |                 | 0,92 µg/l     |     |               |        |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine 10563-29-8 | aqua (intermittent releases) |                 | 92 µg/l       |     |               |        |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine 10563-29-8 | Sewage treatment plant       |                 | 18,1 mg/l     |     |               |        |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine 10563-29-8 | sediment (freshwater)        |                 |               |     | 0,0336 mg/kg  |        |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine 10563-29-8 | sediment (marine water)      |                 |               |     | 0,00336 mg/kg |        |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine 10563-29-8 | Soil                         |                 |               |     | 0,00132 mg/kg |        |         |
| Benzyl dimethylamine 103-83-3                                 | aqua (freshwater)            |                 | 0,0048 mg/l   |     |               |        |         |
| Benzyl dimethylamine 103-83-3                                 | aqua (marine water)          |                 | 0,00048 mg/l  |     |               |        |         |
| Benzyl dimethylamine 103-83-3                                 | aqua (intermittent releases) |                 | 0,0134 mg/l   |     |               |        |         |
| Benzyl dimethylamine 103-83-3                                 | sewage treatment plant (STP) |                 | 534 mg/l      |     |               |        |         |
| Benzyl dimethylamine 103-83-3                                 | sediment (freshwater)        |                 |               |     | 0,071 mg/kg   |        |         |
| Benzyl dimethylamine 103-83-3                                 | sediment (marine water)      |                 |               |     | 0,0071 mg/kg  |        |         |
| Benzyl dimethylamine 103-83-3                                 | Soil                         |                 |               |     | 0,0114 mg/kg  |        |         |



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

| Name on list                                                     | Application Area   | Route of Exposure | Health Effect                                | Exposure Time | Value                  | Remarks |
|------------------------------------------------------------------|--------------------|-------------------|----------------------------------------------|---------------|------------------------|---------|
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol)<br>14970-87-7      | Workers            | inhalation        | Long term exposure - systemic effects        |               | 1,23 mg/m <sup>3</sup> |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol)<br>14970-87-7      | Workers            | dermal            | Long term exposure - systemic effects        |               | 1,75 mg/kg             |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol)<br>14970-87-7      | General population | inhalation        | Long term exposure - systemic effects        |               | 0,22 mg/m <sup>3</sup> |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol)<br>14970-87-7      | General population | oral              | Long term exposure - systemic effects        |               | 0,125 mg/kg            |         |
| 2,2'-[1,2-Ethanediy]bis(oxy)]bis(ethanethiol)<br>14970-87-7      | General population | dermal            | Long term exposure - systemic effects        |               | 0,625 mg/kg            |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | Workers            | inhalation        | Long term exposure - systemic effects        |               | 59 mg/m <sup>3</sup>   |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | Workers            | inhalation        | Acute/short term exposure - systemic effects |               | 176 mg/m <sup>3</sup>  |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | Workers            | inhalation        | Long term exposure - local effects           |               | 13 mg/m <sup>3</sup>   |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | Workers            | dermal            | Long term exposure - systemic effects        |               | 8,3 mg/kg              |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | General population | inhalation        | Long term exposure - systemic effects        |               | 17 mg/m <sup>3</sup>   |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | General population | inhalation        | Acute/short term exposure - systemic effects |               | 52 mg/m <sup>3</sup>   |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | General population | inhalation        | Long term exposure - local effects           |               | 0,5 mg/m <sup>3</sup>  |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | General population | inhalation        | Acute/short term exposure - local effects    |               | 6,5 mg/m <sup>3</sup>  |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | General population | dermal            | Long term exposure - systemic effects        |               | 5 mg/kg                |         |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9            | General population | oral              | Long term exposure - systemic effects        |               | 5 mg/kg                |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8 | Workers            | inhalation        | Long term exposure - systemic effects        |               | 0,35 mg/m <sup>3</sup> |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8 | Workers            | dermal            | Long term exposure - systemic effects        |               | 0,05 mg/kg             |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8 | General population | inhalation        | Long term exposure - systemic effects        |               | 0,65 mg/m <sup>3</sup> |         |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8 | General population | oral              | Long term exposure - systemic effects        |               | 0,2 mg/kg              |         |
| Benzyl dimethylamine<br>103-83-3                                 | Workers            | inhalation        | Long term exposure - systemic effects        |               | 4,9 mg/m <sup>3</sup>  |         |
| Benzyl dimethylamine<br>103-83-3                                 | Workers            | inhalation        | Acute/short term exposure - systemic effects |               | 9,9 mg/m <sup>3</sup>  |         |
| 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 - local effects           |               | 1 mg/m <sup>3</sup>    |         |
| Benzyl dimethylamine<br>103-83-3                                 | General population | dermal            | Long term exposure -                         |               | 1,25 mg/kg             |         |

|                                  |                    |            |                                       |  |             |  |
|----------------------------------|--------------------|------------|---------------------------------------|--|-------------|--|
|                                  |                    |            | systemic effects                      |  |             |  |
| Benzyltrimethylamine<br>103-83-3 | General population | oral       | Long term exposure - systemic effects |  | 1,25 mg/kg  |  |
| Benzyltrimethylamine<br>103-83-3 | General population | inhalation | Long term exposure - systemic effects |  | 43,75 mg/m3 |  |

**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 &gt; 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; &gt;= 0.4 mm thickness)

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

nitrile rubber (NBR; &gt;= 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**

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| Delivery form              | liquid                                            |
| Colour                     | Clear                                             |
| Odor                       | characteristic                                    |
| Physical state             | liquid                                            |
| Melting point              | Not applicable, Product is a liquid               |
| Solidification temperature | < 5 °C (< 41 °F)                                  |
| Initial boiling point      | > 230 °C (> 446 °F)no method / method unknown     |
| Flammability               | The product is not flammable.                     |
| Explosive limits           | Not applicable, The product is not flammable.     |
| Flash point                | > 100,0 °C (> 212 °F); no method / method unknown |
| Auto-ignition temperature  | > 224 °C (> 435.2 °F)                             |

|                                                                                            |                                                                                                                                     |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Decomposition temperature                                                                  | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH<br>(25 °C (77 °F); Conc.: 100 g/l; Solvent: Water)                                      | 9,1                                                                                                                                 |
| Viscosity (kinematic)<br>(25 °C (77 °F); )                                                 | 20.000 mm <sup>2</sup> /s                                                                                                           |
| Viscosity, dynamic<br>(Cone and plate; 25 °C (77 °F); Shear gradient: 10 s <sup>-1</sup> ) | 19.000 - 26.000 mPa.s LCT STM 740; cone & plate viscosity                                                                           |
| Solubility (qualitative)<br>(Solvent: Acetone)                                             | Soluble                                                                                                                             |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Water)                                | Partially soluble                                                                                                                   |
| Partition coefficient: n-octanol/water                                                     | Not applicable<br>Mixture                                                                                                           |
| Vapour pressure<br>(21 °C (69.8 °F))                                                       | < 700 mbar;no method / method unknown                                                                                               |
| Density<br>(25 °C (77 °F))                                                                 | 1,1 g/cm <sup>3</sup> None                                                                                                          |
| Relative vapour density:<br>(20 °C)                                                        | > 1                                                                                                                                 |
| Particle characteristics                                                                   | Not applicable<br>Product is a liquid                                                                                               |

## 9.2. Other information

Other information not applicable for this product

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with strong oxidants.  
Reaction with strong acids.

### 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

See section reactivity.

### 10.6. Hazardous decomposition products

carbon oxides.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### 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                                                            |
|------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|---------|-------------------------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                                  | LD50          | > 50 - 300 mg/kg | rat     | OECD Guideline 423 (Acute Oral toxicity)                          |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                                        | LD50          | 3.160 mg/kg      | rat     | OECD Guideline 401 (Acute Oral Toxicity)                          |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8                                                             | LD50          | 1.669 mg/kg      | rat     | OECD Guideline 401 (Acute Oral Toxicity)                          |
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | LD50          | > 2.000 mg/kg    | rat     | OECD Guideline 420 (Acute Oral Toxicity)                          |
| Benzylldimethylamine<br>103-83-3                                                                                             | LD50          | 353 mg/kg        | rat     | equivalent or similar to 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                                                              |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------|---------|---------------------------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                                  | LD50                          | > 2.000 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity)                          |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                                        | Acute toxicity estimate (ATE) | 2.500 mg/kg   |         | Expert judgement                                                    |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                                        | LD50                          | > 2.150 mg/kg | rat     | equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity) |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8                                                             | LD50                          | 1.310 mg/kg   | rat     | not specified                                                       |
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | LD50                          | > 2.000 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity)                          |
| Benzylldimethylamine<br>103-83-3                                                                                             | LD50                          | 1.477 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        |
|-------------------------------------------------------------|---------------|------------|-----------------|------------------|---------|---------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7 | LC50          | 1,34 mg/l  | dust/mist       | 4 h              | rat     | not specified |
| Benzyltrimethylamine<br>103-83-3                            | LC50          | 2,052 mg/l | vapour          | 4 h              | rat     | not specified |

**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                                                                            |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------|---------|-----------------------------------------------------------------------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                                        | Sub-Category<br>1B (corrosive) |                  | rabbit  | equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | not irritating                 | 4 h              | rabbit  | not specified                                                                     |

**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                                                |
|------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|---------|-------------------------------------------------------|
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>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<br>CAS-No.                                                                                              | Result          | Test type                          | Species    | Method                                                          |
|------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------|------------|-----------------------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                                  | not sensitising | Guinea pig maximisation test       | guinea pig | OECD Guideline 406 (Skin Sensitisation)                         |
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | sensitising     | Mouse local lymphnode assay (LLNA) | mouse      | OECD Guideline 429 (Skin Sensitisation: 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<br>CAS-No.                                                                                              | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------|--------------------------------------------|---------|-----------------------------------------------------------------------------------------|
| 3,3'-<br>Oxybis(ethyleneoxy)bis(p<br>ropylamine)<br>4246-51-9                                                                | negative | in vitro mammalian<br>cell micronucleus<br>test        | with and without                           |         | OECD Guideline 487 (In vitro<br>Mammalian Cell<br>Micronucleus Test)                    |
| 3,3'-<br>Oxybis(ethyleneoxy)bis(p<br>ropylamine)<br>4246-51-9                                                                | negative | mammalian cell<br>gene mutation assay                  | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                   |
| 3,3'-<br>Oxybis(ethyleneoxy)bis(p<br>ropylamine)<br>4246-51-9                                                                | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)                             |
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 472 (Genetic<br>Toxicology: Escherichia coli,<br>Reverse Mutation Assay) |

**Carcinogenicity**

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

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

**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                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------|-------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------|
| 3,3'-<br>Oxybis(ethyleneoxy)bis(p<br>ropylamine)<br>4246-51-9                                                                | NOAEL P 600 mg/kg                                                     | screening                  | oral: gavage            | rat     | OECD Combined Repeated<br>Dose and Reproductive /<br>Developmental Toxicity<br>Screening Test (Precursor<br>Protocol of GL 422) |
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | NOAEL P >= 50 mg/kg<br>NOAEL F1 >= 750 mg/kg<br>NOAEL F2 >= 750 mg/kg | Two<br>generation<br>study | oral: gavage            | 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                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------|----------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 3,3'-<br>Oxybis(ethyleneoxy)bis(p<br>ropylamine)<br>4246-51-9                                                                | NOAEL < 100 mg/kg | oral: gavage            | 59 days<br>daily                             | rat     | OECD Guideline 422<br>(Combined Repeated<br>Dose Toxicity Study with<br>the Reproduction /<br>Developmental Toxicity<br>Screening Test) |
| reaction product:<br>bisphenol-A-<br>(epichlorhydrin); epoxy<br>resin (number average<br>molecular weight≤700)<br>25068-38-6 | NOAEL 50 mg/kg    | oral: gavage            | 14 w<br>daily                                | rat     | OECD Guideline 408<br>(Repeated Dose 90-Day<br>Oral Toxicity in Rodents)                                                                |

**Aspiration hazard:**

No data available.

**11.2 Information on other hazards**

not applicable

## 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.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                   | Value<br>type | Value            | Exposure time | Species             | Method                                         |
|-------------------------------------------------------------------------------------------------------------------|---------------|------------------|---------------|---------------------|------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                       | LC50          | 5,7 mg/l         | 96 h          | Danio rerio         | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                             | LC50          | > 215 - 464 mg/l | 96 h          | Leuciscus idus      | DIN 38412-15                                   |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)<br>25068-38-6 | LC50          | 1,75 mg/l        | 96 h          | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Benzyltrimethylamine<br>103-83-3                                                                                  | LC50          | 37,8 mg/l        | 96 h          | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |

#### Toxicity (aquatic invertebrates):

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

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                   | Value<br>type | Value      | Exposure time | Species       | Method                                                     |
|-------------------------------------------------------------------------------------------------------------------|---------------|------------|---------------|---------------|------------------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                       | EC50          | 0,76 mg/l  | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                             | EC50          | 218 mg/l   | 48 h          | Daphnia magna | EU Method C.2 (Acute Toxicity for Daphnia)                 |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8                                                  | EC50          | 9,2 mg/l   | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)<br>25068-38-6 | EC50          | 1,7 mg/l   | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Benzyltrimethylamine<br>103-83-3                                                                                  | EC50          | > 100 mg/l | 48 h          | Daphnia magna | EU Method C.2 (Acute Toxicity for Daphnia)                 |

#### Chronic toxicity (aquatic invertebrates):

The table below presents the data of the classified substances present in the mixture.

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

|                                  |      |            |      |               |                                             |
|----------------------------------|------|------------|------|---------------|---------------------------------------------|
| Benzyltrimethylamine<br>103-83-3 | NOEC | 0,789 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.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                   | Value<br>type | Value     | Exposure time | Species                                                       | Method                                            |
|-------------------------------------------------------------------------------------------------------------------|---------------|-----------|---------------|---------------------------------------------------------------|---------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                       | EC50          | 3,11 mg/l | 96 h          | Pseudokirchneriella subcapitata                               | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                       | EC10          | 0,51 mg/l | 96 h          | Pseudokirchneriella subcapitata                               | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                             | EC50          | 666 mg/l  | 72 h          | Scenedesmus subspicatus (new name: Desmodesmus subspicatus)   | DIN 38412-09                                      |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                             | NOEC          | 15,6 mg/l | 72 h          | Scenedesmus subspicatus (new name: Desmodesmus subspicatus)   | DIN 38412-09                                      |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)<br>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)<br>25068-38-6 | NOEC          | 4,2 mg/l  | 72 h          | Scenedesmus capricornutum                                     | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Benzyltrimethylamine<br>103-83-3                                                                                  | EC50          | 1,34 mg/l | 72 h          | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | EU Method C.3 (Algal Inhibition test)             |
| Benzyltrimethylamine<br>103-83-3                                                                                  | NOEC          | 0,24 mg/l | 72 h          | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | EU Method C.3 (Algal Inhibition test)             |

**Toxicity (microorganisms):**

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

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                   | Value<br>type | Value      | Exposure time | Species                                             | Method                                                             |
|-------------------------------------------------------------------------------------------------------------------|---------------|------------|---------------|-----------------------------------------------------|--------------------------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                       | EC50          | 772,1 mg/l | 3 h           | activated sludge of a predominantly domestic sewage | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                             | EC10          | 152,5 mg/l | 17 h          | Pseudomonas putida                                  | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)           |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)<br>25068-38-6 | IC50          | > 100 mg/l | 3 h           | activated sludge, industrial                        | other guideline:                                                   |
| Benzyltrimethylamine<br>103-83-3                                                                                  | EC10          | 534 mg/l   | 17 h          | Pseudomonas putida                                  | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)           |

## 12.2. Persistence and degradability

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                   | Result                       | Test type | Degradability | Exposure<br>time | Method                                                                         |
|-------------------------------------------------------------------------------------------------------------------|------------------------------|-----------|---------------|------------------|--------------------------------------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                       | not readily biodegradable.   | aerobic   | < 10 %        | 28 d             | OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test) |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                             | not inherently biodegradable | aerobic   | < 20 %        | 28 d             | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)       |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                             | not readily biodegradable.   | aerobic   | 0 %           | 60 d             | OECD Guideline 301 B (Ready Biodegradability: CO <sub>2</sub> Evolution Test)  |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8                                                  | readily biodegradable        |           | 100 %         | 28 d             | OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test) |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)<br>25068-38-6 | not readily biodegradable.   | aerobic   | 5 %           | 28 d             | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)    |
| Benzyl dimethylamine<br>103-83-3                                                                                  | not readily biodegradable.   | aerobic   | 0 - 2 %       | 28 d             | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))          |

## 12.3. Bioaccumulative potential

The table below presents the data of the classified substances present in the mixture.

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

**12.4. Mobility in soil**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                    | LogPow | Temperature | Method                                                                             |
|--------------------------------------------------------------------------------------------------------------------|--------|-------------|------------------------------------------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                        | 1,66   | 55 °C       | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)        |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                              | -1,25  | 25 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8                                                   | -0,47  | 25 °C       | other (calculated)                                                                 |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin<br>(number average molecular weight≤700)<br>25068-38-6 | 3,242  | 25 °C       | EU Method A.8 (Partition Coefficient)                                              |
| Benzyl dimethylamine<br>103-83-3                                                                                   | 1,98   |             | EU Method A.8 (Partition Coefficient)                                              |

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

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                                                 | PBT / vPvB                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 2,2'-[1,2-ethanediylbis(oxy)]bis(ethanethiol)<br>14970-87-7                                                     | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)<br>4246-51-9                                                           | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| N'-(3-Aminopropyl)-N,N-dimethylpropane-1,3-diamine<br>10563-29-8                                                | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700)<br>25068-38-6 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Benzyl dimethylamine<br>103-83-3                                                                                | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

**12.6. Endocrine disrupting properties**

not applicable

**12.7. Other adverse effects**

No data available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Product disposal:**

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

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 or ID number**

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

**14.2. UN proper shipping name**

|      |                                                                                                                                                         |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADR  | AMINES, LIQUID, CORROSIVE, N.O.S. (N,N'-Dimethyldipropyltriamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))                                              |
| RID  | AMINES, LIQUID, CORROSIVE, N.O.S. (N,N'-Dimethyldipropyltriamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))                                              |
| ADN  | AMINES, LIQUID, CORROSIVE, N.O.S. (N,N'-Dimethyldipropyltriamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))                                              |
| IMDG | AMINES, LIQUID, CORROSIVE, N.O.S. (N,N'-Dimethyldipropyltriamine,3,3'-oxybis(ethyleneoxy)bis(propylamine),2,2'-[1,2-Ethanedylbis(oxy)]bis(ethanethiol)) |
| IATA | Amines, liquid, corrosive, n.o.s. (N,N'-Dimethyldipropyltriamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))                                              |

**14.3. Transport hazard class(es)**

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

**14.4. Packing group**

|      |    |
|------|----|
| ADR  | II |
| RID  | II |
| ADN  | II |
| IMDG | II |
| IATA | II |

**14.5. Environmental hazards**

|      |                           |
|------|---------------------------|
| ADR  | Environmentally Hazardous |
| RID  | Environmentally Hazardous |
| ADN  | Environmentally Hazardous |
| IMDG | Marine Pollutant          |
| IATA | not applicable            |

**14.6. Special precautions for user**

|     |                |
|-----|----------------|
| ADR | not applicable |
|-----|----------------|

|      |                 |
|------|-----------------|
|      | Tunnelcode: (E) |
| RID  | not applicable  |
| ADN  | not applicable  |
| IMDG | not applicable  |
| IATA | not applicable  |

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):     | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021):      | Not applicable |
| VOC content<br>(2010/75/EC)                                     | < 3 %          |

**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:

H226 Flammable liquid and vapour.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H332 Harmful if inhaled.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.

|             |                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------|
| ED:         | Substance identified as having endocrine disrupting properties                                                    |
| EU OEL:     | Substance with a Union workplace exposure limit                                                                   |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148                                                               |
| EU EXPLD 2  | Substance listed in Annex II, Reg (EC) No. 2019/1148                                                              |
| SVHC:       | Substance of very high concern (REACH Candidate List)                                                             |
| PBT:        | Substance fulfilling persistent, bioaccumulative and toxic criteria                                               |
| PBT/vPvB:   | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB:       | Substance fulfilling very persistent and very bioaccumulative criteria                                            |

**Further information:**

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