



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

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SDS No. : 153474  
V003.2

LOCTITE 648

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

#### 1.1. Product identifier

LOCTITE 648

#### Contains:

2,2'-Ethylenedioxydiethyl dimethacrylate  
Acrylic acid  
Hydroxypropyl methacrylate  
Acetic acid, 2-phenylhydrazide

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

Intended use:  
Adhesive

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

Henkel Ltd  
Wood Lane End  
HP2 4RQ Hemel Hempstead

Great Britain

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

ua-productsafety.uk@uk.henkel.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 damage                                      | Category 1 |
| H318 Causes serious eye damage.                         |            |
| Skin sensitizer                                         | Category 1 |
| H317 May cause an allergic skin reaction.               |            |
| Specific target organ toxicity - single exposure        | Category 3 |
| H335 May cause respiratory irritation.                  |            |
| Target organ: respiratory tract irritation              |            |
| Chronic hazards to the aquatic environment              | Category 3 |
| H412 Harmful to aquatic life with long lasting effects. |            |

## 2.2. Label elements

### Label elements (CLP):

#### Hazard pictogram:



#### Signal word:

Danger

#### Hazard statement:

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
H412 Harmful 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 waste and residues in accordance with local authority requirements\*\*\*

#### Precautionary statement: Prevention

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

#### Precautionary statement: Response

P302+P352 IF ON SKIN: Wash with plenty of water.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

## 2.3. Other hazards

Non corrosive to skin in accordance with the in vitro test method, B40 skin corrosion - Human skin model assay, equivalent to test method OECD 431 or based on analogy to similar products tested.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General chemical description:

Methacrylate resin based product containing Acrylic Acid

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

| <b>Hazardous components<br/>CAS-No.</b>              | <b>EC Number<br/>REACH-Reg No.</b> | <b>content</b> | <b>Classification</b>                                                                                                                                                                                                        |
|------------------------------------------------------|------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | 203-652-6<br>01-2119969287-21      | 10- 20 %       | Skin Sens. 1B<br>H317                                                                                                                                                                                                        |
| Acrylic acid<br>79-10-7                              | 201-177-9<br>01-2119452449-31      | 5- < 10 %      | Flam. Liq. 3<br>H226<br>Acute Tox. 4; Oral<br>H302<br>Acute Tox. 4; Dermal<br>H312<br>Skin Corr. 1A<br>H314<br>Acute Tox. 4; Inhalation<br>H332<br>STOT SE 3<br>H335<br>Aquatic Acute 1<br>H400<br>Aquatic Chronic 2<br>H411 |
| Hydroxypropyl methacrylate<br>27813-02-1             | 248-666-3<br>01-2119490226-37      | 5- < 10 %      | Skin Sens. 1<br>H317<br>Eye Irrit. 2<br>H319                                                                                                                                                                                 |
| Cumene hydroperoxide<br>80-15-9                      | 201-254-7                          | 0,25- < 2,5 %  | Acute Tox. 4; Dermal<br>H312<br>STOT RE 2<br>H373<br>Acute Tox. 4; Oral<br>H302<br>Org. Perox. E<br>H242<br>Acute Tox. 3; Inhalation<br>H331<br>Aquatic Chronic 2<br>H411<br>Skin Corr. 1B<br>H314                           |
| Acetic acid, 2-phenylhydrazide<br>114-83-0           | 204-055-3                          | 0,1- < 1 %     | Acute Tox. 3; Oral<br>H301<br>Skin Irrit. 2<br>H315<br>Skin Sens. 1<br>H317<br>Eye Irrit. 2<br>H319<br>STOT SE 3; Inhalation<br>H335<br>Carc. 2<br>H351                                                                      |
| Methacrylic acid<br>79-41-4                          | 201-204-4<br>01-2119463884-26      | 0,1- < 1 %     | Acute Tox. 4; Oral<br>H302<br>Acute Tox. 3; Dermal<br>H311<br>Acute Tox. 4; Inhalation<br>H332<br>Skin Corr. 1A<br>H314                                                                                                      |

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation:

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

#### Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

#### Eye contact:

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

#### Ingestion:

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

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

SKIN: Redness, inflammation.

SKIN: Rash, Urticaria.

EYE: Irritation, conjunctivitis.

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

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

See section: Description of first aid measures

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media:

Carbon dioxide, foam, powder

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

None known

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

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 skin and eye contact.

### 6.2. Environmental precautions

Do not let product enter drains.

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

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

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

### 6.4. Reference to other sections

See advice in section 8

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Use only in well-ventilated areas.

Avoid skin and eye contact.

Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

**Hygiene measures:**

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

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

Store in original containers at 8-21°C (46.4-69.8°F) and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.

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

Adhesive

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

Valid for  
Great Britain

| Ingredient [Regulated substance]                  | ppm | mg/m <sup>3</sup> | Value type                        | Short term exposure limit category / Remarks | Regulatory list |
|---------------------------------------------------|-----|-------------------|-----------------------------------|----------------------------------------------|-----------------|
| Cumene<br>98-82-8<br>[CUMENE]                     | 50  | 250               | Short Term Exposure Limit (STEL): |                                              | EH40 WEL        |
| Cumene<br>98-82-8<br>[CUMENE]                     |     |                   | Skin designation:                 | Can be absorbed through the skin.            | EH40 WEL        |
| Cumene<br>98-82-8<br>[CUMENE]                     | 25  | 125               | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| Cumene<br>98-82-8<br>[CUMENE]                     | 50  | 250               | Short Term Exposure Limit (STEL): | Indicative                                   | ECTLV           |
| Cumene<br>98-82-8<br>[CUMENE]                     | 20  | 100               | Time Weighted Average (TWA):      | Indicative                                   | ECTLV           |
| Methacrylic acid<br>79-41-4<br>[METHACRYLIC ACID] | 40  | 143               | Short Term Exposure Limit (STEL): |                                              | EH40 WEL        |
| Methacrylic acid<br>79-41-4<br>[METHACRYLIC ACID] | 20  | 72                | Time Weighted Average (TWA):      |                                              | EH40 WEL        |

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

| Name on list                                                        | Environmental<br>Compartment       | Exposure<br>period | Value |     |                  |             | Remarks |
|---------------------------------------------------------------------|------------------------------------|--------------------|-------|-----|------------------|-------------|---------|
|                                                                     |                                    |                    | mg/l  | ppm | mg/kg            | others      |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                | aqua<br>(freshwater)               |                    |       |     |                  | 0,164 mg/L  |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                | aqua (marine<br>water)             |                    |       |     |                  | 0,0164 mg/L |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                | STP                                |                    |       |     |                  | 10 mg/L     |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                | aqua<br>(intermittent<br>releases) |                    |       |     |                  | 0,164 mg/L  |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                | sediment<br>(freshwater)           |                    |       |     | 1,85 mg/kg       |             |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                | sediment<br>(marine water)         |                    |       |     | 0,185<br>mg/kg   |             |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                | Soil                               |                    |       |     | 0,274<br>mg/kg   |             |         |
| Acrylic acid<br>79-10-7                                             | aqua<br>(freshwater)               |                    |       |     |                  | 0,003 mg/L  |         |
| Acrylic acid<br>79-10-7                                             | aqua (marine<br>water)             |                    |       |     |                  | 0,0003 mg/L |         |
| Acrylic acid<br>79-10-7                                             | aqua<br>(intermittent<br>releases) |                    |       |     |                  | 0,0013 mg/L |         |
| Acrylic acid<br>79-10-7                                             | STP                                |                    |       |     |                  | 0,9 mg/L    |         |
| Acrylic acid<br>79-10-7                                             | sediment<br>(freshwater)           |                    |       |     | 0,0236<br>mg/kg  |             |         |
| Acrylic acid<br>79-10-7                                             | sediment<br>(marine water)         |                    |       |     | 0,00236<br>mg/kg |             |         |
| Acrylic acid<br>79-10-7                                             | soil                               |                    |       |     | 1 mg/kg          |             |         |
| Acrylic acid<br>79-10-7                                             | oral                               |                    |       |     | 0,0023<br>mg/kg  |             |         |
| Acrylic acid<br>79-10-7                                             | Predator                           |                    |       |     | 0,03 g/kg        |             |         |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1 | aqua<br>(freshwater)               |                    |       |     |                  | 0,904 mg/L  |         |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1 | aqua (marine<br>water)             |                    |       |     |                  | 0,904 mg/L  |         |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1 | STP                                |                    |       |     |                  | 10 mg/L     |         |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1 | aqua<br>(intermittent<br>releases) |                    |       |     |                  | 0,972 mg/L  |         |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1 | sediment<br>(freshwater)           |                    |       |     | 6,28 mg/kg       |             |         |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1 | sediment<br>(marine water)         |                    |       |     | 6,28 mg/kg       |             |         |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1 | soil                               |                    |       |     | 0,727<br>mg/kg   |             |         |

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

| Name on list                                                 | Application Area   | Route of Exposure | Health Effect                             | Exposure Time | Value                  | Remarks |
|--------------------------------------------------------------|--------------------|-------------------|-------------------------------------------|---------------|------------------------|---------|
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0            | Workers            | inhalation        | Long term exposure - systemic effects     |               | 48,5 mg/m <sup>3</sup> |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0            | Workers            | Dermal            | Long term exposure - systemic effects     |               | 13,9 mg/kg bw/day      |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0            | general population | inhalation        | Long term exposure - systemic effects     |               | 14,5 mg/m <sup>3</sup> |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0            | general population | Dermal            | Long term exposure - systemic effects     |               | 8,33 mg/kg bw/day      |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0            | general population | oral              | Long term exposure - systemic effects     |               | 8,33 mg/kg bw/day      |         |
| Acrylic acid 79-10-7                                         | Workers            | Inhalation        | Long term exposure - local effects        |               | 30 mg/m <sup>3</sup>   |         |
| Acrylic acid 79-10-7                                         | Workers            | Inhalation        | Acute/short term exposure - local effects |               | 30 mg/m <sup>3</sup>   |         |
| Acrylic acid 79-10-7                                         | Workers            | Dermal            | Acute/short term exposure - local effects |               | 1 mg/cm <sup>2</sup>   |         |
| Acrylic acid 79-10-7                                         | general population | Dermal            | Acute/short term exposure - local effects |               | 1 mg/cm <sup>2</sup>   |         |
| Acrylic acid 79-10-7                                         | general population | inhalation        | Acute/short term exposure - local effects |               | 3,6 mg/m <sup>3</sup>  |         |
| Acrylic acid 79-10-7                                         | general population | inhalation        | Long term exposure - local effects        |               | 3,6 mg/m <sup>3</sup>  |         |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | Workers            | Dermal            | Long term exposure - systemic effects     |               | 4,2 mg/kg bw/day       |         |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | Workers            | Inhalation        | Long term exposure - systemic effects     |               | 14,7 mg/m <sup>3</sup> |         |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | general population | Dermal            | Long term exposure - systemic effects     |               | 2,5 mg/kg bw/day       |         |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | general population | Inhalation        | Long term exposure - systemic effects     |               | 8,8 mg/m <sup>3</sup>  |         |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | general population | oral              | Long term exposure - systemic effects     |               | 2,5 mg/kg bw/day       |         |

**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

**Hand protection:**

Chemical-resistant protective gloves (EN 374).

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

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

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

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

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

**Eye protection:**

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

**Skin protection:**

Wear suitable protective clothing.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|                                                               |                                               |
|---------------------------------------------------------------|-----------------------------------------------|
| Appearance                                                    | liquid<br>liquid<br>green                     |
| Odor                                                          | characteristic                                |
| Odour threshold                                               | No data available / Not applicable            |
| pH                                                            | Not available.                                |
| Initial boiling point                                         | > 100,0 °C (> 212 °F)                         |
| Flash point                                                   | > 93,3 °C (> 199.94 °F); Tagliabue closed cup |
| Decomposition temperature                                     | No data available / Not applicable            |
| Vapour pressure<br>(20 °C (68 °F))                            | < 4 mbar                                      |
| Vapour pressure<br>(50 °C (122 °F))                           | < 300 mbar                                    |
| Density<br>(25 °C (77 °F))                                    | 1,13 g/cm <sup>3</sup>                        |
| Bulk density                                                  | No data available / Not applicable            |
| Viscosity                                                     | No data available / Not applicable            |
| Viscosity (kinematic)                                         | No data available / Not applicable            |
| Explosive properties                                          | No data available / Not applicable            |
| Solubility (qualitative)<br>(23 °C (73.4 °F); Solvent: Water) | Not miscible                                  |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Acetone) | Miscible                                      |
| Solidification temperature                                    | No data available / Not applicable            |
| Melting point                                                 | No data available / Not applicable            |
| Flammability                                                  | No data available / Not applicable            |
| Auto-ignition temperature                                     | No data available / Not applicable            |
| Explosive limits                                              | No data available / Not applicable            |
| Partition coefficient: n-octanol/water                        | No data available / Not applicable            |
| Evaporation rate                                              | No data available / Not applicable            |
| Vapor density                                                 | No data available / Not applicable            |
| Oxidising properties                                          | No data available / Not applicable            |

**9.2. Other information**

No data available / Not applicable

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

Reaction with 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**

No decomposition if used according to specifications.

**10.5. Incompatible materials**

See section reactivity

**10.6. Hazardous decomposition products**

carbon oxides.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**STOT-single exposure:**

May cause respiratory irritation.

**Oral toxicity:**

May cause irritation to the digestive tract.

**Skin irritation:**

Causes skin irritation.

Non corrosive to skin in accordance with the in vitro test method, B40 skin corrosion - Human skin model assay, equivalent to test method OECD 431 or based on analogy to similar products tested.

**Eye irritation:**

Causes serious eye damage.

**Sensitizing:**

May cause an allergic skin reaction.

**Acute oral toxicity:**

| Hazardous components<br>CAS-No.                         | Value<br>type | Value         | Route of<br>application | Exposure<br>time | Species | Method                                      |
|---------------------------------------------------------|---------------|---------------|-------------------------|------------------|---------|---------------------------------------------|
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | LD50          | 10.837 mg/kg  | oral                    |                  | rat     | BASF Test                                   |
| Acrylic acid<br>79-10-7                                 | LD50          | 1.500 mg/kg   | oral                    |                  | rat     |                                             |
| Hydroxypropyl<br>methacrylate<br>27813-02-1             | LD50          | > 2.000 mg/kg | oral                    |                  | rat     |                                             |
| Cumene hydroperoxide<br>80-15-9                         | LD50          | 550 mg/kg     | oral                    |                  | rat     | OECD Guideline 401 (Acute<br>Oral Toxicity) |
| Methacrylic acid<br>79-41-4                             | LD50          | 1.320 mg/kg   | oral                    |                  | rat     |                                             |

**Acute inhalative toxicity:**

| Hazardous components<br>CAS-No. | Value<br>type | Value      | Route of<br>application | Exposure<br>time | Species | Method                                            |
|---------------------------------|---------------|------------|-------------------------|------------------|---------|---------------------------------------------------|
| Acrylic acid<br>79-10-7         | LC50          | > 5,1 mg/l | Vapor.                  | 4 h              | rat     | OECD Guideline 403 (Acute<br>Inhalation Toxicity) |
| Methacrylic acid<br>79-41-4     | LC50          | 4,7 mg/l   | inhalation              | 4 h              | rat     | OECD Guideline 403 (Acute<br>Inhalation Toxicity) |

**Acute dermal toxicity:**

| Hazardous components<br>CAS-No.             | Value<br>type                          | Value                | Route of<br>application | Exposure<br>time | Species | Method                    |
|---------------------------------------------|----------------------------------------|----------------------|-------------------------|------------------|---------|---------------------------|
| Acrylic acid<br>79-10-7                     | LD50                                   | 640 mg/kg            | dermal                  |                  | rabbit  | BASF Test                 |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | LD50                                   | > 5.000 mg/kg        | dermal                  |                  | rabbit  |                           |
| Methacrylic acid<br>79-41-4                 | Acute<br>toxicity<br>estimate<br>(ATE) | 500 mg/kg            | dermal                  |                  |         | Expert judgement          |
| Methacrylic acid<br>79-41-4                 | LD50                                   | 500 - 1.000<br>mg/kg |                         |                  | rabbit  | Dermal Toxicity Screening |

**Skin corrosion/irritation:**

| Hazardous components<br>CAS-No. | Result                  | Exposure<br>time | Species | Method                                                      |
|---------------------------------|-------------------------|------------------|---------|-------------------------------------------------------------|
| Acrylic acid<br>79-10-7         | highly corrosive        | 3 min            | rabbit  | OECD Guideline 404 (Acute<br>Dermal Irritation / Corrosion) |
| Cumene hydroperoxide<br>80-15-9 | corrosive               |                  | rabbit  | Draize Test                                                 |
| Methacrylic acid<br>79-41-4     | Category 1A (corrosive) | 4 h              | rabbit  | OECD Guideline 404 (Acute<br>Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

| Hazardous components<br>CAS-No.                         | Result              | Exposure<br>time | Species | Method                                                   |
|---------------------------------------------------------|---------------------|------------------|---------|----------------------------------------------------------|
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | slightly irritating | 24 h             | rabbit  | OECD Guideline 405 (Acute<br>Eye Irritation / Corrosion) |
| Acrylic acid<br>79-10-7                                 | corrosive           | 21 d             | rabbit  | BASF Test                                                |

**Respiratory or skin sensitization:**

| Hazardous components<br>CAS-No. | Result          | Test type                | Species    | Method       |
|---------------------------------|-----------------|--------------------------|------------|--------------|
| Acrylic acid<br>79-10-7         | not sensitising | Skin<br>painting<br>test | guinea pig |              |
| Methacrylic acid<br>79-41-4     | not sensitising | Buehler<br>test          | guinea pig | Buehler test |

**Germ cell mutagenicity:**

| Hazardous components<br>CAS-No. | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method                                                      |
|---------------------------------|----------|--------------------------------------------------------|--------------------------------------------|---------|-------------------------------------------------------------|
| Acrylic acid<br>79-10-7         | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         |                                                             |
| Cumene hydroperoxide<br>80-15-9 | positive | bacterial reverse<br>mutation assay (e.g<br>Ames test) | without                                    |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay) |
| Cumene hydroperoxide<br>80-15-9 | negative | dermal                                                 |                                            | mouse   |                                                             |

**Repeated dose toxicity**

| Hazardous components<br>CAS-No. | Result | Route of<br>application | Exposure time /<br>Frequency of<br>treatment | Species | Method |
|---------------------------------|--------|-------------------------|----------------------------------------------|---------|--------|
| Cumene hydroperoxide<br>80-15-9 |        | inhalation:<br>aerosol  | 6 h/d5 d/w                                   | rat     |        |

**SECTION 12: Ecological information****General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Precautions required with respect to Environmental Hazards of articles in which this product is used should be considered.

**12.1. Toxicity****Ecotoxicity:**

Harmful to aquatic life with long lasting effects.

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

| Hazardous components<br>CAS-No.                         | Value<br>type | Value      | Acute<br>Toxicity<br>Study | Exposure<br>time | Species                                                                            | Method                                                                                          |
|---------------------------------------------------------|---------------|------------|----------------------------|------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | LC50          | 16,4 mg/l  | Fish                       | 96 h             | Salmo gairdneri (new name:<br>Oncorhynchus mykiss)                                 | OECD Guideline<br>203 (Fish, Acute<br>Toxicity Test)                                            |
| Acrylic acid<br>79-10-7                                 | LC50          | 27 mg/l    | Fish                       | 96 h             |                                                                                    | EPA OTS<br>797.1400 (Fish<br>Acute Toxicity<br>Test)                                            |
| Acrylic acid<br>79-10-7                                 | EC10          | 0,03 mg/l  | Algae                      | 72 h             |                                                                                    | OECD Guideline<br>201 (Alga, Growth<br>Inhibition Test)                                         |
| Acrylic acid<br>79-10-7                                 | EC50          | 0,13 mg/l  | Algae                      | 72 h             | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)                  | OECD Guideline<br>201 (Alga, Growth<br>Inhibition Test)                                         |
|                                                         | NOEC          | 19 mg/l    | chronic<br>Daphnia         | 21 d             | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)<br>Daphnia magna | EPA OTS<br>797.1330 (Daphnid<br>Chronic Toxicity<br>Test)                                       |
| Hydroxypropyl methacrylate<br>27813-02-1                | LC50          | 493 mg/l   | Fish                       | 48 h             | Leuciscus idus melanotus                                                           | DIN 38412-15                                                                                    |
| Hydroxypropyl methacrylate<br>27813-02-1                | EC50          | > 130 mg/l | Daphnia                    | 48 h             | Daphnia magna                                                                      | OECD Guideline<br>202 (Daphnia sp.<br>Acute<br>Immobilisation<br>Test)                          |
| Cumene hydroperoxide<br>80-15-9                         | LC50          | 3,9 mg/l   | Fish                       | 96 h             | Oncorhynchus mykiss                                                                | OECD Guideline<br>203 (Fish, Acute<br>Toxicity Test)                                            |
| Cumene hydroperoxide<br>80-15-9                         | EC50          | 18 mg/l    | Daphnia                    | 48 h             | Daphnia magna                                                                      | OECD Guideline<br>202 (Daphnia sp.<br>Acute<br>Immobilisation<br>Test)                          |
| Cumene hydroperoxide<br>80-15-9                         | ErC50         | 3,1 mg/l   | Algae                      | 72 h             | Pseudokirchnerella subcapitata                                                     | OECD Guideline<br>201 (Alga, Growth<br>Inhibition Test)                                         |
| Methacrylic acid<br>79-41-4                             | LC50          | 85 mg/l    | Fish                       | 96 h             | Salmo gairdneri (new name:<br>Oncorhynchus mykiss)                                 | EPA OTS<br>797.1400 (Fish<br>Acute Toxicity<br>Test)                                            |
| Methacrylic acid<br>79-41-4                             | EC50          | > 130 mg/l | Daphnia                    | 48 h             | Daphnia magna                                                                      | EPA OTS<br>797.1300 (Aquatic<br>Invertebrate Acute<br>Toxicity Test,<br>Freshwater<br>Daphnids) |
| Methacrylic acid<br>79-41-4                             | EC50          | 45 mg/l    | Algae                      | 72 h             | Selenastrum capricornutum<br>(new name: Pseudokirchnerella<br>subcapitata)         | OECD Guideline<br>201 (Alga, Growth<br>Inhibition Test)                                         |
|                                                         | NOEC          | 8,2 mg/l   | Algae                      | 72 h             | Selenastrum capricornutum<br>(new name: Pseudokirchnerella<br>subcapitata)         | OECD Guideline<br>201 (Alga, Growth<br>Inhibition Test)                                         |

## 12.2. Persistence and degradability

### Persistence and Biodegradability:

The product is not biodegradable.

| Hazardous components<br>CAS-No. | Result | Route of<br>application | Degradability | Method |
|---------------------------------|--------|-------------------------|---------------|--------|
|---------------------------------|--------|-------------------------|---------------|--------|

|                                                      |                       |         |        |                                                                             |
|------------------------------------------------------|-----------------------|---------|--------|-----------------------------------------------------------------------------|
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | readily biodegradable |         | 85 %   | OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)           |
| Acrylic acid<br>79-10-7                              | readily biodegradable | aerobic | 81 %   | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)           |
| Hydroxypropyl methacrylate<br>27813-02-1             | readily biodegradable | aerobic | 94,2 % | OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test) |
| Cumene hydroperoxide<br>80-15-9                      |                       | no data | 0 %    | OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)           |
| Methacrylic acid<br>79-41-4                          | readily biodegradable | aerobic | 86 %   | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)           |

**12.3. Bioaccumulative potential / 12.4. Mobility in soil****Mobility:**

Cured adhesives are immobile.

**Bioaccumulative potential:**

No data available.

| Hazardous components<br>CAS-No.                                    | LogKow | Bioconcentration<br>factor (BCF) | Exposure<br>time | Species     | Temperature | Method                                                                                   |
|--------------------------------------------------------------------|--------|----------------------------------|------------------|-------------|-------------|------------------------------------------------------------------------------------------|
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0               | 1,88   |                                  |                  |             |             |                                                                                          |
| Acrylic acid<br>79-10-7<br>Acrylic acid<br>79-10-7                 | 0,46   | 3,16                             |                  |             | 25 °C       | OECD Guideline 107<br>(Partition Coefficient (n-octanol / water), Shake<br>Flask Method) |
| Hydroxypropyl methacrylate<br>27813-02-1                           | 0,97   |                                  |                  |             |             |                                                                                          |
| Cumene hydroperoxide<br>80-15-9<br>Cumene hydroperoxide<br>80-15-9 | 2,16   | 9,1                              |                  | calculation |             | OECD Guideline 305<br>(Bioconcentration: Flow-<br>through Fish Test)                     |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0                     | 0,74   |                                  |                  |             |             |                                                                                          |
| Methacrylic acid<br>79-41-4                                        | 0,93   |                                  |                  |             | 22 °C       | OECD Guideline 107<br>(Partition Coefficient (n-octanol / water), Shake<br>Flask Method) |

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

| Hazardous components<br>CAS-No.                      | PBT/vPvB                                                                                                              |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Acrylic acid<br>79-10-7                              | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Hydroxypropyl methacrylate<br>27813-02-1             | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Methacrylic acid<br>79-41-4                          | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

**12.6. Other adverse effects**

No data available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Product disposal:**

Collection and delivery to recycling enterprise or other registered elimination institution.  
Dispose of in accordance with local and national regulations.

**Disposal of uncleaned packages:**

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

**Waste code**

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.

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

**SECTION 14: Transport information****14.1. UN number**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.2. UN proper shipping name**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.4. Packaging group**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.5. Environmental hazards**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.6. Special precautions for user**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

not applicable

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

VOC content < 5,00 %  
(2010/75/EC)

**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 vapor.  
H242 Heating may cause a fire.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
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.  
H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

### Further information:

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

### Label elements (DPD):

Xi - Irritant



### Risk phrases:

R41 Risk of serious damage to eyes.  
R37/38 Irritating to respiratory system and skin.  
R43 May cause sensitisation by skin contact.

### Safety phrases:

S24/25 Avoid contact with skin and eyes.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S28 After contact with skin, wash immediately with plenty of water and soap.  
S37/39 Wear suitable gloves and eye/face protection.  
S51 Use only in well-ventilated areas.

### Additional labeling:

For consumer use only: S2 Keep out of the reach of children.  
S46 If swallowed, seek medical advice immediately and show this container or label.

### Contains:

2,2'-Ethylenedioxydiethyl dimethacrylate,  
Hydroxypropyl methacrylate

**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.**

