



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

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LOCTITE 3875 PTB known as 30 CC 3875 EFD PART B

SDS No. : 224034  
V006.0

Revision: 03.09.2018  
printing date: 09.12.2020

Replaces version from: 25.05.2015

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

#### 1.1. Product identifier

LOCTITE 3875 PTB known as 30 CC 3875 EFD PART B

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

Intended use:

Accelerator

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

Henkel Ltd  
Wood Lane End  
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)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       |            |

#### 2.2. Label elements

##### Label elements (CLP):

Hazard pictogram:



Contains

Hydroxypropyl methacrylate

Methacryloyloxyethyl succinate  
Acrylic acid  
2,2'-Ethylenedioxydiethyl dimethacrylate  
2-Hydroxyethyl methacrylate  
Hexanoic acid, 2-ethyl-, cobalt(2+) salt

|  |   |
|--|---|
| <b>Signal word:</b>                            | <b>Danger</b>   |
| <b>Hazard statement:</b>                       | <b>H318 Causes serious eye damage.<br/>H315 Causes skin irritation.<br/>H317 May cause an allergic skin reaction.<br/>H335 May cause respiratory irritation.</b>  |
| <b>Precautionary statement:<br/>Prevention</b> | <b>P261 Avoid breathing vapors.<br/>P280 Wear protective gloves/eye protection.</b>   |
| <b>Precautionary statement:<br/>Response</b>   | <b>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br/>P302+P352 IF ON SKIN: Wash with plenty of soap and water.<br/>P333+P313 If skin irritation or rash occurs: Get medical advice/attention.</b> |

### 2.3. Other hazards

None if used properly.

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

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General chemical description:

Anaerobic Sealant

#### Base substances of preparation:

Methacrylates

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

| Hazardous components<br>CAS-No.                      | EC Number<br>REACH-Reg No.    | content       | Classification   |
|--|-------------------------------|---------------|--|
| Hydroxypropyl methacrylate<br>27813-02-1             | 248-666-3<br>01-2119490226-37 | 10- 20 %      | Skin Sens. 1<br>H317<br>Eye Irrit. 2<br>H319   |
| Methacryloyloxyethyl succinate<br>20882-04-6         | 244-096-4<br>01-2120137902-58 | 5- < 10 %     | Skin Sens. 1; Dermal<br>H317<br>Eye Dam. 1<br>H318   |
| Isobornyl methacrylate<br>7534-94-3                  | 231-403-1<br>01-2119886505-27 | 1- < 5 %      | Aquatic Chronic 3<br>H412  |
| Acrylic acid<br>79-10-7                              | 201-177-9<br>01-2119452449-31 | 0,25- < 2,5 % | STOT SE 3<br>H335<br>Aquatic Chronic 2<br>H411<br>Aquatic Acute 1<br>H400<br>Acute Tox. 4; Inhalation<br>H332<br>Acute Tox. 4; Oral<br>H302<br>Flam. Liq. 3<br>H226<br>Skin Corr. 1A<br>H314<br>Acute Tox. 4; Dermal<br>H312 |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | 203-652-6<br>01-2119969287-21 | 0,1- < 1 %    | Skin Sens. 1B<br>H317  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | 212-782-2<br>01-2119490169-29 | 0,1- < 1 %    | Skin Irrit. 2<br>H315<br>Skin Sens. 1<br>H317<br>Eye Irrit. 2<br>H319  |
| Hexanoic acid, 2-ethyl-, cobalt(2+) salt<br>136-52-7 | 205-250-6<br>01-2119524678-29 | 0,1- < 1 %    | Skin Sens. 1A<br>H317<br>Aquatic Acute 1<br>H400<br>Aquatic Chronic 3<br>H412<br>Eye Irrit. 2<br>H319<br>Repr. 2<br>H361f  |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9   | 245-018-1<br>01-2119979088-21 | 0,1- < 1 %    | Repr. 2<br>H361d   |

**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, consult doctor if complaint persists.

#### Skin contact:

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

Eye contact:

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.

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

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:**

Foam, extinguishing powder, carbon dioxide.

Water spray jet

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

High pressure waterjet

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

Danger of decomposition if exposed to heat.

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.

oxides of aluminum

oxides of boron

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

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

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

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

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

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

Avoid contact with skin and eyes.

Ensure adequate ventilation.

Wear protective equipment.

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

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

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

Remove mechanically.

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

Wipe up using absorbent material and subject to waste incineration.

Dispose of contaminated material as waste according to Section 13.

#### **6.4. Reference to other sections**

See advice in section 8

### **SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Ensure good ventilation/suction at the workplace.  
Avoid skin and eye contact.  
Extraction is necessary to remove fumes evolved during reflow.  
See advice in section 8  
Avoid open flames.

Hygiene measures:

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

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

Store in sealed original container.  
Protect against contamination.  
Store in a cool, dry place.  
Keep away from heat and direct sunlight.  
Ensure that storage and workrooms are adequately ventilated.  
Refer to Technical Data Sheet

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

Accelerator

## 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 |
|---|-----|-------------------|-----------------------------------|--|-----------------|
| Aluminium oxide<br>1344-28-1<br>[ALUMINIUM OXIDES, INHALABLE DUST]                  |     | 10                | Time Weighted Average (TWA):      |  | EH40 WEL        |
| Aluminium oxide<br>1344-28-1<br>[ALUMINIUM OXIDES, RESPIRABLE DUST]                 |     | 4                 | Time Weighted Average (TWA):      |  | EH40 WEL        |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7<br>[COBALT AND COBALT COMPOUNDS (AS CO)]   |     | 0,1               | Time Weighted Average (TWA):      |  | EH40 WEL        |
| 2-Ethylhexanoic acid, zirconium salt<br>22464-99-9<br>[ZIRCONIUM COMPOUNDS (AS ZR)] |     | 5                 | Time Weighted Average (TWA):      |  | EH40 WEL        |
| 2-Ethylhexanoic acid, zirconium salt<br>22464-99-9<br>[ZIRCONIUM COMPOUNDS (AS ZR)] |     | 10                | Short Term Exposure Limit (STEL): |  | EH40 WEL        |

#### Occupational Exposure Limits

Valid for  
Ireland

| Ingredient [Regulated substance]  | ppm | mg/m <sup>3</sup> | Value type                        | Short term exposure limit category / Remarks | Regulatory list |
|---|-----|-------------------|-----------------------------------|--|-----------------|
| Aluminium oxide<br>1344-28-1<br>[ALUMINIUM OXIDES, RESPIRABLE DUST]                 |     | 4                 | Time Weighted Average (TWA):      |  | IR_OEL          |
| Aluminium oxide<br>1344-28-1<br>[ALUMINIUM OXIDES, TOTAL INHALABLE DUST]            |     | 10                | Time Weighted Average (TWA):      |  | IR_OEL          |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID]   | 2   | 6                 | Time Weighted Average (TWA):      |  | IR_OEL          |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID (PROP-2-ENOIC ACID)]                       | 10  | 29                | Time Weighted Average (TWA):      | Indicative                                   | ECTLV           |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID (PROP-2-ENOIC ACID)]                       | 20  | 59                | Short Term Exposure Limit (STEL): | Indicative                                   | ECTLV           |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7<br>[COBALT & COBALT COMPOUNDS (AS CO)]     |     | 0,1               | Time Weighted Average (TWA):      |  | IR_OEL          |
| 2-Ethylhexanoic acid, zirconium salt<br>22464-99-9<br>[ZIRCONIUM COMPOUNDS (AS ZR)] |     | 10                | Short Term Exposure Limit (STEL): |  | IR_OEL          |
| 2-Ethylhexanoic acid, zirconium salt<br>22464-99-9<br>[ZIRCONIUM COMPOUNDS (AS ZR)] |     | 5                 | Time Weighted Average (TWA):      |  | IR_OEL          |

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

| Name on list   | Environmental Compartment    | Exposure period | Value       |     |               |        | Remarks |
|--|------------------------------|-----------------|-------------|-----|---------------|--------|---------|
|  |                              |                 | mg/l        | ppm | mg/kg         | others |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>27813-02-1      | aqua (freshwater)            |                 | 0,904 mg/l  |     |               |        |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>27813-02-1      | aqua (marine water)          |                 | 0,904 mg/l  |     |               |        |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>27813-02-1      | sewage treatment plant (STP) |                 | 10 mg/l     |     |               |        |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>27813-02-1      | aqua (intermittent releases) |                 | 0,972 mg/l  |     |               |        |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>27813-02-1      | sediment (freshwater)        |                 |             |     | 6,28 mg/kg    |        |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>27813-02-1      | sediment (marine water)      |                 |             |     | 6,28 mg/kg    |        |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>27813-02-1      | Soil                         |                 |             |     | 0,727 mg/kg   |        |         |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate<br>7534-94-3 | aqua (freshwater)            |                 | 4,66 µg/l   |     |               |        |         |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate<br>7534-94-3 | Soil                         |                 |             |     | 0,118 mg/kg   |        |         |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate<br>7534-94-3 | sewage treatment plant (STP) |                 | 2,45 mg/l   |     |               |        |         |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate<br>7534-94-3 | sediment (freshwater)        |                 |             |     | 0,604 mg/kg   |        |         |
| Acrylic acid<br>79-10-7  | aqua (freshwater)            |                 | 0,003 mg/l  |     |               |        |         |
| Acrylic acid<br>79-10-7  | aqua (marine water)          |                 | 0,0003 mg/l |     |               |        |         |
| Acrylic acid<br>79-10-7  | aqua (intermittent releases) |                 | 0,0013 mg/l |     |               |        |         |
| Acrylic acid<br>79-10-7  | sewage treatment plant (STP) |                 | 0,9 mg/l    |     |               |        |         |
| Acrylic acid<br>79-10-7  | sediment (freshwater)        |                 |             |     | 0,0236 mg/kg  |        |         |
| Acrylic acid<br>79-10-7  | sediment (marine water)      |                 |             |     | 0,00236 mg/kg |        |         |
| Acrylic acid<br>79-10-7  | Soil                         |                 |             |     | 1 mg/kg       |        |         |
| Acrylic acid<br>79-10-7  | oral                         |                 |             |     | 0,03 g/kg     |        |         |
| Acrylic acid<br>79-10-7  | Predator                     |                 |             |     | 0,03 g/kg     |        |         |
| Acrylic acid<br>79-10-7  | Air                          |                 |             |     |               |        |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | aqua (freshwater)            |                 | 0,164 mg/l  |     |               |        |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | aqua (marine water)          |                 | 0,0164 mg/l |     |               |        |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | sewage treatment plant (STP) |                 | 10 mg/l     |     |               |        |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | aqua (intermittent releases) |                 | 0,164 mg/l  |     |               |        |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | sediment (freshwater)        |                 |             |     | 1,85 mg/kg    |        |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | sediment (marine water)      |                 |             |     | 0,185 mg/kg   |        |         |

|  |                                    |  |                |  |                |  |  |
|--|------------------------------------|--|----------------|--|----------------|--|--|
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | Soil                               |  |                |  | 0,274<br>mg/kg |  |  |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | Air                                |  |                |  |                |  |  |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | Predator                           |  |                |  |                |  |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | aqua<br>(freshwater)               |  | 0,482 mg/l     |  |                |  |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | aqua (marine<br>water)             |  | 0,482 mg/l     |  |                |  |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | sewage<br>treatment plant<br>(STP) |  | 10 mg/l        |  |                |  |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | aqua<br>(intermittent<br>releases) |  | 1 mg/l         |  |                |  |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | sediment<br>(freshwater)           |  |                |  | 3,79 mg/kg     |  |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | sediment<br>(marine water)         |  |                |  | 3,79 mg/kg     |  |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | Soil                               |  |                |  | 0,476<br>mg/kg |  |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | Predator                           |  |                |  |                |  |  |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7             | aqua<br>(freshwater)               |  | 0,0006<br>mg/l |  |                |  |  |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7             | aqua (marine<br>water)             |  | 2,36 µg/l      |  |                |  |  |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7             | sediment<br>(freshwater)           |  |                |  | 9,5 mg/kg      |  |  |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7             | sediment<br>(marine water)         |  |                |  | 9,5 mg/kg      |  |  |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7             | Soil                               |  |                |  | 10,9 mg/kg     |  |  |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7             | sewage<br>treatment plant<br>(STP) |  | 0,37 mg/l      |  |                |  |  |

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

| Name on list   | Application Area   | Route of Exposure | Health Effect                             | Exposure Time | Value                    | Remarks |
|--|--------------------|-------------------|---|---------------|--------------------------|---------|
| Methacrylic acid, monoester with propane-1,2-diol<br>27813-02-1      | Workers            | dermal            | Long term exposure - systemic effects     |               | 4,2 mg/kg                |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>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<br>27813-02-1      | General population | dermal            | Long term exposure - systemic effects     |               | 2,5 mg/kg                |         |
| Methacrylic acid, monoester with propane-1,2-diol<br>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<br>27813-02-1      | General population | oral              | Long term exposure - systemic effects     |               | 2,5 mg/kg                |         |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate<br>7534-94-3 | Workers            | dermal            | Long term exposure - systemic effects     |               | 1,04 mg/kg               |         |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate<br>7534-94-3 | General population | dermal            | Long term exposure - systemic effects     |               | 0,625 mg/kg              |         |
| Acrylic acid<br>79-10-7  | Workers            | inhalation        | Long term exposure - local effects        |               | 30 mg/m <sup>3</sup>     |         |
| Acrylic acid<br>79-10-7  | Workers            | inhalation        | Acute/short term exposure - local effects |               | 30 mg/m <sup>3</sup>     |         |
| Acrylic acid<br>79-10-7  | Workers            | dermal            | Acute/short term exposure - local effects |               | 1 mg/cm <sup>2</sup>     |         |
| Acrylic acid<br>79-10-7  | General population | dermal            | Acute/short term exposure - local effects |               | 1 mg/cm <sup>2</sup>     |         |
| Acrylic acid<br>79-10-7  | General population | inhalation        | Acute/short term exposure - local effects |               | 3,6 mg/m <sup>3</sup>    |         |
| Acrylic acid<br>79-10-7  | General population | inhalation        | Long term exposure - local effects        |               | 3,6 mg/m <sup>3</sup>    |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | Workers            | inhalation        | Long term exposure - systemic effects     |               | 48,5 mg/m <sup>3</sup>   |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | Workers            | dermal            | Long term exposure - systemic effects     |               | 13,9 mg/kg               |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | General population | inhalation        | Long term exposure - systemic effects     |               | 14,5 mg/m <sup>3</sup>   |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | General population | dermal            | Long term exposure - systemic effects     |               | 8,33 mg/kg               |         |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0                 | General population | oral              | Long term exposure - systemic effects     |               | 8,33 mg/kg               |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9                              | Workers            | dermal            | Long term exposure - systemic effects     |               | 1,3 mg/kg                |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9                              | Workers            | Inhalation        | Long term exposure - systemic effects     |               | 4,9 mg/m <sup>3</sup>    |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9                              | General population | dermal            | Long term exposure - systemic effects     |               | 0,83 mg/kg               |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9                              | General population | Inhalation        | Long term exposure - systemic effects     |               | 2,9 mg/m <sup>3</sup>    |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9                              | General population | oral              | Long term exposure - systemic effects     |               | 0,83 mg/kg               |         |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7                             | Workers            | Inhalation        | Long term exposure - local                |               | 0,2351 mg/m <sup>3</sup> |         |

|  |                    |            | effects                               |  |             |  |
|--|--------------------|------------|---------------------------------------|--|-------------|--|
| Cobalt bis(2-ethylhexanoate)<br>136-52-7           | General population | Inhalation | Long term exposure - local effects    |  | 0,037 mg/m3 |  |
| Cobalt bis(2-ethylhexanoate)<br>136-52-7           | General population | oral       | Long term exposure - systemic effects |  | 55,8 µg/kg  |  |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9 | Workers            | inhalation | Long term exposure - systemic effects |  | 32,97 mg/m3 |  |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9 | Workers            | dermal     | Long term exposure - systemic effects |  | 6,49 mg/kg  |  |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9 | General population | oral       | Long term exposure - systemic effects |  | 4,51 mg/kg  |  |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9 | General population | inhalation | Long term exposure - systemic effects |  | 8,13 mg/m3  |  |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9 | General population | dermal     | Long term exposure - systemic effects |  | 3,25 mg/kg  |  |

**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:

Protective goggles

or

facial protection

Avoid eye contact.

Protective eye equipment should conform to EN166.

## Skin protection:

Wear protective equipment.

Suitable protective clothing

apron

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

Advices to personal protection equipment:

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

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                                    |
|---|------------------------------------|
| Appearance  | liquid<br>pasty<br>light blue      |
| Odor  | mild                               |
| Odour threshold   | No data available / Not applicable |
| pH  | Not applicable                     |
| Melting point   | No data available / Not applicable |
| Solidification temperature                                  | No data available / Not applicable |
| Initial boiling point<br>(1.013 hPa)                        | > 107 °C (> 224.6 °F)              |
| Flash point   | 107 °C (224.6 °F)                  |
| Evaporation rate  | No data available / Not applicable |
| Flammability  | No data available / Not applicable |
| Explosive limits  | No data available / Not applicable |
| Vapour pressure   | No data available / Not applicable |
| Relative vapour density:                                    | No data available / Not applicable |
| Density<br>(20 °C (68 °F))                                  | 1,69 g/cm <sup>3</sup>             |
| Bulk density  | No data available / Not applicable |
| Solubility  | No data available / Not applicable |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Water) | Insoluble                          |
| Partition coefficient: n-octanol/water                      | No data available / Not applicable |
| Auto-ignition temperature                                   | No data available / Not applicable |
| Decomposition temperature                                   | No data available / Not applicable |
| Viscosity   | No data available / Not applicable |
| Viscosity (kinematic)                                       | No data available / Not applicable |
| Explosive properties  | No data available / Not applicable |
| Oxidising properties  | No data available / Not applicable |

### 9.2. Other information

No data available / Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with oxidants, acids and lyes

Reaction with reducing agents.

Heavy metals.

Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization.

### 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.

Danger of decomposition if exposed to heat.

**10.5. Incompatible materials**

See section reactivity.

**10.6. Hazardous decomposition products**

Hydrocarbons

At higher temperature carbon oxides and nitrogen oxides may be generated.

May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

Rapid polymerisation may generate excessive heat and pressure.

See section 5.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity:**

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

| Hazardous substances<br>CAS-No.                      | Value<br>type | Value         | Species | Method  |
|--|---------------|---------------|---------|---|
| Hydroxypropyl methacrylate<br>27813-02-1             | LD50          | > 2.000 mg/kg | rat     | OECD Guideline 401 (Acute Oral Toxicity)                        |
| Methacryloyloxyethyl succinate<br>20882-04-6         | LD50          | > 2.000 mg/kg | rat     | OECD Guideline 423 (Acute Oral toxicity)                        |
| Isobornyl methacrylate<br>7534-94-3                  | LD50          | 3.160 mg/kg   | rat     | not specified   |
| Acrylic acid<br>79-10-7                              | LD50          | 1.500 mg/kg   | rat     | BASF Test   |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | LD50          | 10.837 mg/kg  | rat     | not specified   |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | LD50          | > 5.000 mg/kg | rat     | not specified   |
| Hexanoic acid, 2-ethyl-, cobalt(2+) salt<br>136-52-7 | LD50          | 3.129 mg/kg   | rat     | OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure) |

**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                                     |
|--|-------------------------------|---------------|---------|--|
| Hydroxypropyl methacrylate<br>27813-02-1             | LD50                          | > 5.000 mg/kg | rabbit  | not specified                              |
| Isobornyl methacrylate<br>7534-94-3                  | LD50                          | > 3.000 mg/kg | rabbit  | not specified                              |
| Acrylic acid<br>79-10-7                              | Acute toxicity estimate (ATE) | 1.100 mg/kg   |         | Expert judgement                           |
| Acrylic acid<br>79-10-7                              | LD50                          | > 2.000 mg/kg | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | LD50                          | > 2.000 mg/kg | mouse   | not specified                              |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | LD50                          | > 5.000 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   |
|---------------------------------|--|------------|-----------------|------------------|---------|--|
| Acrylic acid<br>79-10-7         | LC50                                   | > 5,1 mg/l | vapour          | 4 h              | rat     | OECD Guideline 403 (Acute Inhalation Toxicity) |
| Acrylic acid<br>79-10-7         | Acute<br>toxicity<br>estimate<br>(ATE) | 11 mg/l    | vapour          |                  |         | Expert judgement                               |

**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  |
|---|----------------------|------------------|--|---|
| Hydroxypropyl<br>methacrylate<br>27813-02-1             | not irritating       | 24 h             | rabbit   | Draize Test   |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6         | not irritating       | 0,25 h           | Human,<br>EPISKIIN™<br>Reconstituted<br>Human<br>Epidermis model | OECD Guideline 439 (In Vitro Skin Irritation:<br>Reconstructed Human Epidermis (RHE) Test Method) |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6         | Not Classified       | 4 h              | Human,<br>EPISKIIN™<br>Reconstituted<br>Human<br>Epidermis model | OECD Guideline 431 (In Vitro Skin Corrosion:<br>Reconstructed Human Epidermis (RHE) Test Method)  |
| Isobornyl methacrylate<br>7534-94-3                     | mildly<br>irritating |                  | rabbit   | OECD Guideline 404 (Acute Dermal Irritation / Corrosion)  |
| Acrylic acid<br>79-10-7                                 | highly<br>corrosive  | 3 min            | rabbit   | OECD Guideline 404 (Acute Dermal Irritation / Corrosion)  |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | not irritating       | 24 h             | rabbit   | Draize Test   |
| Hexanoic acid, 2-ethyl-,<br>cobalt(2+) salt<br>136-52-7 | not irritating       |                  | In vitro   | OECD Guideline 439 (In Vitro Skin Irritation:<br>Reconstructed Human Epidermis (RHE) Test Method) |

**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  |
|---|----------------|------------------|----------------------------------|---|
| Methacryloyloxyethyl<br>succinate<br>20882-04-6         | Category I     | 10 min           | Bovine, cornea,<br>in vitro test | OECD Guideline 437 (BCOP)                             |
| Acrylic acid<br>79-10-7                                 | corrosive      | 21 d             | rabbit                           | BASF Test   |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | not irritating |                  | rabbit                           | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9              | irritating     |                  | rabbit                           | Draize Test   |
| Hexanoic acid, 2-ethyl-,<br>cobalt(2+) salt<br>136-52-7 | Category II    |                  | 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   |
|---|-----------------|---------------------------------------|------------|--|
| Isobornyl methacrylate<br>7534-94-3                     | not sensitising | Guinea pig maximisation<br>test       | guinea pig | OECD Guideline 406 (Skin Sensitisation)                            |
| Acrylic acid<br>79-10-7                                 | not sensitising | Skin painting test                    | guinea pig | not specified  |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | sensitising     | Mouse local lymphnode<br>assay (LLNA) | mouse      | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |
| Hexanoic acid, 2-ethyl-,<br>cobalt(2+) salt<br>136-52-7 | sensitising     |                                       | guinea pig | OECD Guideline 406 (Skin Sensitisation)                            |

**Germ cell mutagenicity:**

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

| Hazardous substances<br>CAS-No.                         | Result   | Type of study /<br>Route of<br>administration   | Metabolic<br>activation /<br>Exposure time | Species | Method  |
|---|----------|---|--|---------|---|
| Hydroxypropyl<br>methacrylate<br>27813-02-1             | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| Hydroxypropyl<br>methacrylate<br>27813-02-1             | negative | mammalian cell<br>gene mutation assay   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6         | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| Isobornyl methacrylate<br>7534-94-3                     | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| Isobornyl methacrylate<br>7534-94-3                     | negative |   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| Isobornyl methacrylate<br>7534-94-3                     | negative | in vitro mammalian<br>chromosome<br>aberration test   | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)  |
| Acrylic acid<br>79-10-7                                 | negative | mammalian cell<br>gene mutation assay   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| Acrylic acid<br>79-10-7                                 | negative | DNA damage and<br>repair assay,<br>unscheduled DNA<br>synthesis in<br>mammalian cells in<br>vitro | without                                    |         | OECD Guideline 482 (Genetic<br>Toxicology: DNA Damage<br>and Repair, Unscheduled<br>DNA Synthesis in Mammalian<br>Cells In Vitro) |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | negative | mammalian cell<br>gene mutation assay   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | negative | in vitro mammalian<br>cell micronucleus<br>test   | with and without                           |         | OECD Guideline 487 (In vitro<br>Mammalian Cell<br>Micronucleus Test)  |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9              | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9              | positive | in vitro mammalian<br>chromosome<br>aberration test   | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)  |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9              | negative | mammalian cell<br>gene mutation assay   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9              | 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   |
|---|------------------|-------------------------|---|---------|-------------|--|
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | not carcinogenic | inhalation              | 2 years (102<br>weeks)<br>6 hours/day,<br>5 days/week | rat     | male        | OECD Guideline 451<br>(Carcinogenicity<br>Studies) |
| Acrylic acid<br>79-10-7                     |                  | oral: drinking<br>water | 26 (males) -<br>28 (females)<br>month<br>continuously | rat     | male/female | OECD Guideline 451<br>(Carcinogenicity<br>Studies) |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9  |                  | inhalation              | 102 weeks<br>6 hours/day,<br>5 days/week              | rat     | female      | OECD Guideline 451<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  |
|---|---|-----------------------------|----------------------------|---------|---|
| Hydroxypropyl<br>methacrylate<br>27813-02-1             | NOAEL P 400 mg/kg                                 | two-<br>generation<br>study | oral: gavage               | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)  |
| Isobornyl methacrylate<br>7534-94-3                     | NOAEL P 25 mg/kg<br>NOAEL F1 500 mg/kg            |                             | oral: gavage               | rat     | OECD Guideline 421<br>(Reproduction /<br>Developmental Toxicity<br>Screening Test)  |
| Acrylic acid<br>79-10-7                                 | NOAEL P 240 mg/kg<br>NOAEL F2 53 mg/l             |                             | oral:<br>drinking<br>water | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)  |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | NOAEL P 1.000 mg/kg<br>NOAEL F1 1.000 mg/kg       |                             | oral: gavage               | rat     | OECD Guideline 422<br>(Combined Repeated Dose<br>Toxicity Study with the<br>Reproduction /<br>Developmental Toxicity<br>Screening Test) |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9              | NOAEL P >= 1.000 mg/kg<br>NOAEL F1 >= 1.000 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)         |

**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  |
|---|-------------------|-------------------------|--|---------|---|
| Hydroxypropyl<br>methacrylate<br>27813-02-1             | NOAEL 300 mg/kg   | oral: gavage            |  | rat     | OECD Guideline 422<br>(Combined Repeated<br>Dose Toxicity Study with<br>the Reproduction /<br>Developmental Toxicity<br>Screening Test) |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | NOAEL 1.000 mg/kg | oral: gavage            | daily  | rat     | OECD Guideline 422<br>(Combined Repeated<br>Dose Toxicity Study with<br>the Reproduction /<br>Developmental Toxicity<br>Screening Test) |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9              | NOAEL 100 mg/kg   | oral: gavage            | once daily                                   | rat     | OECD Guideline 422<br>(Combined Repeated<br>Dose Toxicity Study with<br>the Reproduction /<br>Developmental Toxicity<br>Screening Test) |

**Aspiration hazard:**

No data available.

## SECTION 12: Ecological information

### General ecological information:

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

In the cured state contribution of this product to Environmental Hazards is insignificant in comparison to articles in which it is used.

### 12.1. Toxicity

#### Toxicity (Fish):

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

| Hazardous substances<br>CAS-No.                         | Value<br>type | Value      | Exposure time | Species  | Method   |
|---|---------------|------------|---------------|--|--|
| Hydroxypropyl methacrylate<br>27813-02-1                | LC50          | 493 mg/l   | 48 h          | Leuciscus idus melanotus                           | DIN 38412-15                                   |
| Isobornyl methacrylate<br>7534-94-3                     | LC50          | 1,79 mg/l  | 96 h          | Danio rerio  | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Acrylic acid<br>79-10-7                                 | LC50          | 27 mg/l    | 96 h          | Salmo gairdneri (new name:<br>Oncorhynchus mykiss) | EPA OTS 797.1400 (Fish Acute Toxicity Test)    |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | LC50          | 16,4 mg/l  | 96 h          | Danio rerio  | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9                 | LC50          | > 100 mg/l | 96 h          | Oryzias latipes                                    | OECD Guideline 203 (Fish, Acute Toxicity Test) |

#### Toxicity (Daphnia):

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

| Hazardous substances<br>CAS-No.                       | Value<br>type | Value        | Exposure time | Species       | Method   |
|---|---------------|--------------|---------------|---------------|--|
| Hydroxypropyl methacrylate<br>27813-02-1              | EC50          | > 143 mg/l   | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)                       |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6       | EC50          | > 515,4 mg/l | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)                       |
| Isobornyl methacrylate<br>7534-94-3                   | EC50          | 1,1 mg/l     | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)                       |
| Acrylic acid<br>79-10-7                               | EC50          | 95 mg/l      | 48 h          | Daphnia magna | EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids) |
| 2-Hydroxyethyl methacrylate<br>868-77-9               | EC50          | 380 mg/l     | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)                       |
| 2-ethylhexanoic acid,<br>zirconium salt<br>22464-99-9 | EC50          |              | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)                       |

#### Chronic toxicity to aquatic invertebrates

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

| Hazardous substances<br>CAS-No.                         | Value<br>type | Value      | Exposure time | Species       | Method   |
|---|---------------|------------|---------------|---------------|--|
| Hydroxypropyl methacrylate<br>27813-02-1                | NOEC          | 45,2 mg/l  | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test)      |
| Isobornyl methacrylate<br>7534-94-3                     | NOEC          | 0,233 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test)      |
| Acrylic acid<br>79-10-7                                 | NOEC          | 19 mg/l    | 21 d          | Daphnia magna | EPA OTS 797.1330 (Daphnid Chronic Toxicity Test) |
| 2,2'-Ethylenedioxydiethyl<br>dimethacrylate<br>109-16-0 | NOEC          | 32 mg/l    | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test)      |
| 2-Hydroxyethyl methacrylate<br>868-77-9                 | NOEC          | 24,1 mg/l  | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test)      |

**Toxicity (Algae):**

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

| Hazardous substances CAS-No.                         | Value type | Value       | Exposure time | Species   | Method  |
|--|------------|-------------|---------------|---|---|
| Hydroxypropyl methacrylate<br>27813-02-1             | EC50       | > 97,2 mg/l | 72 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Hydroxypropyl methacrylate<br>27813-02-1             | NOEC       | > 97,2 mg/l | 72 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Methacryloyloxyethyl succinate<br>20882-04-6         | EC50       | > 312 mg/l  | 72 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Methacryloyloxyethyl succinate<br>20882-04-6         | NOEC       | 21,1 mg/l   | 72 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Isobornyl methacrylate<br>7534-94-3                  | EC50       | 2,66 mg/l   | 96 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Isobornyl methacrylate<br>7534-94-3                  | NOEC       | 0,254 mg/l  | 96 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Acrylic acid<br>79-10-7                              | EC10       | 0,03 mg/l   | 72 h          | Scenedesmus subspicatus (new name: Desmodesmus subspicatus)           | EU Method C.3 (Algal Inhibition test)             |
| Acrylic acid<br>79-10-7                              | EC50       | 0,13 mg/l   | 72 h          | Scenedesmus subspicatus (new name: Desmodesmus subspicatus)           | EU Method C.3 (Algal Inhibition test)             |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | EC50       | > 100 mg/l  | 72 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | NOEC       | 18,6 mg/l   | 72 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | EC50       | 836 mg/l    | 72 h          | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | NOEC       | 400 mg/l    | 72 h          | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Hexanoic acid, 2-ethyl-, cobalt(2+) salt<br>136-52-7 | NOEC       | 0,1506 mg/l | 72 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Hexanoic acid, 2-ethyl-, cobalt(2+) salt<br>136-52-7 | EC50       | 0,6542 mg/l | 72 h          | Pseudokirchneriella subcapitata                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9   | EC50       |             | 72 h          | Scenedesmus subspicatus (new name: Desmodesmus subspicatus)           | DIN 38412-09                                      |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9   | EC10       |             | 72 h          | Scenedesmus subspicatus (new name: Desmodesmus subspicatus)           | DIN 38412-09                                      |

**Toxicity to microorganisms**

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

| Hazardous substances CAS-No.                       | Value type | Value        | Exposure time | Species                    | Method   |
|--|------------|--------------|---------------|----------------------------|--|
| Hydroxypropyl methacrylate<br>27813-02-1           | EC10       | 1.140 mg/l   | 16 h          |                            | not specified  |
| Acrylic acid<br>79-10-7                            | EC20       | 900 mg/l     | 30 min        | activated sludge, domestic | ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge) |
| 2-Hydroxyethyl methacrylate<br>868-77-9            | EC0        | > 3.000 mg/l | 16 h          | Pseudomonas fluorescens    | other guideline:   |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9 | EC10       |              | 17 h          | Pseudomonas putida         | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)                 |

**12.2. Persistence and degradability**

The product is not biodegradable.

| Hazardous substances<br>CAS-No.                      | Result   | Test type | Degradability | Exposure<br>time | Method   |
|--|--|-----------|---------------|------------------|--|
| Hydroxypropyl methacrylate<br>27813-02-1             | readily biodegradable                            | aerobic   | 94,2 %        | 28 d             | OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)                    |
| Methacryloyloxyethyl succinate<br>20882-04-6         | readily biodegradable, but failing 10-day window | aerobic   | 80 %          | 28 d             | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)                    |
| Isobornyl methacrylate<br>7534-94-3                  | readily biodegradable                            | aerobic   | 70 %          | 28 d             | OECD Guideline 310 (Ready Biodegradability/CO <sub>2</sub> in Sealed Vessels (Headspace Test)) |
| Acrylic acid<br>79-10-7                              | inherently biodegradable                         | aerobic   | 100 %         | 28 d             | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)                       |
| Acrylic acid<br>79-10-7                              | readily biodegradable                            | aerobic   | 81 %          | 28 d             | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)                              |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | readily biodegradable                            | aerobic   | 85 %          | 28 d             | OECD Guideline 301 B (Ready Biodegradability: CO <sub>2</sub> Evolution Test)                  |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | readily biodegradable                            | aerobic   | 92 - 100 %    | 14 d             | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))                          |
| Hexanoic acid, 2-ethyl-, cobalt(2+) salt<br>136-52-7 | readily biodegradable                            | aerobic   | 60 %          | 10 d             | OECD Guideline 301 B (Ready Biodegradability: CO <sub>2</sub> Evolution Test)                  |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9   | inherently biodegradable                         | aerobic   | > 70 %        | 28 d             | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)                       |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9   | readily biodegradable, but failing 10-day window | aerobic   | 73,82 %       | 28 d             | OECD Guideline 301 B (Ready Biodegradability: CO <sub>2</sub> Evolution Test)                  |

### 12.3. Bioaccumulative potential

No data available.

| Hazardous substances<br>CAS-No.     | Bioconcentration factor (BCF) | Exposure time | Temperature | Species     | Method   |
|-------------------------------------|-------------------------------|---------------|-------------|-------------|--|
| Isobornyl methacrylate<br>7534-94-3 | 37                            | 56 day        | 24 °C       | Danio rerio | OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test) |
| Acrylic acid<br>79-10-7             | 3,16                          |               |             |             | QSAR (Quantitative Structure Activity Relationship)            |

### 12.4. Mobility in soil

Cured adhesives are immobile.

| Hazardous substances<br>CAS-No.                      | LogPow | Temperature | Method   |
|--|--------|-------------|--|
| Hydroxypropyl methacrylate<br>27813-02-1             | 0,97   | 20 °C       | not specified  |
| Methacryloyloxyethyl succinate<br>20882-04-6         | 0,783  | 23 °C       | EU Method A.8 (Partition Coefficient)  |
| Isobornyl methacrylate<br>7534-94-3                  | 5,09   |             | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)        |
| Acrylic acid<br>79-10-7                              | 0,46   | 25 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | 2,3    |             | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)        |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | 0,42   | 25 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Hexanoic acid, 2-ethyl-, cobalt(2+) salt<br>136-52-7 | 4,68   |             | not specified  |

### 12.5. Results of PBT and vPvB assessment

| Hazardous substances<br>CAS-No.                      | PBT / vPvB  |
|--|---|
| Hydroxypropyl methacrylate<br>27813-02-1             | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Isobornyl methacrylate<br>7534-94-3                  | 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. |
| 2,2'-Ethylenedioxydiethyl dimethacrylate<br>109-16-0 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 2-Hydroxyethyl methacrylate<br>868-77-9              | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Hexanoic acid, 2-ethyl-, cobalt(2+) salt<br>136-52-7 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 2-ethylhexanoic acid, zirconium salt<br>22464-99-9   | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

### 12.6. Other adverse effects

No data available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

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

Disposal of uncleaned packages:

Disposal must be made according to official regulations.

Use packages for recycling only when totally empty.

Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

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**  
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. Packing 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 and the IBC Code**  
not applicable

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

VOC content < 3 %  
(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.  
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.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H361d Suspected of damaging the unborn child.  
H361f Suspected of damaging fertility.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

**Further information:**

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

**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.**