



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

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LOCTITE 518

SDS No. : 544621

V010.0

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Replaces version from: 24.07.2023

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

#### 1.1. Product identifier

LOCTITE 518

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

Intended use:

Anaerobic Sealant

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

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com

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

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazards identification

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

##### Classification (CLP):

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



**Contains**

3,3,5 Trimethylcyclohexyl methacrylate

2-Hydroxyethyl methacrylate

Methacryloyloxyethyl succinate

Acetic acid, 2-phenylhydrazide

2-Carboxyethyl acrylate

Limonene

**Signal word:**

Warning

**Hazard statement:**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

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 contents/container in accordance with national regulation.\*\*\*

**Precautionary statement:  
Prevention**

P261 Avoid breathing vapors.

P273 Avoid release to the environment.

P280 Wear protective gloves.

**Precautionary statement:  
Response**

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P337+P313 If eye irritation persists: Get medical advice/attention.

**2.3. Other hazards**

None if used properly.

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

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

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

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

| Hazardous components<br>CAS-No.<br>EC Number<br>REACH-Reg No.                           | Concentration | Classification                                                                                                                                                                                                                   | Specific Conc. Limits, M-<br>factors and ATEs                                                                             | Add.<br>Information |
|-----------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------|
| 3-Phenoxy-2-hydroxypropyl<br>methacrylate<br>16926-87-7<br>240-994-5                    | 10- 20 %      | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335                                                                                                                                                                     |                                                                                                                           |                     |
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9<br>231-927-0<br>01-2120748527-45 | 5- < 10 %     | Aquatic Chronic 2, H411<br>Skin Sens. 1B, H317<br>STOT SE 3, H335<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319                                                                                                                   | STOT SE 3; H335; C >= 10 %                                                                                                |                     |
| 2-Hydroxyethyl methacrylate<br>868-77-9<br>212-782-2<br>01-2119490169-29                | 5- < 10 %     | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Eye Irrit. 2, H319                                                                                                                                                                  |                                                                                                                           |                     |
| Methacryloyloxyethyl succinate<br>20882-04-6<br>244-096-4<br>01-2120137902-58           | 0,1- < 1 %    | Skin Sens. 1, H317<br>Eye Dam. 1, H318                                                                                                                                                                                           |                                                                                                                           |                     |
| Acetic acid, 2-phenylhydrazide<br>114-83-0<br>204-055-3<br>01-2120951382-56             | 0,1- < 1 %    | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Acute Tox. 4, Oral, H302<br>Skin Sens. 1, H317<br>Carc. 2, H351                                                                                                              | M acute = 1<br>M chronic = 1                                                                                              |                     |
| 2-Propenoic acid, homopolymer<br>(oligomers)<br>9003-01-4<br>01-2120754771-50           | 0,1- < 1 %    | Aquatic Acute 1, H400<br>Aquatic Chronic 2, H411<br>Acute Tox. 4, Oral, H302<br>Eye Dam. 1, H318<br>STOT SE 3, H335                                                                                                              | M acute = 1                                                                                                               |                     |
| methacrylic acid<br>79-41-4<br>201-204-4<br>01-2119463884-26                            | 0,1- < 1 %    | Acute Tox. 4, Oral, H302<br>Acute Tox. 3, Dermal, H311<br>Acute Tox. 4, Inhalation, H332<br>Skin Corr. 1A, H314<br>Eye Dam. 1, H318<br>STOT SE 3, H335                                                                           | STOT SE 3; H335; C >= 1 %<br>=====<br>dermal:ATE = 500 mg/kg<br>inhalation:ATE = 3,19<br>mg/l;dust/mist                   |                     |
| 2-Carboxyethyl acrylate<br>24615-84-7<br>246-359-9                                      | 0,1- < 1 %    | Aquatic Chronic 2, H411<br>Skin Corr. 1, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>STOT SE 3, H335                                                                                                                       |                                                                                                                           |                     |
| Acrylic acid<br>79-10-7<br>201-177-9<br>01-2119452449-31                                | 0,1- < 1 %    | Acute Tox. 4, Dermal, H312<br>Skin Corr. 1A, H314<br>Flam. Liq. 3, H226<br>Acute Tox. 4, Oral, H302<br>Acute Tox. 4, Inhalation, H332<br>Aquatic Acute 1, H400<br>Aquatic Chronic 2, H411<br>STOT SE 3, H335<br>Eye Dam. 1, H318 | STOT SE 3; H335; C >= 1 %<br>=====<br>M acute = 1<br>=====<br>dermal:ATE = 1.100 mg/kg<br>inhalation:ATE = 11 mg/l;vapour | EU OEL              |
| Limonene<br>5989-27-5<br>205-341-0, 227-813-5<br>01-2119529223-47                       | 0,1- < 1 %    | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Aquatic Acute 1, H400<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412                                                                                        | M acute = 1                                                                                                               |                     |

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

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Inhalation:

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

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

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

Ingestion:

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

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

SKIN: Rash, Urticaria.

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

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

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

See section: Description of first aid measures

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media:

water, carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

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

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

### 5.3. Advice for firefighters

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

Additional information:

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

## SECTION 6: Accidental release measures

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

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

Keep away from sources of ignition.

### 6.2. Environmental precautions

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

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

Dispose of contaminated material as waste according to Section 13.

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

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

**6.4. Reference to other sections**

See advice in section 8

|                                        |
|----------------------------------------|
| <b>SECTION 7: Handling and storage</b> |
|----------------------------------------|

**7.1. Precautions for safe handling**

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

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

Ensure good ventilation/extraction.

Refer to Technical Data Sheet.

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

Anaerobic Sealant

**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 |
|------------------------------------------------------------------------|-----|-------------------|-----------------------------------|----------------------------------------------|-----------------|
| Silicon dioxide<br>112945-52-5<br>[SILICA, AMORPHOUS, INHALABLE DUST]  |     | 6                 | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| Silicon dioxide<br>112945-52-5<br>[SILICA, AMORPHOUS, RESPIRABLE DUST] |     | 2,4               | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| Silicon dioxide<br>112945-52-5<br>[Dust, respirable dust]              |     | 4                 | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| Silicon dioxide<br>112945-52-5<br>[Dust, inhalable dust]               |     | 10                | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| Methacrylic acid<br>79-41-4<br>[METHACRYLIC ACID]                      | 20  | 72                | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| Methacrylic acid<br>79-41-4<br>[METHACRYLIC ACID]                      | 40  | 143               | Short Term Exposure Limit (STEL): | 15 minutes                                   | EH40 WEL        |
| 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           |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID]                              | 10  | 29                | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| Acrylic acid<br>79-10-7<br>[Acrylic acid]                              | 20  | 59                | Short Term Exposure Limit (STEL): | 1 minute                                     | 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 |
|--------------------------------------------------------|-----|-------------------|-----------------------------------|----------------------------------------------|-----------------|
| Silicon dioxide<br>112945-52-5<br>[SILICA, AMORPHOUS]  |     | 6                 | Time Weighted Average (TWA):      |                                              | IR_OEL          |
| Silicon dioxide<br>112945-52-5<br>[SILICA, AMORPHOUS]  |     | 2,4               | Time Weighted Average (TWA):      |                                              | IR_OEL          |
| Silicon dioxide<br>112945-52-5<br>[DUSTS NON-SPECIFIC] |     | 10                | Time Weighted Average (TWA):      |                                              | IR_OEL          |
| Silicon dioxide<br>112945-52-5<br>[DUSTS NON-SPECIFIC] |     | 4                 | Time Weighted Average (TWA):      |                                              | IR_OEL          |
| Methacrylic acid<br>79-41-4<br>[METHACRYLIC ACID]      | 20  | 70                | Time Weighted Average (TWA):      |                                              | IR_OEL          |
| Methacrylic acid<br>79-41-4                            | 40  | 140               | Short Term Exposure Limit (STEL): | 15 minutes                                   | IR_OEL          |

|                                                               |    |    |                                   |                             |        |
|---------------------------------------------------------------|----|----|-----------------------------------|-----------------------------|--------|
| [METHACRYLIC ACID]                                            |    |    |                                   |                             |        |
| 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  |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID]                     | 20 | 59 | Short Term Exposure Limit (STEL): | 1 minute<br>Indicative OELV | IR_OEL |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID]                     | 10 | 29 | Time Weighted Average (TWA):      | Indicative OELV             | IR_OEL |

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

| Name on list                                           | Environmental<br>Compartment       | Exposure<br>period | Value           |     |                |        | Remarks                             |
|--------------------------------------------------------|------------------------------------|--------------------|-----------------|-----|----------------|--------|-------------------------------------|
|                                                        |                                    |                    | mg/l            | ppm | mg/kg          | others |                                     |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | aqua<br>(freshwater)               |                    | 0,0019<br>mg/l  |     |                |        |                                     |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | aqua (marine<br>water)             |                    | 0,00019<br>mg/l |     |                |        |                                     |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | aqua<br>(intermittent<br>releases) |                    | 0,019 mg/l      |     |                |        |                                     |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | sewage<br>treatment plant<br>(STP) |                    | 100 mg/l        |     |                |        |                                     |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | sediment<br>(freshwater)           |                    |                 |     | 0,141<br>mg/kg |        |                                     |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | sediment<br>(marine water)         |                    |                 |     | 0,014<br>mg/kg |        |                                     |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | Soil                               |                    |                 |     | 0,027<br>mg/kg |        |                                     |
| 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                           |                    |                 |     |                |        | no potential for<br>bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | Marine water -<br>intermittent     |                    | 1 mg/l          |     |                |        |                                     |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | aqua<br>(freshwater)               |                    | 0,003 mg/l      |     |                |        |                                     |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | aqua (marine<br>water)             |                    | 0,0003<br>mg/l  |     |                |        |                                     |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | sewage<br>treatment plant<br>(STP) |                    | 0,9 mg/l        |     |                |        |                                     |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | sediment<br>(freshwater)           |                    |                 |     | 0,021<br>mg/kg |        |                                     |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | sediment<br>(marine water)         |                    |                 |     | 0,002<br>mg/kg |        |                                     |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | Soil                               |                    |                 |     | 0,003<br>mg/kg |        |                                     |
| methacrylic acid<br>79-41-4                            | aqua<br>(freshwater)               |                    | 0,82 mg/l       |     |                |        |                                     |
| methacrylic acid<br>79-41-4                            | Freshwater -<br>intermittent       |                    | 0,45 mg/l       |     |                |        |                                     |
| methacrylic acid<br>79-41-4                            | aqua (marine<br>water)             |                    | 0,082 mg/l      |     |                |        |                                     |
| methacrylic acid<br>79-41-4                            | sewage<br>treatment plant<br>(STP) |                    | 100 mg/l        |     |                |        |                                     |
| methacrylic acid<br>79-41-4                            | sediment<br>(freshwater)           |                    |                 |     | 3,09 mg/kg     |        |                                     |
| methacrylic acid<br>79-41-4                            | sediment<br>(marine water)         |                    |                 |     | 0,309<br>mg/kg |        |                                     |
| methacrylic acid<br>79-41-4                            | Soil                               |                    |                 |     | 0,137<br>mg/kg |        |                                     |
| methacrylic acid<br>79-41-4                            | Predator                           |                    |                 |     |                |        | no potential for<br>bioaccumulation |

|                         |                                    |  |                |  |                  |  |                      |
|-------------------------|------------------------------------|--|----------------|--|------------------|--|----------------------|
| 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<br>mg/l |  |                  |  |                      |
| Acrylic acid<br>79-10-7 | sewage<br>treatment plant<br>(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                               |  |                |  | 0,03 g/kg        |  |                      |
| Acrylic acid<br>79-10-7 | Air                                |  |                |  |                  |  | no hazard identified |
| Limonene D<br>5989-27-5 | aqua<br>(freshwater)               |  | 0,014 mg/l     |  |                  |  |                      |
| Limonene D<br>5989-27-5 | aqua (marine<br>water)             |  | 0,0014<br>mg/l |  |                  |  |                      |
| Limonene D<br>5989-27-5 | sewage<br>treatment plant<br>(STP) |  | 1,8 mg/l       |  |                  |  |                      |
| Limonene D<br>5989-27-5 | sediment<br>(freshwater)           |  |                |  | 3,85 mg/kg       |  |                      |
| Limonene D<br>5989-27-5 | sediment<br>(marine water)         |  |                |  | 0,385<br>mg/kg   |  |                      |
| Limonene D<br>5989-27-5 | Soil                               |  |                |  | 0,763<br>mg/kg   |  |                      |
| Limonene D<br>5989-27-5 | oral                               |  |                |  | 133 mg/kg        |  |                      |

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

| Name on list                                           | Application Area   | Route of Exposure | Health Effect                         | Exposure Time | Value       | Remarks                          |
|--------------------------------------------------------|--------------------|-------------------|---------------------------------------|---------------|-------------|----------------------------------|
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | Workers            | inhalation        | Long term exposure - systemic effects |               | 16,45 mg/m3 |                                  |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | Workers            | dermal            | Long term exposure - systemic effects |               | 46,7 mg/kg  |                                  |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | General population | inhalation        | Long term exposure - systemic effects |               | 2,9 mg/m3   |                                  |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | General population | dermal            | Long term exposure - systemic effects |               | 1,67 mg/kg  |                                  |
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | General population | oral              | Long term exposure - systemic effects |               | 1,67 mg/kg  |                                  |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | Workers            | dermal            | Long term exposure - systemic effects |               | 1,3 mg/kg   | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | Workers            | Inhalation        | Long term exposure - systemic effects |               | 4,9 mg/m3   | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | General population | dermal            | Long term exposure - systemic effects |               | 0,83 mg/kg  | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | General population | Inhalation        | Long term exposure - systemic effects |               | 2,9 mg/m3   | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | General population | oral              | Long term exposure - systemic effects |               | 0,83 mg/kg  | no potential for bioaccumulation |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | Workers            | inhalation        | Long term exposure - systemic effects |               | 1,97 mg/m3  |                                  |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | Workers            | dermal            | Long term exposure - systemic effects |               | 0,56 mg/kg  |                                  |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | General population | inhalation        | Long term exposure - systemic effects |               | 0,348 mg/m3 |                                  |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | General population | dermal            | Long term exposure - systemic effects |               | 0,2 mg/kg   |                                  |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | General population | oral              | Long term exposure - systemic effects |               | 0,2 mg/kg   |                                  |
| methacrylic acid<br>79-41-4                            | Workers            | Inhalation        | Long term exposure - local effects    |               | 88 mg/m3    | no potential for bioaccumulation |
| methacrylic acid<br>79-41-4                            | Workers            | Inhalation        | Long term exposure - systemic effects |               | 29,6 mg/m3  | no potential for bioaccumulation |
| methacrylic acid<br>79-41-4                            | Workers            | dermal            | Long term exposure - systemic effects |               | 4,25 mg/kg  | no potential for bioaccumulation |
| methacrylic acid<br>79-41-4                            | General population | Inhalation        | Long term exposure - local effects    |               | 6,55 mg/m3  | no potential for bioaccumulation |
| methacrylic acid<br>79-41-4                            | General population | Inhalation        | Long term exposure - systemic effects |               | 6,3 mg/m3   | no potential for bioaccumulation |
| methacrylic acid<br>79-41-4                            | General population | dermal            | Long term exposure - systemic effects |               | 2,55 mg/kg  | no potential for bioaccumulation |
| Acrylic acid<br>79-10-7                                | Workers            | inhalation        | Long term exposure - local effects    |               | 30 mg/m3    | no hazard identified             |
| Acrylic acid<br>79-10-7                                | Workers            | inhalation        | Acute/short term exposure - local     |               | 30 mg/m3    | no hazard identified             |

|                         |                       |            | effects                                         |  |           |                      |
|-------------------------|-----------------------|------------|-------------------------------------------------|--|-----------|----------------------|
| Acrylic acid<br>79-10-7 | Workers               | dermal     | Acute/short term<br>exposure - local<br>effects |  | 1 mg/cm2  | no hazard identified |
| Acrylic acid<br>79-10-7 | General<br>population | dermal     | Acute/short term<br>exposure - local<br>effects |  | 1 mg/cm2  | no hazard identified |
| Acrylic acid<br>79-10-7 | General<br>population | inhalation | Acute/short term<br>exposure - local<br>effects |  | 3,6 mg/m3 | no hazard identified |
| Acrylic acid<br>79-10-7 | General<br>population | inhalation | Long term<br>exposure - local<br>effects        |  | 3,6 mg/m3 | no hazard identified |

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

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

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

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

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

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

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

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

Eye protection:

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

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

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

Advices to personal protection equipment:

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

Personal protective equipment should conform to the relevant EN standard.

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

Delivery form

liquid

Colour

red

Odor

mild, Acrylic

|                                                                                                                                                    |                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Physical state                                                                                                                                     | liquid                                                                                                                              |
| Melting point                                                                                                                                      | Not applicable, Product is a liquid                                                                                                 |
| Solidification temperature                                                                                                                         | < -30 °C (< -22 °F)                                                                                                                 |
| Initial boiling point                                                                                                                              | > 150 °C (> 302 °F)                                                                                                                 |
| Flammability                                                                                                                                       | The product is not flammable.                                                                                                       |
| Explosive limits                                                                                                                                   | Not applicable, The product is not flammable.                                                                                       |
| Flash point                                                                                                                                        | > 100 °C (> 212 °F); no method / method unknown                                                                                     |
| Auto-ignition temperature                                                                                                                          | Not applicable, The product is not flammable.                                                                                       |
| Decomposition temperature                                                                                                                          | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH                                                                                                                                                 | Not applicable, Product is non-polar/aprotic.                                                                                       |
| Viscosity (kinematic)<br>(40 °C (104 °F); )                                                                                                        | > 20,5 mm <sup>2</sup> /s                                                                                                           |
| Viscosity, dynamic<br>(Cone and plate; Instrument: Haake Cone/Plate<br>M10 PK1 (or equivalent), 2deg. Cone; Shear<br>gradient: 1 s <sup>-1</sup> ) | < 1.100.000 mPa.s LCT STM 738; Rheological Data from flow curves                                                                    |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Water)                                                                                        | Slight                                                                                                                              |
| Partition coefficient: n-octanol/water                                                                                                             | Not applicable<br>Mixture                                                                                                           |
| Vapour pressure<br>(50 °C (122 °F))                                                                                                                | < 700 mbar;no method / method unknown                                                                                               |
| Vapour pressure<br>(20 °C (68 °F))                                                                                                                 | < 0,13 mbar                                                                                                                         |
| Density<br>(20 °C (68 °F))                                                                                                                         | 1,1 g/cm <sup>3</sup> no method / method unknown                                                                                    |
| Relative vapour density:<br>(20 °C)                                                                                                                | > 1                                                                                                                                 |
| Particle characteristics                                                                                                                           | Not applicable<br>Product is a liquid                                                                                               |

## 9.2. Other information

Other information not applicable for this product

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with strong oxidants.  
Acids.  
Reducing agents.  
Strong bases.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

See section reactivity

### 10.4. Conditions to avoid

Stable under normal conditions of storage and use.

### 10.5. Incompatible materials

See section reactivity.

### 10.6. Hazardous decomposition products

carbon oxides.  
Hydrocarbons  
nitrogen oxides  
Rapid polymerisation may generate excessive heat and pressure.

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity:**

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

| Hazardous substances<br>CAS-No.                           | Value<br>type | Value         | Species | Method                                                               |
|-----------------------------------------------------------|---------------|---------------|---------|----------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | LD0           | > 5.000 mg/kg | rat     | OECD Guideline 401 (Acute Oral Toxicity)                             |
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | LD50          | > 5.000 mg/kg | rat     | OECD Guideline 401 (Acute Oral Toxicity)                             |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9                | LD50          | 5.564 mg/kg   | rat     | FDA Guideline                                                        |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6           | LD50          | > 2.000 mg/kg | rat     | OECD Guideline 423 (Acute Oral toxicity)                             |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | LD50          | 310 mg/kg     | rat     | OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down<br>Procedure)   |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | LD50          | 1.500 mg/kg   | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral<br>Toxicity) |
| methacrylic acid<br>79-41-4                               | LD50          | 1.320 mg/kg   | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral<br>Toxicity) |
| Acrylic acid<br>79-10-7                                   | LD50          | 1.500 mg/kg   | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral<br>Toxicity) |
| Limonene<br>5989-27-5                                     | LD50          | > 5.000 mg/kg | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral<br>Toxicity) |

**Acute dermal toxicity:**

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

| Hazardous substances<br>CAS-No.                           | Value<br>type                          | Value                | Species | Method                                                                 |
|-----------------------------------------------------------|----------------------------------------|----------------------|---------|------------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | LD0                                    | > 2.000 mg/kg        | rat     | OECD Guideline 402 (Acute Dermal Toxicity)                             |
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | LD50                                   | > 2.000 mg/kg        | rat     | OECD Guideline 402 (Acute Dermal Toxicity)                             |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9                | LD50                                   | > 5.000 mg/kg        | rabbit  | not specified                                                          |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | LD50                                   | > 2.000 mg/kg        | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity)                             |
| methacrylic acid<br>79-41-4                               | LD50                                   | 500 - 1.000<br>mg/kg | rabbit  | Dermal Toxicity Screening                                              |
| methacrylic acid<br>79-41-4                               | Acute<br>toxicity<br>estimate<br>(ATE) | 500 mg/kg            |         | Expert judgement                                                       |
| Acrylic acid<br>79-10-7                                   | Acute<br>toxicity<br>estimate<br>(ATE) | 1.100 mg/kg          |         | Expert judgement                                                       |
| Limonene<br>5989-27-5                                     | LD50                                   | > 5.000 mg/kg        | rabbit  | equivalent or similar to OECD Guideline 402 (Acute<br>Dermal Toxicity) |

**Acute inhalative toxicity:**

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

| Hazardous substances<br>CAS-No.                           | Value<br>type                          | Value           | Test atmosphere | Exposure<br>time | Species | Method                                                                        |
|-----------------------------------------------------------|----------------------------------------|-----------------|-----------------|------------------|---------|-------------------------------------------------------------------------------|
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | LC50                                   | > 5,1 mg/l      | vapour          | 4 h              | rat     | equivalent or similar to OECD<br>Guideline 403 (Acute<br>Inhalation Toxicity) |
| methacrylic acid<br>79-41-4                               | LC50                                   | 3,19 - 6,5 mg/l | dust/mist       | 4 h              | rat     | equivalent or similar to OECD<br>Guideline 403 (Acute<br>Inhalation Toxicity) |
| methacrylic acid<br>79-41-4                               | Acute<br>toxicity<br>estimate<br>(ATE) | 3,19 mg/l       | dust/mist       |                  |         | Expert judgement                                                              |
| Acrylic acid<br>79-10-7                                   | LC0                                    | 5,1 mg/l        | vapour          | 4 h              | rat     | equivalent or similar to OECD<br>Guideline 403 (Acute<br>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                                                                                            |
|-----------------------------------------------------------|--------------------------------|------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9                | slightly<br>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 corrosive                  | 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)  |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | not corrosive                  |                  | Human,<br>EpiSkin™<br>(SM),<br>Reconstructed<br>Human<br>Epidermis (RHE) | OECD Guideline 431 (In Vitro Skin Corrosion:<br>Reconstructed Human Epidermis (RHE) Test Method)  |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | not irritating                 |                  | Human,<br>EpiSkin™<br>(SM),<br>Reconstructed<br>Human<br>Epidermis (RHE) | OECD Guideline 439 (In Vitro Skin Irritation:<br>Reconstructed Human Epidermis (RHE) Test Method) |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | slightly<br>irritating         | 4 h              | rabbit                                                                   | OECD Guideline 404 (Acute Dermal Irritation / Corrosion)                                          |
| methacrylic acid<br>79-41-4                               | corrosive                      | 3 min            | rabbit                                                                   | OECD Guideline 404 (Acute Dermal Irritation / Corrosion)                                          |
| 2-Carboxyethyl acrylate<br>24615-84-7                     | corrosive                      | 24 h             | rabbit                                                                   | not specified                                                                                     |
| Acrylic acid<br>79-10-7                                   | Sub-Category<br>1A (corrosive) | 3 min            | rabbit                                                                   | OECD Guideline 404 (Acute Dermal Irritation / Corrosion)                                          |
| Limonene<br>5989-27-5                                     | moderately<br>irritating       | 4 h              | rabbit                                                                   | OECD Guideline 404 (Acute Dermal Irritation / Corrosion)                                          |

**Serious eye damage/irritation:**

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

| Hazardous substances<br>CAS-No.                        | Result                                          | Exposure<br>time | Species                       | Method                                                |
|--------------------------------------------------------|-------------------------------------------------|------------------|-------------------------------|-------------------------------------------------------|
| 2-Hydroxyethyl methacrylate<br>868-77-9                | Category 2B<br>(mildly irritating to eyes)      |                  | rabbit                        | Draize Test                                           |
| Methacryloyloxyethyl succinate<br>20882-04-6           | Category I                                      | 10 min           | Bovine, cornea, in vitro test | OECD Guideline 437 (BCOP)                             |
| Acetic acid, 2-phenylhydrazide<br>114-83-0             | not irritating                                  |                  | Chicken, eye, isolated        | OECD Guideline 438 (Isolated Chicken Eye Test Method) |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | Category 1<br>(irreversible effects on the eye) |                  | rabbit                        | BASF Test                                             |
| methacrylic acid<br>79-41-4                            | corrosive                                       |                  | rabbit                        | Draize Test                                           |
| Acrylic acid<br>79-10-7                                | Category 1<br>(irreversible effects on the eye) |                  | rabbit                        | BASF Test                                             |
| Limonene<br>5989-27-5                                  | not irritating                                  |                  | rabbit                        | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

**Respiratory or skin sensitization:**

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

| Hazardous substances<br>CAS-No.                        | Result                           | Test type                              | Species                              | Method                                                           |
|--------------------------------------------------------|----------------------------------|----------------------------------------|--------------------------------------|------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | sensitising                      | Mouse local lymphnode assay (LLNA)     | mouse                                | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)  |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | not sensitising                  | Buehler test                           | guinea pig                           | Buehler test                                                     |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | sensitising                      | Guinea pig maximisation test           | guinea pig                           | Magnusson and Kligman Method                                     |
| Acetic acid, 2-phenylhydrazide<br>114-83-0             | positive                         | Direct peptide reactivity assay (DPRA) | cysteine and lysine, in chemico test | OECD Guideline 442C (Direct Peptide Reactivity Assay (DPRA))     |
| Acetic acid, 2-phenylhydrazide<br>114-83-0             | positive                         | Activation of keratinocytes            | human keratinocytes, in vitro test   | OECD Guideline 442D (ARE-Nrf2 Luciferase Test Method)            |
| Acetic acid, 2-phenylhydrazide<br>114-83-0             | positive                         | activation of dendritic cells          | human monocytes, in vitro test       | OECD Guideline 442E (H-CLAT: Human Cell Line Activation Test)    |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | not sensitising                  | Freund's complete adjuvant test        | guinea pig                           | Klecak Method                                                    |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | not sensitising                  | Split adjuvant test                    | guinea pig                           | Maguire Method                                                   |
| methacrylic acid<br>79-41-4                            | not sensitising                  | Buehler test                           | guinea pig                           | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |
| 2-Carboxyethyl acrylate<br>24615-84-7                  | sensitising                      | Mouse local lymphnode assay (LLNA)     | mouse                                | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)  |
| Acrylic acid<br>79-10-7                                | not sensitising                  | Freund's complete adjuvant test        | guinea pig                           | Klecak Method                                                    |
| Acrylic acid<br>79-10-7                                | not sensitising                  | Split adjuvant test                    | guinea pig                           | Maguire Method                                                   |
| Limonene<br>5989-27-5                                  | Sub-Category 1B<br>(sensitising) | Mouse local lymphnode assay (LLNA)     | mouse                                | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)  |

**Germ cell mutagenicity:**

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

| <b>Hazardous substances<br/>CAS-No.</b>                   | <b>Result</b> | <b>Type of study /<br/>Route of<br/>administration</b>                                            | <b>Metabolic<br/>activation /<br/>Exposure time</b> | <b>Species</b> | <b>Method</b>                                                                                                                                        |
|-----------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | 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                | 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)                                                                                |
| 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)                                                                                          |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | positive      | bacterial reverse<br>mutation assay (e.g<br>Ames test)                                            | with and without                                    |                | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)                                                                                          |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | negative      | in vitro mammalian<br>cell micronucleus<br>test                                                   | with and without                                    |                | OECD Guideline 487 (In vitro<br>Mammalian Cell<br>Micronucleus Test)                                                                                 |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | negative      | bacterial reverse<br>mutation assay (e.g<br>Ames test)                                            | with and without                                    |                | equivalent or similar to OECD<br>Guideline 471 (Bacterial<br>Reverse Mutation Assay)                                                                 |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | negative      | in vitro mammalian<br>chromosome<br>aberration test                                               | with and without                                    |                | equivalent or similar to OECD<br>Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)                                                 |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | negative      | mammalian cell<br>gene mutation assay                                                             | with and without                                    |                | equivalent or similar to OECD<br>Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                                                    |
| methacrylic acid<br>79-41-4                               | negative      | bacterial reverse<br>mutation assay (e.g<br>Ames test)                                            | with and without                                    |                | equivalent or similar to OECD<br>Guideline 471 (Bacterial<br>Reverse Mutation Assay)                                                                 |
| Acrylic acid<br>79-10-7                                   | negative      | bacterial reverse<br>mutation assay (e.g<br>Ames test)                                            | with and without                                    |                | equivalent or similar to OECD<br>Guideline 471 (Bacterial<br>Reverse Mutation Assay)                                                                 |
| Acrylic acid<br>79-10-7                                   | negative      | mammalian cell<br>gene mutation assay                                                             | with and without                                    |                | equivalent or similar to OECD<br>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                                             |                | equivalent or similar to OECD<br>Guideline 482 (Genetic<br>Toxicology: DNA Damage<br>and Repair, Unscheduled<br>DNA Synthesis in Mammalian<br>Cells) |
| Limonene<br>5989-27-5                                     | negative      | bacterial reverse<br>mutation assay (e.g<br>Ames test)                                            | with and without                                    |                | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)                                                                                          |
| Limonene<br>5989-27-5                                     | negative      | in vitro mammalian<br>chromosome<br>aberration test                                               | with and without                                    |                | equivalent or similar to OECD<br>Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)                                                 |
| Limonene<br>5989-27-5                                     | negative      | mammalian cell<br>gene mutation assay                                                             | with and without                                    |                | equivalent or similar to OECD<br>Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                                                    |
| Limonene<br>5989-27-5                                     | negative      | sister chromatid<br>exchange assay in<br>mammalian cells                                          | with and without                                    |                | equivalent or similar to OECD<br>Guideline 479 (Genetic<br>Toxicology: In Vitro Sister<br>Chromatid Exchange Assay in<br>Mammalian Cells)            |
| 2-Hydroxyethyl<br>methacrylate                            | negative      | oral: gavage                                                                                      |                                                     | rat            | OECD Guideline 474<br>(Mammalian Erythrocyte                                                                                                         |

|                                                        |          |              |  |                         |                                                                                                |
|--------------------------------------------------------|----------|--------------|--|-------------------------|------------------------------------------------------------------------------------------------|
| 868-77-9                                               |          |              |  |                         | Micronucleus Test)                                                                             |
| 2-Hydroxyethyl methacrylate<br>868-77-9                | negative | oral: gavage |  | Drosophila melanogaster | not specified                                                                                  |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | negative | oral: gavage |  | rat                     | equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) |
| methacrylic acid<br>79-41-4                            | negative | inhalation   |  | mouse                   | equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)  |
| methacrylic acid<br>79-41-4                            | negative | oral: gavage |  | mouse                   | equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)          |
| Acrylic acid<br>79-10-7                                | negative | oral: gavage |  | rat                     | equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) |
| Acrylic acid<br>79-10-7                                | negative | oral: gavage |  | mouse                   | not specified                                                                                  |
| Limonene<br>5989-27-5                                  | negative | oral: gavage |  | rat                     | not specified                                                                                  |

### 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 application | Exposure time /<br>Frequency of treatment | Species | Sex         | Method                                                             |
|--------------------------------------------|------------------|----------------------|-------------------------------------------|---------|-------------|--------------------------------------------------------------------|
| 2-Hydroxyethyl methacrylate<br>868-77-9    | not carcinogenic | inhalation           | 2 y<br>6 h/d, 5 d/w                       | rat     | female      | equivalent or similar OECD Guideline 451 (Carcinogenicity Studies) |
| 2-Hydroxyethyl methacrylate<br>868-77-9    | not carcinogenic | inhalation           | 2 y<br>6 h/d, 5 d/w                       | rat     | male        | equivalent or similar OECD Guideline 451 (Carcinogenicity Studies) |
| Acetic acid, 2-phenylhydrazide<br>114-83-0 | carcinogenic     | oral: drinking water | continuous                                | mouse   | male/female |                                                                    |
| methacrylic acid<br>79-41-4                | not carcinogenic | inhalation           | 2 y                                       | mouse   | male/female | OECD Guideline 451 (Carcinogenicity Studies)                       |
| Acrylic acid<br>79-10-7                    | not carcinogenic | oral: drinking water | 26 - 28 m continuously                    | rat     | male/female | OECD Guideline 451 (Carcinogenicity Studies)                       |
| Acrylic acid<br>79-10-7                    | not carcinogenic | dermal               | 21 m<br>3 times/w                         | mouse   | male/female | not specified                                                      |

**Reproductive toxicity:**

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

| Hazardous substances<br>CAS-No.                           | Result / Value                                               | Test type                   | Route of<br>application    | Species | Method                                                                                             |
|-----------------------------------------------------------|--------------------------------------------------------------|-----------------------------|----------------------------|---------|----------------------------------------------------------------------------------------------------|
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9                | NOAEL P >= 1.000 mg/kg<br>NOAEL F1 >= 1.000 mg/kg            | screening                   | oral: gavage               | rat     | equivalent or similar to<br>OECD Guideline 422<br>(Combined Repeated Dose<br>Toxicity Study)       |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | NOAEL P 240 mg/kg<br>NOAEL F1 53 mg/kg<br>NOAEL F2 53 mg/kg  | two-<br>generation<br>study | oral:<br>drinking<br>water | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)                             |
| methacrylic acid<br>79-41-4                               | NOAEL P 50 mg/kg<br>NOAEL F1 400 mg/kg<br>NOAEL F2 400 mg/kg | Two<br>generation<br>study  | oral: gavage               | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)                             |
| Acrylic acid<br>79-10-7                                   | NOAEL P 83 mg/kg<br>NOAEL F1 250 mg/kg                       | one-<br>generation<br>study | oral:<br>drinking<br>water | rat     | equivalent or similar to<br>OECD Guideline 415 (One-<br>Generation Reproduction<br>Toxicity Study) |
| Acrylic acid<br>79-10-7                                   | NOAEL P 240 mg/kg<br>NOAEL F1 53 mg/kg<br>NOAEL F2 53 mg/kg  | two-<br>generation<br>study | oral:<br>drinking<br>water | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)                             |

**STOT-single exposure:**

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

| Hazardous substances<br>CAS-No.                           | Assessment                        | Route of<br>exposure | Target Organs | Remarks |
|-----------------------------------------------------------|-----------------------------------|----------------------|---------------|---------|
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | May cause respiratory irritation. |                      |               |         |
| methacrylic acid<br>79-41-4                               | May cause respiratory irritation. |                      |               |         |
| 2-Carboxyethyl acrylate<br>24615-84-7                     | May cause respiratory irritation. |                      |               |         |
| Acrylic acid<br>79-10-7                                   | May cause respiratory irritation. |                      |               |         |

**STOT-repeated exposure:**

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

| Hazardous substances<br>CAS-No.                           | Result / Value    | Route of<br>application    | Exposure time /<br>Frequency of<br>treatment | Species | Method                                                                                                                                  |
|-----------------------------------------------------------|-------------------|----------------------------|----------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | NOAEL 1.000 mg/kg | oral: gavage               | 28 d<br>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               | 49 d<br>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 0,352 mg/l  | inhalation                 | 90 d<br>6 h/d, 5 d/w                         | rat     | OECD Guideline 413<br>(Subchronic Inhalation<br>Toxicity: 90-Day)                                                                       |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | NOAEL 40 mg/kg    | oral:<br>drinking<br>water | 12 m<br>daily                                | rat     | equivalent or similar to<br>OECD Guideline 452<br>(Chronic Toxicity<br>Studies)                                                         |
| methacrylic acid<br>79-41-4                               |                   | inhalation                 | 90 d<br>6 h/d, 5 d/w                         | rat     | OECD Guideline 413<br>(Subchronic Inhalation<br>Toxicity: 90-Day)                                                                       |
| Acrylic acid<br>79-10-7                                   | NOAEL 40 mg/kg    | oral:<br>drinking<br>water | 12 m<br>daily                                | rat     | equivalent or similar to<br>OECD Guideline 452<br>(Chronic Toxicity<br>Studies)                                                         |
| Acrylic acid<br>79-10-7                                   | NOAEL 0,015 mg/l  | inhalation:<br>vapour      | 90 d<br>6 h/d, 5 d/w                         | mouse   | equivalent or similar to<br>OECD Guideline 413<br>(Subchronic Inhalation<br>Toxicity: 90-Day)                                           |
| Limonene<br>5989-27-5                                     | NOAEL 825 mg/kg   | oral: gavage               | 16 d<br>5 d/w                                | rat     | equivalent or similar to<br>OECD Guideline 407<br>(Repeated Dose 28-Day<br>Oral Toxicity in Rodents)                                    |

**Aspiration hazard:**

The mixture is classified based on Viscosity data.

| Hazardous substances<br>CAS-No. | Viscosity (kinematic)<br>Value | Temperature | Method        | Remarks |
|---------------------------------|--------------------------------|-------------|---------------|---------|
| Limonene<br>5989-27-5           | 0,87 mm <sup>2</sup> /s        | 25 °C       | not specified |         |

**11.2 Information on other hazards**

not applicable

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

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

**12.1. Toxicity****Toxicity (Fish):**

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

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

| Hazardous substances<br>CAS-No.                           | Value<br>type | Value        | Exposure time | Species                                            | Method                                                                                    |
|-----------------------------------------------------------|---------------|--------------|---------------|----------------------------------------------------|-------------------------------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | LC50          | 1,9 mg/l     | 96 h          | Brachydanio rerio (new name:<br>Danio rerio)       | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)                                         |
| 2-Hydroxyethyl methacrylate<br>868-77-9                   | LC50          | > 100 mg/l   | 96 h          | Oryzias latipes                                    | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)                                         |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | LC50          | 27 mg/l      | 96 h          | Oncorhynchus mykiss                                | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)                                         |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | NOEC          | > 10,1 mg/l  | 45 d          | Oryzias latipes                                    | OECD Guideline 210 (fish<br>early lite stage toxicity test)                               |
| methacrylic acid<br>79-41-4                               | LC50          | 85 mg/l      | 96 h          | Salmo gairdneri (new name:<br>Oncorhynchus mykiss) | EPA OTS 797.1400 (Fish<br>Acute Toxicity Test)                                            |
| methacrylic acid<br>79-41-4                               | NOEC          | 10 mg/l      | 35 d          | Danio rerio                                        | OECD Guideline 210 (fish<br>early lite stage 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<br>Acute Toxicity Test)                                            |
| Acrylic acid<br>79-10-7                                   | NOEC          | >= 10,1 mg/l | 45 d          | Oryzias latipes                                    | OECD Guideline 210 (fish<br>early lite stage toxicity test)                               |
| Limonene<br>5989-27-5                                     | LC50          | 0,702 mg/l   | 96 h          | Pimephales promelas                                | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)                                         |
| Limonene<br>5989-27-5                                     | LC10          | 0,32 mg/l    | 8 d           | Pimephales promelas                                | OECD Guideline 212 (Fish,<br>Short-term Toxicity Test on<br>Embryo and Sac-Fry<br>Stages) |

**Toxicity (aquatic invertebrates):**

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

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

| Hazardous substances<br>CAS-No.                           | Value<br>type | Value        | Exposure time | Species       | Method                                                                                    |
|-----------------------------------------------------------|---------------|--------------|---------------|---------------|-------------------------------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | EC50          | 14,43 mg/l   | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test)                          |
| 2-Hydroxyethyl methacrylate<br>868-77-9                   | EC50          | 380 mg/l     | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test)                          |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6           | EC50          | > 515,4 mg/l | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test)                          |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | EC50          | 1,1 mg/l     | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test)                          |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | EC50          | 47 mg/l      | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test)                          |
| methacrylic acid<br>79-41-4                               | EC50          | > 130 mg/l   | 48 h          | Daphnia magna | EPA OTS 797.1300<br>(Aquatic Invertebrate Acute<br>Toxicity Test, Freshwater<br>Daphnids) |
| Acrylic acid                                              | EC50          | 95 mg/l      | 48 h          | Daphnia magna | EPA OTS 797.1300                                                                          |

|                       |      |            |      |               |                                                                 |
|-----------------------|------|------------|------|---------------|-----------------------------------------------------------------|
| 79-10-7               |      |            |      |               | (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids) |
| Limonene<br>5989-27-5 | EC50 | 0,577 mg/l | 48 h | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute Immobilisation Test)   |

**Chronic toxicity (aquatic invertebrates):**

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

| Hazardous substances<br>CAS-No.                           | Value<br>type | Value      | Exposure time | Species       | Method                                              |
|-----------------------------------------------------------|---------------|------------|---------------|---------------|-----------------------------------------------------|
| 2-Hydroxyethyl methacrylate<br>868-77-9                   | NOEC          | 24,1 mg/l  | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test)         |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | NOEC          | 19 mg/l    | 21 d          | Daphnia magna | EPA OTS 797.1330<br>(Daphnid Chronic Toxicity Test) |
| methacrylic acid<br>79-41-4                               | NOEC          | 53 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<br>(Daphnid Chronic Toxicity Test) |
| Limonene<br>5989-27-5                                     | EC10          | 0,153 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test)         |

**Toxicity (Algae):**

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

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

| Hazardous substances<br>CAS-No.                           | Value<br>type | Value              | Exposure time | Species                                                                     | Method                                               |
|-----------------------------------------------------------|---------------|--------------------|---------------|-----------------------------------------------------------------------------|------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | EC10          | 0,43 mg/l          | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9                   | EC50          | 836 mg/l           | 72 h          | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9                   | NOEC          | 400 mg/l           | 72 h          | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6           | EC50          | > 312 mg/l         | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6           | NOEC          | 21,1 mg/l          | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | EC50          | 0,258 mg/l         | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | NOEC          | 0,012 mg/l         | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | EC50          | 0,13 mg/l          | 72 h          | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)           | EU Method C.3 (Algal<br>Inhibition test)             |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | EC10          | 0,03 mg/l          | 72 h          | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)           | EU Method C.3 (Algal<br>Inhibition test)             |
| methacrylic acid<br>79-41-4                               | NOEC          | 8,2 mg/l           | 72 h          | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| methacrylic acid<br>79-41-4                               | EC50          | 45 mg/l            | 72 h          | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2-Carboxyethyl acrylate<br>24615-84-7                     | EC50          | > 1,71 - 3,55 mg/l | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Acrylic acid<br>79-10-7                                   | EC10          | 0,03 mg/l          | 72 h          | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)           | EU Method C.3 (Algal<br>Inhibition test)             |
| Acrylic acid<br>79-10-7                                   | EC50          | 0,13 mg/l          | 72 h          | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)           | EU Method C.3 (Algal<br>Inhibition test)             |
| Limonene<br>5989-27-5                                     | EC50          | 0,32 mg/l          | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Limonene<br>5989-27-5                                     | EC10          | 0,174 mg/l         | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |

#### Toxicity (microorganisms):

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

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

| Hazardous substances<br>CAS-No.                           | Value<br>type | Value        | Exposure time | Species                    | Method                                                                            |
|-----------------------------------------------------------|---------------|--------------|---------------|----------------------------|-----------------------------------------------------------------------------------|
| 2-Hydroxyethyl methacrylate<br>868-77-9                   | EC0           | > 3.000 mg/l | 16 h          | Pseudomonas fluorescens    | other guideline:                                                                  |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | EC20          | 900 mg/l     | 30 min        | activated sludge, domestic | ISO 8192 (Test for<br>Inhibition of Oxygen<br>Consumption by Activated<br>Sludge) |
| methacrylic acid<br>79-41-4                               | EC10          | 100 mg/l     | 17 h          | Pseudomonas putida         | DIN 38412, part 8<br>(Pseudomonas<br>Zellvermehrungshemm-<br>Test)                |
| Acrylic acid<br>79-10-7                                   | EC20          | 900 mg/l     | 30 min        | activated sludge, domestic | ISO 8192 (Test for<br>Inhibition of Oxygen<br>Consumption by Activated            |

|                       |      |         |     |                                                        |                                                                          |
|-----------------------|------|---------|-----|--------------------------------------------------------|--------------------------------------------------------------------------|
|                       |      |         |     |                                                        | Sludge)                                                                  |
| Limonene<br>5989-27-5 | EC10 | 18 mg/l | 3 h | activated sludge of a<br>predominantly domestic sewage | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |

## 12.2. Persistence and degradability

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

| Hazardous substances<br>CAS-No.                           | Result                                              | Test type     | Degradability | Exposure<br>time | Method                                                                            |
|-----------------------------------------------------------|-----------------------------------------------------|---------------|---------------|------------------|-----------------------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl<br>methacrylate<br>7779-31-9    | not readily biodegradable.                          | aerobic       | 16,8 %        | 28 d             | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9                   | readily biodegradable                               | aerobic       | 92 - 100 %    | 14 d             | OECD Guideline 301 C (Ready<br>Biodegradability: Modified MITI<br>Test (I))       |
| Methacryloyloxyethyl<br>succinate<br>20882-04-6           | readily biodegradable, but<br>failing 10-day window | aerobic       | 80 %          | 28 d             | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0            | not readily biodegradable.                          | aerobic       | 39 %          | 28 d             | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)           |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | readily biodegradable                               | aerobic       | 87,4 %        | 28 d             | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |
| 2-Propenoic acid,<br>homopolymer (oligomers)<br>9003-01-4 | inherently biodegradable                            | aerobic       | 100 %         | 28 d             | OECD Guideline 302 B (Inherent<br>biodegradability: Zahn-<br>Wellens/EMPA Test)   |
| methacrylic acid<br>79-41-4                               | readily biodegradable                               | aerobic       | 86 %          | 28 d             | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)           |
| methacrylic acid<br>79-41-4                               | inherently biodegradable                            | aerobic       | 100 %         | 14 d             | OECD Guideline 302 B (Inherent<br>biodegradability: Zahn-<br>Wellens/EMPA Test)   |
| 2-Carboxyethyl acrylate<br>24615-84-7                     | not readily biodegradable.                          | not specified | > 0 - 60 %    | 28 d             | OECD 301 A - F                                                                    |
| Acrylic acid<br>79-10-7                                   | inherently biodegradable                            | aerobic       | 100 %         | 28 d             | OECD Guideline 302 B (Inherent<br>biodegradability: Zahn-<br>Wellens/EMPA Test)   |
| Acrylic acid<br>79-10-7                                   | readily biodegradable                               | aerobic       | 81 %          | 28 d             | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)           |
| Limonene<br>5989-27-5                                     | readily biodegradable                               | aerobic       | 71,4 %        | 28 d             | OECD Guideline 301 B (Ready<br>Biodegradability: CO2 Evolution<br>Test)           |

## 12.3. Bioaccumulative potential

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

| Hazardous substances<br>CAS-No. | Bioconcentratio<br>n factor (BCF) | Exposure time | Temperature | Species | Method                                                 |
|---------------------------------|-----------------------------------|---------------|-------------|---------|--------------------------------------------------------|
| Acrylic acid<br>79-10-7         | 3,16                              |               |             |         | QSAR (Quantitative Structure<br>Activity Relationship) |

#### 12.4. Mobility in soil

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

| Hazardous substances<br>CAS-No.                        | LogPow | Temperature | Method                                                                             |
|--------------------------------------------------------|--------|-------------|------------------------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9    | 5,25   | 20 °C       | 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) |
| Methacryloyloxyethyl succinate<br>20882-04-6           | 0,783  | 23 °C       | EU Method A.8 (Partition Coefficient)                                              |
| Acetic acid, 2-phenylhydrazide<br>114-83-0             | 0,74   |             | QSAR (Quantitative Structure Activity Relationship)                                |
| 2-Propenoic acid, homopolymer (oligomers)<br>9003-01-4 | 0,23   |             | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| methacrylic acid<br>79-41-4                            | 0,93   | 22 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| 2-Carboxyethyl acrylate<br>24615-84-7                  | 0,46   |             |                                                                                    |
| Acrylic acid<br>79-10-7                                | 0,46   | 25 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Limonene<br>5989-27-5                                  | 4,57   |             | not specified                                                                      |

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

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

| Hazardous substances<br>CAS-No.                     | PBT / vPvB                                                                                                            |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 3,3,5 Trimethylcyclohexyl methacrylate<br>7779-31-9 | 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. |
| Acetic acid, 2-phenylhydrazide<br>114-83-0          | 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. |
| Acrylic acid<br>79-10-7                             | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Limonene<br>5989-27-5                               | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

#### 12.6. Endocrine disrupting properties

not applicable

#### 12.7. Other adverse effects

No data available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**Product disposal:**

Dispose of in accordance with local and national regulations.  
Do not empty into drains / surface water / ground water.

**Disposal of uncleaned packages:**

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

**Waste code**

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

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

## SECTION 14: Transport information

**14.1. UN number or ID number**

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. Maritime transport in bulk according to IMO instruments**

not applicable

## SECTION 15: Regulatory information

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

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): | Not applicable |
|-----------------------------------------------------------------|----------------|

|                                                             |                |
|-------------------------------------------------------------|----------------|
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): | Not applicable |
|-------------------------------------------------------------|----------------|

|                                                            |                |
|------------------------------------------------------------|----------------|
| Persistent organic pollutants (Regulation (EU) 2019/1021): | Not applicable |
|------------------------------------------------------------|----------------|

|                             |       |
|-----------------------------|-------|
| VOC content<br>(2010/75/EC) | < 3 % |
|-----------------------------|-------|

**15.2. Chemical safety assessment**

A chemical safety assessment has been carried out.

## SECTION 16: Other information

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

H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
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.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

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

### Further information:

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