

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

Page 1 of 23

LOCTITE AA 326 known as Loctite 326

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

#### 1.1. Product identifier

LOCTITE AA 326 known as Loctite 326

**1.2. Relevant identified uses of the substance or mixture and uses advised against** Intended use: Acrylic Adhesive

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

Henkel Ltd Adhesives Wood Lane End HP2 4RQ Hemel Hempstead

Great Britain

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

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website https://mysds.henkel.com/index.html#/appSelection or 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                               | 2-Hydroxyethyl methacrylate   |
|  | Hydroxypropyl methacrylate<br>Acrylic acid  |
|  | Acetic acid, 2-phenylhydrazide  |
| Signal word:                           | Warning   |
| Hazard statement:                      | <ul> <li>H315 Causes skin irritation.</li> <li>H317 May cause an allergic skin reaction.</li> <li>H319 Causes serious eye irritation.</li> <li>H335 May cause respiratory irritation.</li> <li>H412 Harmful to aquatic life with long lasting effects.</li> </ul> |
| 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:<br>Prevention | <ul><li>P273 Avoid release to the environment.</li><li>P280 Wear protective gloves.</li><li>P261 Avoid breathing vapors.</li></ul>  |
| Precautionary statement:<br>Response   | P333+P313 If skin irritation or rash occurs: Get medical advice/attention.<br>P337+P313 If eye irritation persists: Get medical advice/attention.<br>P302+P352 IF ON SKIN: Wash with plenty of soap and water.  |

2.3. Other hazardsNone if used properly.Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

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

3.2. Mixtures

General chemical description: Acrylate adhesive

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

| Hazardous components<br>CAS-No.            | EC Number<br>REACH-Reg No.    | content   | Classification   |
|--|-------------------------------|-----------|--|
| 2-Hydroxyethyl methacrylate<br>868-77-9    | 212-782-2<br>01-2119490169-29 | 20- 40 %  | Skin Irrit. 2<br>H315<br>Skin Sens. 1<br>H317<br>Eye Irrit. 2<br>H319  |
| Isobornyl methacrylate<br>7534-94-3        | 231-403-1<br>01-2119886505-27 | 10- 20 %  | Aquatic Chronic 3<br>H412  |
| Hydroxypropyl methacrylate<br>27813-02-1   | 248-666-3<br>01-2119490226-37 | 1-< 5 %   | Skin Sens. 1<br>H317<br>Eye Irrit. 2<br>H319   |
| Acrylic acid<br>79-10-7                    | 201-177-9<br>01-2119452449-31 | 1-< 3%    | Acute Tox. 4; Dermal<br>H312<br>Skin Corr. 1A<br>H314<br>Flam. Liq. 3<br>H226<br>Acute Tox. 4; Oral<br>H302<br>Acute Tox. 4; Inhalation<br>H332<br>Aquatic Acute 1<br>H400<br>Aquatic Chronic 2<br>H411<br>STOT SE 3<br>H335 |
| Cumene hydroperoxide<br>80-15-9            | 201-254-7<br>01-2119475796-19 | 0,1-< 1 % | STOT RE 2<br>H373<br>Skin Corr. 1B<br>H314<br>Acute Tox. 2; Inhalation<br>H330<br>Aquatic Chronic 2<br>H411<br>Acute Tox. 4; Oral<br>H302<br>Acute Tox. 4; Dermal<br>H312<br>Org. Perox. E<br>H242<br>STOT SE 3<br>H335      |
| methacrylic acid<br>79-41-4                | 201-204-4<br>01-2119463884-26 | 0,1-< 1 % | Acute Tox. 4; Oral<br>H302<br>Acute Tox. 3; Dermal<br>H311<br>Acute Tox. 4; Inhalation<br>H332<br>Skin Corr. 1A<br>H314<br>Eye Dam. 1<br>H318<br>STOT SE 3<br>H335   |
| Acetic acid, 2-phenylhydrazide<br>114-83-0 | 204-055-3                     | 0,1-< 1%  | Acute Tox. 3; Oral<br>H301<br>Skin Irrit. 2<br>H315<br>Skin Sens. 1<br>H317<br>Eye Irrit. 2<br>H319<br>STOT SE 3; Inhalation<br>H335<br>Carc. 2<br>H351  |

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

#### Substances without classification may have community workplace exposure limits available.

# **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

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

Skin contact: Rinse with running water and soap. Obtain medical attention if irritation persists.

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

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

**4.2. Most important symptoms and effects, both acute and delayed** SKIN: Redness, inflammation.

SKIN: Rash, Urticaria.

EYE: Irritation, conjunctivitis.

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

**4.3. Indication of any immediate medical attention and special treatment needed** See section: Description of first aid measures

#### **SECTION 5: Firefighting measures**

**5.1. Extinguishing media Suitable extinguishing media:** 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 (CO2) and nitrogen oxides (NOx) 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.

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

Dispose of contaminated material as waste according to Section 13. For small spills wipe up with paper towel and place in container for disposal. For large spills absorb onto inert absorbent material and place in sealed container for disposal.

#### 6.4. Reference to other sections

See advice in section 8

# **SECTION 7: Handling and storage**

**7.1. Precautions for safe handling** Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

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

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

Ensure good ventilation/extraction. Refer to Technical Data Sheet

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

# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

# **Occupational Exposure Limits**

Valid for

Great Britain

| Ingredient [Regulated substance]                                 | ррт | mg/m <sup>3</sup> | Value type                           | Short term exposure limit category / Remarks | Regulatory list |
|--|-----|-------------------|--------------------------------------|--|-----------------|
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID (PROP-2-ENOIC<br>ACID)] | 10  | 29                | Time Weighted Average<br>(TWA):      | Indicative                                   | ECTLV           |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID (PROP-2-ENOIC<br>ACID)] | 20  | 59                | Short Term Exposure<br>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<br>Limit (STEL): | 1 minute                                     | 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<br>Limit (STEL): | 15 minutes                                   | EH40 WEL        |

# **Occupational Exposure Limits**

#### Valid for

#### Ireland

| Ingredient [Regulated substance]                                 | ppm | mg/m <sup>3</sup> | Value type                           | Short term exposure limit<br>category / Remarks | Regulatory list |
|--|-----|-------------------|--------------------------------------|---|-----------------|
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID (PROP-2-ENOIC<br>ACID)] | 10  | 29                | Time Weighted Average (TWA):         | Indicative                                      | ECTLV           |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID (PROP-2-ENOIC<br>ACID)] | 20  | 59                | Short Term Exposure<br>Limit (STEL): | Indicative                                      | ECTLV           |
| Acrylic acid<br>79-10-7<br>[ACRYLIC ACID]                        | 20  | 59                | Short Term Exposure<br>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          |
| Methacrylic acid<br>79-41-4<br>[METHACRYLIC ACID]                | 20  | 70                | Time Weighted Average (TWA):         |   | IR_OEL          |
| Methacrylic acid<br>79-41-4<br>[METHACRYLIC ACID]                | 40  | 140               | Short Term Exposure<br>Limit (STEL): | 15 minutes                                      | IR_OEL          |

# Predicted No-Effect Concentration (PNEC):

| Name on list                               | Environmental<br>Compartment   | Exposure<br>period | Value                                   |     |            |        | Remarks              |
|--|--------------------------------|--------------------|---|-----|------------|--------|----------------------|
|  |                                | periou             | mg/l                                    | ppm | mg/kg      | others |                      |
| 2-Hydroxyethyl methacrylate                | aqua                           |                    | 0,482 mg/l                              |     |            |        |                      |
| 868-77-9<br>2-Hydroxyethyl methacrylate    | (freshwater)<br>aqua (marine   |                    | 0,482 mg/l                              |     |            |        |                      |
| 868-77-9                                   | water)                         |                    | 0, <del>4</del> 02 mg/1                 |     |            |        |                      |
| 2-Hydroxyethyl methacrylate                | sewage                         |                    | 10 mg/l                                 |     |            |        |                      |
| 868-77-9                                   | treatment plant (STP)          |                    |   |     |            |        |                      |
| 2-Hydroxyethyl methacrylate                | aqua                           |                    | 1 mg/l                                  |     |            |        |                      |
| 868-77-9                                   | (intermittent releases)        |                    |   |     |            |        |                      |
| 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      |        |                      |
| 2-Hydroxyethyl methacrylate                | Predator                       |                    |   |     | mg/kg      |        | no potential for     |
| 868-77-9                                   |                                |                    |   |     |            |        | bioaccumulation      |
| 2-Hydroxyethyl methacrylate<br>868-77-9    | Marine water -<br>intermittent |                    | 1 mg/l                                  |     |            |        |                      |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl | aqua<br>(frachwater)           |                    | 4,66 µg/l                               |     |            |        |                      |
| methacrylate<br>7534-94-3                  | (freshwater)                   |                    |   |     |            |        |                      |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl | Soil                           |                    |   |     | 0,118      |        |                      |
| methacrylate<br>7534-94-3                  |                                |                    |   |     | mg/kg      |        |                      |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl | sewage                         |                    | 2,45 mg/l                               |     |            |        |                      |
| methacrylate<br>7534-94-3                  | treatment plant<br>(STP)       |                    |   |     |            |        |                      |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl | sediment                       |                    |   |     | 0,604      |        |                      |
| methacrylate<br>7534-94-3                  | (freshwater)                   |                    |   |     | mg/kg      |        |                      |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl | aqua                           |                    | 0,0179                                  |     |            |        |                      |
| methacrylate<br>7534-94-3                  | (intermittent releases)        |                    | mg/l                                    |     |            |        |                      |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl | aqua (marine                   |                    | 0,000466                                |     |            |        |                      |
| methacrylate<br>7534-94-3                  | water)                         |                    | mg/l                                    |     |            |        |                      |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl | sediment                       |                    |   |     | 0,06 mg/kg |        |                      |
| methacrylate<br>7534-94-3                  | (marine water)                 |                    |   |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | aqua                           |                    | 0,904 mg/l                              |     |            |        |                      |
| 1,2-diol<br>27813-02-1                     | (freshwater)                   |                    |   |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | aqua (marine                   |                    | 0,904 mg/l                              |     |            |        |                      |
| 1,2-diol<br>27813-02-1                     | water)                         |                    | •,, • • • • • • • • • • • • • • • • • • |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | sewage                         |                    | 10 mg/l                                 |     |            |        |                      |
| 1,2-diol<br>27813-02-1                     | treatment plant<br>(STP)       |                    |   |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | aqua                           |                    | 0,972 mg/l                              |     |            |        |                      |
| 1,2-diol<br>27813-02-1                     | (intermittent releases)        |                    |   |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | sediment                       |                    |   |     | 6,28 mg/kg |        |                      |
| 1,2-diol<br>27813-02-1                     | (freshwater)                   |                    |   |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | sediment                       |                    |   |     | 6,28 mg/kg |        |                      |
| 1,2-diol<br>27813-02-1                     | (marine water)                 |                    |   |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | Soil                           |                    |   |     | 0,727      |        |                      |
| 1,2-diol<br>27813-02-1                     |                                |                    |   |     | mg/kg      |        |                      |
| Methacrylic acid, monoester with propane-  | Marine water -                 |                    | 0,972 mg/l                              |     |            |        |                      |
| 1,2-diol<br>27813-02-1                     | intermittent                   |                    |   |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | Air                            |                    |   |     |            |        | no hazard identified |
| 1,2-diol<br>27813-02-1                     |                                |                    |   |     |            |        |                      |
| Methacrylic acid, monoester with propane-  | Predator                       |                    |   |     |            |        | no potential for     |
| 1,2-diol                                   |                                |                    |   | 1   |            |        | bioaccumulation      |

| 27813-02-1                   | 1                 |            | 1 1       | I                    |
|------------------------------|-------------------|------------|-----------|----------------------|
| Acrylic acid                 | aqua              | 0,003 mg/1 |           |                      |
| 79-10-7                      | (freshwater)      | 0,005 mg 1 |           |                      |
| Acrylic acid                 | aqua (marine      | 0,0003     |           |                      |
| 79-10-7                      | water)            | mg/l       |           |                      |
| Acrylic acid                 | sewage            | 0,9 mg/l   |           |                      |
| 79-10-7                      | treatment plant   | 0,9 mg/1   |           |                      |
|                              | (STP)             |            |           |                      |
| Acrylic acid                 | sediment          |            | 0,0236    |                      |
| 79-10-7                      | (freshwater)      |            | mg/kg     |                      |
| Acrylic acid                 | sediment          |            | 0,00236   |                      |
| 79-10-7                      | (marine water)    |            | mg/kg     |                      |
| Acrylic acid                 | Soil              |            | 1 mg/kg   |                      |
| 79-10-7                      |                   |            | 8 8       |                      |
| Acrylic acid                 | oral              |            | 0,03 g/kg |                      |
| 79-10-7                      | orui              |            | 0,00 6,10 |                      |
| Acrylic acid                 | Air               |            |           | no hazard identified |
| 79-10-7                      | All               |            |           | no nazaru identined  |
|                              |                   | 0.0021     |           |                      |
| .alpha.,.alphaDimethylbenzyl | aqua              | 0,0031     |           |                      |
| hydroperoxide                | (freshwater)      | mg/l       |           |                      |
| 80-15-9                      |                   |            |           |                      |
| .alpha.,.alphaDimethylbenzyl | aqua (marine      | 0,00031    |           |                      |
| hydroperoxide                | water)            | mg/l       |           |                      |
| 80-15-9                      |                   |            |           |                      |
| .alpha.,.alphaDimethylbenzyl | aqua              | 0,031 mg/l |           |                      |
| hydroperoxide                | (intermittent     | _          |           |                      |
| 80-15-9                      | releases)         |            |           |                      |
| .alpha.,.alphaDimethylbenzyl | Sewage            | 0,35 mg/l  |           |                      |
| hydroperoxide                | treatment plant   | -,         |           |                      |
| 80-15-9                      | u cualicité plane |            |           |                      |
| .alpha.,.alphaDimethylbenzyl | sediment          |            | 0.023     |                      |
| hydroperoxide                | (freshwater)      |            | mg/kg     |                      |
| 80-15-9                      | (iresitwater)     |            | IIIg/ Kg  |                      |
| .alpha.,.alphaDimethylbenzyl | sediment          |            | 0,0023    |                      |
| hydroperoxide                | (marine water)    |            | mg/kg     |                      |
| 80-15-9                      | (marme water)     |            | mg/kg     |                      |
|                              | 0.1               |            | 0.0000    |                      |
| .alpha.,.alphaDimethylbenzyl | Soil              |            | 0,0029    |                      |
| hydroperoxide                |                   |            | mg/kg     |                      |
| 80-15-9                      |                   |            |           |                      |
| methacrylic acid             | aqua              | 0,82 mg/l  |           |                      |
| 79-41-4                      | (freshwater)      |            |           |                      |
| methacrylic acid             | aqua (marine      | 0,82 mg/l  |           |                      |
| 79-41-4                      | water)            |            |           |                      |
| methacrylic acid             | sewage            | 10 mg/l    |           |                      |
| 79-41-4                      | treatment plant   |            |           |                      |
|                              | (STP)             |            |           |                      |
| methacrylic acid             | aqua              | 0,82 mg/l  |           |                      |
| 79-41-4                      | (intermittent     |            |           |                      |
|                              | releases)         |            |           |                      |
| methacrylic acid             | Soil              |            | 1,2 mg/kg |                      |
| 79-41-4                      | Son               |            | 1,2       |                      |
| / /-==1====                  | 1                 |            |           |                      |

# Derived No-Effect Level (DNEL):

| Name on list  | Application<br>Area | Route of<br>Exposure | Health Effect                                   | Exposure<br>Time | Value       | Remarks                             |
|---|---------------------|----------------------|---|------------------|-------------|-------------------------------------|
| 2-Hydroxyethyl methacrylate<br>868-77-9                                 | Workers             | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 1,3 mg/kg   | no potential for<br>bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                                 | Workers             | Inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 4,9 mg/m3   | no potential for<br>bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                                 | General population  | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 0,83 mg/kg  | no potential for<br>bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                                 | General population  | Inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 2,9 mg/m3   | no potential for<br>bioaccumulation |
| 2-Hydroxyethyl methacrylate<br>868-77-9                                 | General population  | oral                 | Long term<br>exposure -<br>systemic effects     |                  | 0,83 mg/kg  | no potential for<br>bioaccumulation |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl<br>methacrylate<br>7534-94-3 | Workers             | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 1,04 mg/kg  |                                     |
| Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl<br>methacrylate<br>7534-94-3 | General population  | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 0,625 mg/kg |                                     |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1     | Workers             | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 4,2 mg/kg   | no hazard identified                |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1     | Workers             | Inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 14,7 mg/m3  | no hazard identified                |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1     | General population  | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 2,5 mg/kg   | no hazard identified                |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1     | General population  | Inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 8,8 mg/m3   | no hazard identified                |
| Methacrylic acid, monoester with propane-<br>1,2-diol<br>27813-02-1     | General population  | oral                 | Long term<br>exposure -<br>systemic effects     |                  | 2,5 mg/kg   | no hazard identified                |
| Acrylic acid<br>79-10-7   | Workers             | inhalation           | Long term<br>exposure - local<br>effects        |                  | 30 mg/m3    | no hazard identified                |
| Acrylic acid<br>79-10-7   | Workers             | inhalation           | Acute/short term<br>exposure - local<br>effects |                  | 30 mg/m3    | no hazard identified                |
| 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 population  | dermal               | Acute/short term<br>exposure - local<br>effects |                  | 1 mg/cm2    | no hazard identified                |
| Acrylic acid<br>79-10-7   | General population  | inhalation           | Acute/short term<br>exposure - local<br>effects |                  | 3,6 mg/m3   | no hazard identified                |
| Acrylic acid<br>79-10-7   | General population  | inhalation           | Long term<br>exposure - local<br>effects        |                  | 3,6 mg/m3   | no hazard identified                |
| .alphaalphaDimethylbenzyl<br>hydroperoxide<br>80-15-9                   | Workers             | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 6 mg/m3     |                                     |
| methacrylic acid<br>79-41-4   | Workers             | Inhalation           | Long term<br>exposure - local<br>effects        |                  | 88 mg/m3    |                                     |
| methacrylic acid<br>79-41-4   | Workers             | Inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 29,6 mg/m3  |                                     |
| methacrylic acid<br>79-41-4   | Workers             | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 4,25 mg/kg  |                                     |
| methacrylic acid<br>79-41-4   | General population  | Inhalation           | Long term<br>exposure - local<br>effects        |                  | 6,55 mg/m3  |                                     |
| methacrylic acid<br>79-41-4   | General population  | Inhalation           | Long term<br>exposure -                         |                  | 6,3 mg/m3   |                                     |

|                             |                    | systemic effects                            |            |  |
|-----------------------------|--------------------|---|------------|--|
| methacrylic acid<br>79-41-4 | General population | Long term<br>exposure -<br>systemic effects | 2,55 mg/kg |  |

#### **Biological Exposure Indices:**

None

#### 8.2. Exposure controls:

Engineering controls: Ensure good ventilation/extraction.

Respiratory protection:

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

Hand protection:

Chemical-resistant protective gloves (EN 374).

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

nitrile rubber (NBR; >= 0.4 mm thickness)

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

nitrile rubber (NBR; >= 0.4 mm thickness)

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

Eye protection:

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

Skin protection: Wear suitable protective clothing. Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

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

#### **SECTION 9: Physical and chemical properties**

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

Odor Odour threshold

pH Melting point Solidification temperature Initial boiling point Flash point Evaporation rate Flammability liquid transparent Amber no valuation No data available / Not applicable

Mixture reacts with water. No data available / Not applicable No data available / Not applicable > 149,0 °C (> 300.2 °F) > 93,3 °C (> 199.94 °F); Tagliabue closed cup No data available / Not applicable No data available / Not applicable

| Explosive limits<br>Vapour pressure    | No data available / Not applicable < 13 mbar |
|--|--|
| (26,6 °C (79.9 °F))                    |  |
| Relative vapour density:               | No data available / Not applicable           |
| Density                                | 1,0 g/cm3                                    |
| 0                                      |  |
| Bulk density                           | No data available / Not applicable           |
| Solubility                             | No data available / Not applicable           |
| Solubility (qualitative)               | Slight                                       |
| (Solvent: Water)                       |  |
| Partition coefficient: n-octanol/water | No data available / Not applicable           |
| Auto-ignition temperature              | No data available / Not applicable           |
| Decomposition temperature              | No data available / Not applicable           |
| Viscosity                              | No data available / Not applicable           |
| Viscosity (kinematic)                  | No data available / Not applicable           |
| Explosive properties                   | No data available / Not applicable           |
| Oxidising properties                   | No data available / Not applicable           |
|  |  |

#### 9.2. Other information

No data available / Not applicable

# **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Reacts with 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 toxicological effects**

# Acute oral toxicity:

| Hazardous substances<br>CAS-No.                | Value<br>type | Value         | Species | Method   |
|--|---------------|---------------|---------|--|
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9     | LD50          | 5.564 mg/kg   | rat     | FDA Guideline  |
| Isobornyl methacrylate 7534-94-3               | LD50          | 3.160 mg/kg   | rat     | not specified  |
| Hydroxypropyl<br>methacrylate<br>27813-02-1    | LD50          | > 2.000 mg/kg | rat     | OECD Guideline 401 (Acute Oral Toxicity)                             |
| Acrylic acid<br>79-10-7                        | LD50          | 1.500 mg/kg   | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral<br>Toxicity) |
| Cumene hydroperoxide 80-15-9                   | LD50          | 382 mg/kg     | rat     | other guideline:   |
| methacrylic acid<br>79-41-4                    | LD50          | 1.320 mg/kg   | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral<br>Toxicity) |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0 | LD50          | 270 mg/kg     | rat     | not specified  |

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

# Acute dermal toxicity:

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

| Hazardous substances   | Value         | Value         | Species | Method                                     |
|------------------------|---------------|---------------|---------|--|
| CAS-No.                | type          |               | -       |  |
| 2-Hydroxyethyl         | LD50          | > 5.000 mg/kg | rabbit  | not specified                              |
| methacrylate           |               |               |         |  |
| 868-77-9               |               |               |         |  |
| Isobornyl methacrylate | LD50          | > 3.000 mg/kg | rabbit  | not specified                              |
| 7534-94-3              |               |               |         |  |
| Hydroxypropyl          | LD50          | > 5.000 mg/kg | rabbit  | not specified                              |
| methacrylate           |               |               |         |  |
| 27813-02-1             |               | 1 100 1       |         |  |
| Acrylic acid           | Acute         | 1.100 mg/kg   |         | Expert judgement                           |
| 79-10-7                | toxicity      |               |         |  |
|                        | estimate      |               |         |  |
| Acrylic acid           | (ATE)<br>LD50 | > 2.000 mg/kg | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity) |
| 79-10-7                | LD30          | > 2.000 mg/kg | rabbit  | OECD Guideline 402 (Acute Dennar Toxicity) |
| Cumene hydroperoxide   | Acute         | 1.100 mg/kg   | -       | Expert judgement                           |
| 80-15-9                | toxicity      | 1.100 mg/kg   |         | Expert judgement                           |
| 80-13-9                | estimate      |               |         |  |
|                        | (ATE)         |               |         |  |
| methacrylic acid       | LD50          | 500 - 1.000   | rabbit  | Dermal Toxicity Screening                  |
| 79-41-4                | 0             | mg/kg         |         |  |
| methacrylic acid       | Acute         | 500 mg/kg     | 1       | Expert judgement                           |
| 79-41-4                | toxicity      | 0.0           |         |  |
|                        | estimate      |               |         |  |
|                        | (ATE)         |               |         |  |

#### Acute inhalative toxicity:

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

| Hazardous substances         | Value                                  | Value      | Test atmosphere | Exposure | Species | Method  |
|------------------------------|--|------------|-----------------|----------|---------|---|
| CAS-No.                      | type                                   |            |                 | time     |         |   |
| 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  |
| Cumene hydroperoxide 80-15-9 | LC50                                   | 1,370 mg/l | vapour          | 4 h      | rat     | not specified   |
| methacrylic acid<br>79-41-4  | LC50                                   | > 3,6 mg/l | dust/mist       | 4 h      | rat     | OECD Guideline 403 (Acute<br>Inhalation Toxicity)                             |
| methacrylic acid<br>79-41-4  | Acute<br>toxicity<br>estimate<br>(ATE) | 3,61 mg/l  |                 |          |         | 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  |
| Isobornyl methacrylate<br>7534-94-3         | mildly<br>irritating      |                  | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | not irritating            | 24 h             | rabbit  | Draize Test  |
| Acrylic acid<br>79-10-7                     | Category 1<br>(corrosive) | 3 min            | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Cumene hydroperoxide 80-15-9                | corrosive                 |                  | rabbit  | Draize Test  |
| methacrylic acid<br>79-41-4                 | corrosive                 | 3 min            | 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<br>methacrylate<br>868-77-9  | Category 2B<br>(mildly<br>irritating to<br>eyes)      |                  | rabbit  | Draize Test |  |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | Category 2B<br>(mildly<br>irritating to<br>eyes)      |                  | rabbit  | Draize Test |  |
| Acrylic acid<br>79-10-7                     | Category 1<br>(irreversible<br>effects on the<br>eye) |                  | rabbit  | BASF Test   |  |
| methacrylic acid<br>79-41-4                 | corrosive   |                  | rabbit  | Draize Test |  |

# Respiratory or skin sensitization:

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

| Hazardous substances<br>CAS-No.             | Result          | Test type                             | Species    | Method   |
|---|-----------------|---------------------------------------|------------|--|
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9  | not sensitising | Buehler test                          | guinea pig | Buehler test   |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9  | sensitising     | Guinea pig maximisation test          | guinea pig | Magnusson and Kligman Method   |
| Isobornyl methacrylate<br>7534-94-3         | not sensitising | Guinea pig maximisation test          | guinea pig | OECD Guideline 406 (Skin Sensitisation)  |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | not sensitising | Mouse local lymphnode<br>assay (LLNA) | mouse      | equivalent or similar to OECD Guideline<br>429 (Skin Sensitisation: Local Lymph<br>Node Assay) |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | sensitising     | Guinea pig maximisation test          | guinea pig | not specified  |
| 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   |
| methacrylic acid<br>79-41-4                 | not sensitising | Buehler test                          | guinea pig | equivalent or similar to OECD Guideline<br>406 (Skin Sensitisation)                            |

# Germ cell mutagenicity:

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

| Hazardous substances<br>CAS-No.             | Result   | Type of study /<br>Route of<br>administration   | Metabolic<br>activation /<br>Exposure time | Species | Method  |
|---|----------|---|--|---------|---|
| 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)   |
| Isobornyl methacrylate<br>7534-94-3         | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| Isobornyl methacrylate<br>7534-94-3         | negative |   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| Isobornyl methacrylate<br>7534-94-3         | negative | in vitro mammalian<br>chromosome<br>aberration test   | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)  |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | positive | in vitro mammalian<br>chromosome<br>aberration test   | with and without                           |         | Chromosome Aberration Test  |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | negative | mammalian cell<br>gene mutation assay   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| 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 |
| Cumene hydroperoxide<br>80-15-9             | positive | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | without                                    |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| 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)  |

# 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<br>time /<br>Frequency<br>of treatment | Species | Sex         | Method  |
|---|------------------|-------------------------|---|---------|-------------|---|
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9  | not carcinogenic | inhalation              | 2 y<br>6 h/d, 5 d/w                             | rat     | female      | equivalent or similar<br>OECD Guideline 451<br>(Carcinogenicity<br>Studies) |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9  | not carcinogenic | inhalation              | 2 y<br>6 h/d, 5 d/w                             | rat     | male        | equivalent or similar<br>OECD Guideline 451<br>(Carcinogenicity<br>Studies) |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | not carcinogenic | inhalation              | 2 y<br>6 h/d, 5 d/w                             | rat     | male        | equivalent or similar<br>OECD Guideline 451<br>(Carcinogenicity<br>Studies) |
| Acrylic acid<br>79-10-7                     | not carcinogenic | oral: drinking<br>water | 26 - 28 m<br>continuously                       | rat     | male/female | OECD Guideline 451<br>(Carcinogenicity<br>Studies)                          |
| Acrylic acid<br>79-10-7                     | not carcinogenic | dermal                  | 21 m<br>3 times/w                               | mouse   | male/female | not specified   |
| methacrylic acid<br>79-41-4                 | not carcinogenic | inhalation              | 2 y   | mouse   | male/female | OECD Guideline 451<br>(Carcinogenicity<br>Studies)                          |

#### **Reproductive toxicity:**

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

| Hazardous substances<br>CAS-No.             | Result / Value   | Test type                   | Route of 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)  |
| Isobornyl methacrylate<br>7534-94-3         | NOAEL P 25 mg/kg<br>NOAEL F1 500 mg/kg                       |                             | oral: gavage               | rat     | OECD Guideline 421<br>(Reproduction /<br>Developmental Toxicity<br>Screening Test)  |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | NOAEL P 300 mg/kg<br>NOAEL F1 1.000 mg/kg                    | screening                   | oral: gavage               | rat     | OECD Guideline 422<br>(Combined Repeated Dose<br>Toxicity Study with the<br>Reproduction /<br>Developmental Toxicity<br>Screening Test) |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | NOAEL P 400 mg/kg<br>NOAEL F1 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)  |
| 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)  |

#### STOT-single exposure:

No data available.

# Page 17 of 23

# 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 application       | Exposure time /<br>Frequency of<br>treatment | Species | Method  |
|---|------------------|----------------------------|--|---------|---|
| 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)   |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | NOAEL 300 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) |
| Hydroxypropyl<br>methacrylate<br>27813-02-1 | 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)   |
| 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)   |
| Cumene hydroperoxide 80-15-9                |                  | inhalation:<br>aerosol     | 6 h/d<br>5 d/w                               | rat     | not specified   |
| 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)   |

# Aspiration hazard:

No data available.

# **SECTION 12: Ecological information**

#### General ecological information:

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

#### 12.1. Toxicity

#### Toxicity (Fish):

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

| Hazardous substances        | Value | Value        | Exposure time | Species                    | Method                          |
|-----------------------------|-------|--------------|---------------|----------------------------|---------------------------------|
| CAS-No.                     | type  |              |               |                            |                                 |
| 2-Hydroxyethyl methacrylate | LC50  | > 100 mg/l   | 96 h          | Oryzias latipes            | OECD Guideline 203 (Fish,       |
| 868-77-9                    |       |              |               |                            | Acute Toxicity Test)            |
| Isobornyl methacrylate      | LC50  | 1,79 mg/l    | 96 h          | Danio rerio                | OECD Guideline 203 (Fish,       |
| 7534-94-3                   |       |              |               |                            | Acute Toxicity Test)            |
| Hydroxypropyl methacrylate  | LC50  | 493 mg/l     | 48 h          | Leuciscus idus melanotus   | DIN 38412-15                    |
| 27813-02-1                  |       |              |               |                            |                                 |
| Acrylic acid                | LC50  | 27 mg/l      | 96 h          | Salmo gairdneri (new name: | EPA OTS 797.1400 (Fish          |
| 79-10-7                     |       |              |               | Oncorhynchus mykiss)       | Acute Toxicity Test)            |
| Acrylic acid                | NOEC  | >= 10,1 mg/l | 45 d          | Oryzias latipes            | OECD Guideline 210 (fish        |
| 79-10-7                     |       |              |               |                            | early lite stage toxicity test) |
| Cumene hydroperoxide        | LC50  | 3,9 mg/l     | 96 h          | Oncorhynchus mykiss        | OECD Guideline 203 (Fish,       |
| 80-15-9                     |       |              |               |                            | Acute Toxicity Test)            |
| methacrylic acid            | LC50  | 85 mg/l      | 96 h          | Salmo gairdneri (new name: | EPA OTS 797.1400 (Fish          |
| 79-41-4                     |       |              |               | Oncorhynchus mykiss)       | Acute Toxicity Test)            |

#### Toxicity (Daphnia):

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

| Hazardous substances<br>CAS-No.          | Value<br>type | Value       | Exposure time | Species       | Method  |
|--|---------------|-------------|---------------|---------------|---|
| 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)                          |
| Isobornyl methacrylate<br>7534-94-3      | EC50          | > 2,57 mg/l | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test)                          |
| Hydroxypropyl methacrylate<br>27813-02-1 | EC50          | > 143 mg/l  | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test)                          |
| Acrylic acid<br>79-10-7                  | EC50          | 95 mg/l     | 48 h          | Daphnia magna | EPA OTS 797.1300<br>(Aquatic Invertebrate Acute<br>Toxicity Test, Freshwater<br>Daphnids) |
| Cumene hydroperoxide<br>80-15-9          | EC50          | 18,84 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) |

#### Chronic toxicity to aquatic invertebrates

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

| Hazardous substances<br>CAS-No.         | Value<br>type | Value      | Exposure time | Species       | Method   |
|---|---------------|------------|---------------|---------------|--|
| 2-Hydroxyethyl methacrylate<br>868-77-9 | NOEC          | 24,1 mg/l  | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test)            |
| Isobornyl methacrylate<br>7534-94-3     | NOEC          | 0,233 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia<br>magna, Reproduction Test)         |
| Hydroxypropyl methacrylate 27813-02-1   | NOEC          | 45,2 mg/l  | 21 d          | Daphnia magna | OECD 211 (Daphnia<br>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<br>Test) |

# Toxicity (Algae):

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

| Hazardous substances<br>CAS-No.         | Value<br>type | Value       | Exposure time | Species   | Method   |
|---|---------------|-------------|---------------|---|--|
| 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) |
| Isobornyl methacrylate<br>7534-94-3     | EC50          | 2,66 mg/l   | 96 h          | Pseudokirchneriella subcapitata   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Isobornyl methacrylate<br>7534-94-3     | NOEC          | 0,254 mg/l  | 96 h          | Pseudokirchneriella subcapitata   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Hydroxypropyl methacrylate 27813-02-1   | EC50          | > 97,2 mg/l | 72 h          | Pseudokirchneriella subcapitata   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Hydroxypropyl methacrylate 27813-02-1   | NOEC          | > 97,2 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 name: Desmodesmus 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 name: Desmodesmus subspicatus)                 | EU Method C.3 (Algal<br>Inhibition test)             |
| Cumene hydroperoxide<br>80-15-9         | EC50          | 3,1 mg/l    | 72 h          | Desmodesmus subspicatus<br>(reported as Scenedesmus<br>subspicatus)         | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Cumene hydroperoxide<br>80-15-9         | NOEC          | 1 mg/l      | 72 h          | Desmodesmus subspicatus<br>(reported as Scenedesmus<br>subspicatus)         | OECD Guideline 201 (Alga,<br>Growth 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) |

# Toxicity to microorganisms

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

| Hazardous substances<br>CAS-No.         | Value<br>type | Value        | Exposure time | Species                    | Method  |
|---|---------------|--------------|---------------|----------------------------|---|
| 2-Hydroxyethyl methacrylate<br>868-77-9 | EC0           | > 3.000 mg/l | 16 h          | Pseudomonas fluorescens    | other guideline:  |
| Hydroxypropyl methacrylate 27813-02-1   | EC10          | 1.140 mg/l   | 16 h          |                            | not specified   |
| Acrylic acid<br>79-10-7                 | EC20          | 900 mg/l     | 30 min        | activated sludge, domestic | ISO 8192 (Test for<br>Inhibition of Oxygen<br>Consumption by Activated<br>Sludge) |
| Cumene hydroperoxide<br>80-15-9         | EC10          | 70 mg/l      | 30 min        |                            | not specified   |
| methacrylic acid<br>79-41-4             | EC10          | 100 mg/l     | 17 h          |                            | not specified   |

12.2. Persistence and degradability

| Hazardous substances<br>CAS-No.         | Result                     | Test type | Degradability | Exposure<br>time | Method   |
|---|----------------------------|-----------|---------------|------------------|--|
| 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))            |
| Isobornyl methacrylate<br>7534-94-3     | readily biodegradable      | aerobic   | 70 %          | 28 d             | OECD Guideline 310 (Ready<br>BiodegradabilityCO2 in Sealed<br>Vessels (Headspace Test) |
| Hydroxypropyl methacrylate 27813-02-1   | readily biodegradable      | aerobic   | 94,2 %        | 28 d             | OECD Guideline 301 E (Ready<br>biodegradability: Modified OECD<br>Screening Test)      |
| 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)                |
| Cumene hydroperoxide<br>80-15-9         | not readily biodegradable. | aerobic   | 3 %           | 28 d             | OECD Guideline 301 B (Ready<br>Biodegradability: CO2 Evolution<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)        |
| methacrylic acid<br>79-41-4             | readily biodegradable      | aerobic   | 86 %          | 28 d             | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)                |

# 12.3. Bioaccumulative potential

| Hazardous substances<br>CAS-No.     | Bioconcentratio<br>n factor (BCF) | Exposure time | Temperature | Species     | Method   |
|-------------------------------------|-----------------------------------|---------------|-------------|-------------|--|
| Isobornyl methacrylate<br>7534-94-3 | 37                                | 56 day        | 24 °C       | Danio rerio | OECD Guideline 305 E<br>(Bioaccumulation: Flow-through<br>Fish Test) |
| Acrylic acid<br>79-10-7             | 3,16                              |               |             |             | QSAR (Quantitative Structure<br>Activity Relationship)               |
| Cumene hydroperoxide<br>80-15-9     | 9,1                               |               |             | calculation | OECD Guideline 305<br>(Bioconcentration: Flow-through<br>Fish Test)  |

12.4. Mobility in soil

| Hazardous substances                           | LogPow | Temperature | Method   |
|--|--------|-------------|--|
| CAS-No.  | Ū.     | -           |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9        | 0,42   | 25 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Isobornyl methacrylate<br>7534-94-3            | 5,09   |             | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)        |
| Hydroxypropyl methacrylate 27813-02-1          | 0,97   | 20 °C       | not specified  |
| Acrylic acid<br>79-10-7                        | 0,46   | 25 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Cumene hydroperoxide<br>80-15-9                | 1,6    | 25 °C       | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)        |
| methacrylic acid<br>79-41-4                    | 0,93   | 22 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Acetic acid, 2-<br>phenylhydrazide<br>114-83-0 | 0,74   |             | not specified  |

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

| Hazardous substances        | PBT / vPvB   |
|-----------------------------|--|
| CAS-No.                     |  |
| 2-Hydroxyethyl methacrylate | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 868-77-9                    | Bioaccumulative (vPvB) criteria.   |
| Isobornyl methacrylate      | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 7534-94-3                   | Bioaccumulative (vPvB) criteria.   |
| Hydroxypropyl methacrylate  | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 27813-02-1                  | Bioaccumulative (vPvB) criteria.   |
| Acrylic acid                | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 79-10-7                     | Bioaccumulative (vPvB) criteria.   |
| Cumene hydroperoxide        | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 80-15-9                     | Bioaccumulative (vPvB) criteria.   |
| methacrylic acid            | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 79-41-4                     | Bioaccumulative (vPvB) criteria.   |

#### 12.6. Other adverse effects

No data available.

# **SECTION 13: Disposal considerations**

#### **13.1.** Waste treatment methods

Product disposal:

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

# Disposal of uncleaned packages:

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

Waste code

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

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

# **SECTION 14: Transport information**

| 14.1. | UN number                  |  |  |
|-------|----------------------------|--|--|
|       | ADR                        | Not dangerous goods                                  |  |
|       | RID                        | Not dangerous goods                                  |  |
|       | ADN                        | Not dangerous goods                                  |  |
|       | IMDG                       | Not dangerous goods                                  |  |
|       | IATA                       | Not dangerous goods                                  |  |
|       |                            | Tot dangerous goods                                  |  |
| 14.2. | UN proper shipping name    |  |  |
|       | ADR                        | Not dangerous goods                                  |  |
|       | RID                        | Not dangerous goods                                  |  |
|       | ADN                        | Not dangerous goods                                  |  |
|       | IMDG                       | Not dangerous goods                                  |  |
|       | IATA                       | Not dangerous goods                                  |  |
| 14.3. | Transport hazard class(es) |  |  |
|       | ADR                        | Not dangerous goods                                  |  |
|       | RID                        | e e  |  |
|       |                            | Not dangerous goods                                  |  |
|       | ADN                        | Not dangerous goods                                  |  |
|       | IMDG                       | Not dangerous goods                                  |  |
|       | IATA                       | Not dangerous goods                                  |  |
| 14.4. | Packing group              |  |  |
|       | ADR                        | Not dangerous goods                                  |  |
|       | RID                        | Not dangerous goods                                  |  |
|       | ADN                        | Not dangerous goods                                  |  |
|       | IMDG                       | Not dangerous goods                                  |  |
|       | IATA                       | Not dangerous goods                                  |  |
|       |                            |  |  |
| 14.5. | Environmental              | hazards  |  |
|       | ADR                        | not applicable                                       |  |
|       | RID                        | not applicable                                       |  |
|       | ADN                        | not applicable                                       |  |
|       | IMDG                       | not applicable                                       |  |
|       | IATA                       | not applicable                                       |  |
| 14.6. | Special precaut            | tions for user                                       |  |
|       |                            |  |  |
|       | ADR                        | not applicable                                       |  |
|       | RID                        | not applicable                                       |  |
|       | ADN                        | not applicable                                       |  |
|       | IMDG                       | not applicable                                       |  |
|       | IATA                       | not applicable                                       |  |
| 14.7. | Transport in b             | ulk according to Annex II of Marpol and the IBC Code |  |
|       | not applicable             |  |  |
|       |                            |  |  |
|       |                            |  |  |
|       |                            | SECTION 15. Degulatory information                   |  |

# **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): Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): Not applicable Not applicable Persistent organic pollutants (Regulation (EU) 2019/1021): Not applicable VOC content < 3,00 %

(2010/75/EC)

#### 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 vapor.

- H242 Heating may cause a fire.
- H301 Toxic if swallowed.

H302 Harmful if swallowed.

- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

- H319 Causes serious eye irritation. H330 Fatal if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

#### Further information:

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#### **Annex - Exposure Scenarios:**

Exposure Scenarios for 2-Hydroxyethyl methacrylate can be downloaded under the following link: https://mysds.henkel.com/index.html#/appSelection