



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

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LOCTITE 603

SDS No. : 642226
V004.0

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

1.1. Product identifier

LOCTITE 603

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

Intended use:

Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

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):

| | |
|---|------------|
| Serious eye damage | Category 1 |
| H318 Causes serious eye damage. | |
| Skin sensitizer | Category 1 |
| H317 May cause an allergic skin reaction. | |
| Specific target organ toxicity - single exposure | Category 3 |
| H335 May cause respiratory irritation. | |
| Target organ: respiratory tract irritation | |
| Chronic hazards to the aquatic environment | Category 3 |
| H412 Harmful to aquatic life with long lasting effects. | |
| Skin corrosion/irritation | Category 2 |
| H315 Causes skin irritation. | |

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Contains**

1-Methyltrimethylene dimethacrylate

Hydroxypropyl methacrylate
Acrylic acid

2,2'-Ethylenedioxydiethyl dimethacrylate

Acetic acid, 2-phenylhydrazide
methyl methacrylate**Signal word:**

Danger

Hazard statement:H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.**Precautionary statement:**

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

**Precautionary statement:
Prevention**P261 Avoid breathing vapors.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection.**Precautionary statement:
Response**P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.**2.3. Other hazards**None if used properly.
Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Non corrosive to skin in accordance with the in vitro test method, B40 skin corrosion - Human skin model assay, equivalent to test method OECD 431 or based on analogy to similar products tested.**Following substances are present in a concentration $\geq 0,1\%$ and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**This mixture does not contain any substances in concentration \geq the concentration limit 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 CAS-No. EC Number REACH-Reg No. | Concentration | Classification | Specific Conc. Limits, M-factors and ATEs | Add. Information |
|--|---------------|--|--|------------------|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 256-277-5 01-2120772061-63 | 25- 50 % | STOT SE 3, H335 Skin Irrit. 2, H315 Eye Irrit. 2, H319 | STOT SE 3; H335; C >= 10 % ===== oral:ATE = 2.001 mg/kg | |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 214-711-0 01-2119969461-31 | 10- 20 % | Skin Sens. 1B, H317 | | |
| Hydroxypropyl methacrylate 27813-02-1 248-666-3 01-2119490226-37 | 5- < 10 % | Skin Sens. 1, H317 Eye Irrit. 2, H319 | | |
| Acrylic acid 79-10-7 201-177-9 01-2119452449-31 | 5- < 10 % | Acute Tox. 4, Dermal, H312 Skin Corr. 1A, H314 Flam. Liq. 3, H226 Acute Tox. 4, Oral, H302 Acute Tox. 4, Inhalation, H332 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 STOT SE 3, H335 | STOT SE 3; H335; C >= 1 % ===== M acute = 1 ===== dermal:ATE = 1.100 mg/kg inhalation:ATE = 11 mg/l;vapour | EU OEL |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | 1- < 3 % | Skin Irrit. 2, H315 Acute Tox. 4, Oral, H302 Acute Tox. 4, Inhalation, H332 Aquatic Chronic 3, H412 Eye Dam. 1, H318 | oral:ATE = 413 mg/kg | |
| Cumene hydroperoxide 80-15-9 201-254-7 01-2119475796-19 | 0,1- < 1 % | STOT RE 2, H373 Skin Corr. 1B, H314 Acute Tox. 2, Inhalation, H330 Aquatic Chronic 2, H411 Acute Tox. 4, Oral, H302 Acute Tox. 4, Dermal, H312 Org. Perox. E, H242 STOT SE 3, H335 | Skin Corr. 1B; H314; C >= 10 % Eye Irrit. 2; H319; C 1 - < 3 % Skin Irrit. 2; H315; C 3 - < 10 % Eye Dam. 1; H318; C 3 - < 10 % STOT SE 3; H335; C < 10 % ===== dermal:ATE = 1.100 mg/kg | |
| 2,2'-Ethyleneedioxydiethyl dimethacrylate 109-16-0 203-652-6 01-2119969287-21 | 0,1- < 1 % | Skin Sens. 1B, H317 | dermal:ATE = > 5.000 mg/kg inhalation:ATE = 28,17 mg/l;dust/mist | |
| methacrylic acid 79-41-4 201-204-4 01-2119463884-26 | 0,1- < 1 % | Acute Tox. 4, Oral, H302 Acute Tox. 3, Dermal, H311 Acute Tox. 4, Inhalation, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 | STOT SE 3; H335; C >= 1 % ===== dermal:ATE = 500 mg/kg inhalation:ATE = 3,61 mg/l;dust/mist | |
| methyl methacrylate 80-62-6 201-297-1 01-2119452498-28 | 0,1- < 1 % | Flam. Liq. 2, H225 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317 | STOT SE 3; H335; C >= 10 % | EU OEL |
| Acetic acid, 2-phenylhydrazide 114-83-0 204-055-3 | 0,1- < 1 % | Acute Tox. 3, Oral, H301 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 STOT SE 3, Inhalation, H335 Carc. 2, 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.

Seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.

Seek medical advice.

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

SKIN: Rash, Urticaria.

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

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

SKIN: Redness, inflammation.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

None known

5.2. Special hazards arising from the substance or mixture

Oxides of carbon, oxides of nitrogen, irritating organic vapors.

Sulphur oxides

5.3. Advice for firefighters

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

Additional information:

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid skin and eye contact.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

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

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

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

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

Use only in well-ventilated areas.

Avoid skin and eye contact.

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

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry place.

Refer to Technical Data Sheet

7.3. Specific end use(s)

Adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

| Ingredient [Regulated substance] | ppm | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|---|-----|-------------------|-----------------------------------|--|-----------------|
| Acrylic acid 79-10-7 [ACRYLIC ACID (PROP-2-ENOIC ACID)] | 10 | 29 | Time Weighted Average (TWA): | Indicative | ECLTV |
| Acrylic acid 79-10-7 [ACRYLIC ACID (PROP-2-ENOIC ACID)] | 20 | 59 | Short Term Exposure Limit (STEL): | Indicative | ECLTV |
| Acrylic acid 79-10-7 [ACRYLIC ACID] | 10 | 29 | Time Weighted Average (TWA): | | EH40 WEL |
| Acrylic acid 79-10-7 [Acrylic acid] | 20 | 59 | Short Term Exposure Limit (STEL): | 1 minute | EH40 WEL |
| Methacrylic acid 79-41-4 [METHACRYLIC ACID] | 20 | 72 | Time Weighted Average (TWA): | | EH40 WEL |
| Methacrylic acid 79-41-4 [METHACRYLIC ACID] | 40 | 143 | Short Term Exposure Limit (STEL): | 15 minutes | EH40 WEL |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 50 | 208 | Time Weighted Average (TWA): | | EH40 WEL |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 100 | | Short Term Exposure Limit (STEL): | Indicative | ECLTV |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 50 | | Time Weighted Average (TWA): | Indicative | ECLTV |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 100 | 416 | Short Term Exposure Limit (STEL): | 15 minutes | EH40 WEL |

Occupational Exposure Limits

Valid for
Ireland

| Ingredient [Regulated substance] | ppm | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|---|-----|-------------------|-----------------------------------|--|-----------------|
| Acrylic acid 79-10-7 [ACRYLIC ACID (PROP-2-ENOIC ACID)] | 10 | 29 | Time Weighted Average (TWA): | Indicative | ECLTV |
| Acrylic acid 79-10-7 [ACRYLIC ACID (PROP-2-ENOIC ACID)] | 20 | 59 | Short Term Exposure Limit (STEL): | Indicative | ECLTV |
| Acrylic acid 79-10-7 [ACRYLIC ACID] | 20 | 59 | Short Term Exposure Limit (STEL): | 1 minute Indicative OELV | IR_OEL |
| Acrylic acid 79-10-7 [ACRYLIC ACID] | 10 | 29 | Time Weighted Average (TWA): | Indicative OELV | IR_OEL |
| Methacrylic acid 79-41-4 [METHACRYLIC ACID] | 20 | 70 | Time Weighted Average (TWA): | | IR_OEL |
| Methacrylic acid 79-41-4 [METHACRYLIC ACID] | 40 | 140 | Short Term Exposure Limit (STEL): | 15 minutes | IR_OEL |
| Methyl methacrylate 80-62-6 | 50 | | Time Weighted Average (TWA): | Indicative OELV | IR_OEL |

| | | | | | |
|---|-----|--|--------------------------------------|-------------------------------|--------|
| [METHYL METHACRYLATE] | | | | | |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 100 | | Short Term Exposure Limit (STEL): | Indicative | ECLTV |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 50 | | Time Weighted Average (TWA): | Indicative | ECLTV |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 100 | | Short Term Exposure Limit (STEL): | 15 minutes Indicative OELV | IR_OEL |

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|---|------------------------------|-----------------|--------------|-----|---------------|--------|----------------------------------|
| | | | mg/l | ppm | mg/kg | others | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | aqua (freshwater) | | 0,904 mg/l | | | | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | aqua (marine water) | | 0,904 mg/l | | | | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | sewage treatment plant (STP) | | 10 mg/l | | | | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | aqua (intermittent releases) | | 0,972 mg/l | | | | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | sediment (freshwater) | | | | 6,28 mg/kg | | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | sediment (marine water) | | | | 6,28 mg/kg | | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | Soil | | | | 0,727 mg/kg | | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | Marine water - intermittent | | 0,972 mg/l | | | | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | Air | | | | | | no hazard identified |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | Predator | | | | | | no potential for bioaccumulation |
| Acrylic acid 79-10-7 | aqua (freshwater) | | 0,003 mg/l | | | | |
| Acrylic acid 79-10-7 | aqua (marine water) | | 0,0003 mg/l | | | | |
| Acrylic acid 79-10-7 | sewage treatment plant (STP) | | 0,9 mg/l | | | | |
| Acrylic acid 79-10-7 | sediment (freshwater) | | | | 0,0236 mg/kg | | |
| Acrylic acid 79-10-7 | sediment (marine water) | | | | 0,00236 mg/kg | | |
| Acrylic acid 79-10-7 | Soil | | | | 1 mg/kg | | |
| Acrylic acid 79-10-7 | oral | | | | 0,03 g/kg | | |
| Acrylic acid 79-10-7 | Air | | | | | | no hazard identified |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | aqua (freshwater) | | 0,0031 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | aqua (intermittent releases) | | 0,031 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | aqua (marine water) | | 0,00031 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | sewage treatment plant (STP) | | 0,35 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | sediment (freshwater) | | | | 0,023 mg/kg | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | sediment (marine water) | | | | 0,0023 mg/kg | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | Soil | | | | 0,0029 mg/kg | | |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | aqua (freshwater) | | 0,164 mg/l | | | | |

| | | | | | | | |
|--|------------------------------|--|-------------|--|-------------|--|----------------------------------|
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | aqua (marine water) | | 0,0164 mg/l | | | | |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | sewage treatment plant (STP) | | 10 mg/l | | | | |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | aqua (intermittent releases) | | 0,164 mg/l | | | | |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | sediment (freshwater) | | | | 1,85 mg/kg | | |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | sediment (marine water) | | | | 0,185 mg/kg | | |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | Soil | | | | 0,274 mg/kg | | |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | Air | | | | | | no hazard identified |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | Predator | | | | | | no potential for bioaccumulation |
| methacrylic acid 79-41-4 | aqua (freshwater) | | 0,82 mg/l | | | | |
| methacrylic acid 79-41-4 | aqua (marine water) | | 0,82 mg/l | | | | |
| methacrylic acid 79-41-4 | sewage treatment plant (STP) | | 10 mg/l | | | | |
| methacrylic acid 79-41-4 | aqua (intermittent releases) | | 0,82 mg/l | | | | |
| methacrylic acid 79-41-4 | Soil | | | | 1,2 mg/kg | | |
| methyl methacrylate 80-62-6 | aqua (freshwater) | | 0,94 mg/l | | | | |
| methyl methacrylate 80-62-6 | aqua (marine water) | | 0,94 mg/l | | | | |
| methyl methacrylate 80-62-6 | aqua (intermittent releases) | | 0,94 mg/l | | | | |
| methyl methacrylate 80-62-6 | sewage treatment plant (STP) | | 10 mg/l | | | | |
| methyl methacrylate 80-62-6 | sediment (freshwater) | | | | 5,74 mg/kg | | |
| methyl methacrylate 80-62-6 | Soil | | | | 1,47 mg/kg | | |

Derived No-Effect Level (DNEL):

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|---|--------------------|-------------------|---|---------------|------------------------|----------------------|
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | Workers | inhalation | Long term exposure - systemic effects | | 14,5 mg/m ³ | |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | Workers | dermal | Long term exposure - systemic effects | | 4,2 mg/kg | |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | General population | oral | Long term exposure - systemic effects | | 2,5 mg/kg | |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | General population | dermal | Long term exposure - systemic effects | | 2,5 mg/kg | |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | General population | inhalation | Long term exposure - systemic effects | | 4,3 mg/m ³ | |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | Workers | dermal | Long term exposure - systemic effects | | 4,2 mg/kg | no hazard identified |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | Workers | Inhalation | Long term exposure - systemic effects | | 14,7 mg/m ³ | no hazard identified |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | General population | dermal | Long term exposure - systemic effects | | 2,5 mg/kg | no hazard identified |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | General population | Inhalation | Long term exposure - systemic effects | | 8,8 mg/m ³ | no hazard identified |
| Methacrylic acid, monoester with propane-1,2-diol 27813-02-1 | General population | oral | Long term exposure - systemic effects | | 2,5 mg/kg | no hazard identified |
| Acrylic acid 79-10-7 | Workers | inhalation | Long term exposure - local effects | | 30 mg/m ³ | no hazard identified |
| Acrylic acid 79-10-7 | Workers | inhalation | Acute/short term exposure - local effects | | 30 mg/m ³ | no hazard identified |
| Acrylic acid 79-10-7 | Workers | dermal | Acute/short term exposure - local effects | | 1 mg/cm ² | no hazard identified |
| Acrylic acid 79-10-7 | General population | dermal | Acute/short term exposure - local effects | | 1 mg/cm ² | no hazard identified |
| Acrylic acid 79-10-7 | General population | inhalation | Acute/short term exposure - local effects | | 3,6 mg/m ³ | no hazard identified |
| Acrylic acid 79-10-7 | General population | inhalation | Long term exposure - local effects | | 3,6 mg/m ³ | no hazard identified |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | Workers | inhalation | Long term exposure - systemic effects | | 6 mg/m ³ | |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | Workers | inhalation | Long term exposure - systemic effects | | 48,5 mg/m ³ | no hazard identified |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | Workers | dermal | Long term exposure - systemic effects | | 13,9 mg/kg | no hazard identified |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | General population | inhalation | Long term exposure - systemic effects | | 14,5 mg/m ³ | no hazard identified |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | General population | dermal | Long term exposure - systemic effects | | 8,33 mg/kg | no hazard identified |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | General population | oral | Long term exposure - systemic effects | | 8,33 mg/kg | no hazard identified |
| methacrylic acid 79-41-4 | Workers | Inhalation | Long term exposure - local effects | | 88 mg/m ³ | |
| methacrylic acid 79-41-4 | Workers | Inhalation | Long term exposure - | | 29,6 mg/m ³ | |

| | | | | | | |
|--------------------------------|--------------------|------------|---|--|------------------------|--|
| | | | systemic effects | | | |
| methacrylic acid 79-41-4 | Workers | dermal | Long term exposure - systemic effects | | 4,25 mg/kg | |
| methacrylic acid 79-41-4 | General population | Inhalation | Long term exposure - local effects | | 6,55 mg/m ³ | |
| methacrylic acid 79-41-4 | General population | Inhalation | Long term exposure - systemic effects | | 6,3 mg/m ³ | |
| methacrylic acid 79-41-4 | General population | dermal | Long term exposure - systemic effects | | 2,55 mg/kg | |
| methyl methacrylate 80-62-6 | Workers | dermal | Acute/short term exposure - local effects | | 1,5 mg/cm ² | |
| methyl methacrylate 80-62-6 | Workers | dermal | Long term exposure - systemic effects | | 13,67 mg/kg | |
| methyl methacrylate 80-62-6 | Workers | Inhalation | Long term exposure - systemic effects | | 208 mg/m ³ | |
| methyl methacrylate 80-62-6 | Workers | dermal | Long term exposure - local effects | | 1,5 mg/cm ² | |
| methyl methacrylate 80-62-6 | Workers | Inhalation | Long term exposure - local effects | | 208 mg/m ³ | |
| methyl methacrylate 80-62-6 | General population | dermal | Acute/short term exposure - local effects | | 1,5 mg/cm ² | |
| methyl methacrylate 80-62-6 | General population | dermal | Long term exposure - systemic effects | | 8,2 mg/kg | |
| methyl methacrylate 80-62-6 | General population | Inhalation | Long term exposure - systemic effects | | 74,3 mg/m ³ | |
| methyl methacrylate 80-62-6 | General population | dermal | Long term exposure - local effects | | 1,5 mg/cm ² | |
| methyl methacrylate 80-62-6 | General population | Inhalation | Long term exposure - local effects | | 104 mg/m ³ | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Use only in well-ventilated areas.

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

| | |
|---|--|
| Physical state | liquid |
| Delivery form | liquid |
| Colour | green |
| Odor | characteristic |
| Melting point | Not applicable, Product is a liquid |
| Initial boiling point | > 149 °C (> 300.2 °F) |
| Flammability | Not applicable |
| Explosive limits | Currently under determination |
| Flash point | > 100 °C (> 212 °F) |
| Auto-ignition temperature | Currently under determination |
| Decomposition temperature | Currently under determination |
| pH | Currently under determination |
| Viscosity (kinematic) | Currently under determination |
| Viscosity, dynamic (Brookfield; Instrument: RVT; speed of rotation: 20 min ⁻¹ ; Spindle No: 1) | 100,0 - 150,0 mPa.s LCT STM 10; Viscosity Brookfield |
| Solubility (qualitative) (Solvent: Water) | Slightly soluble |
| Partition coefficient: n-octanol/water | Not applicable |
| Vapour pressure | Mixture |
| Vapour pressure (50 °C (122 °F)) | < 400 Pa |
| Vapour pressure (68 °F (20 °C)) | < 300 mbar;no method |
| Density () | < 3 mm hg |
| Density | 1,07 g/cm ³ no method |
| Relative vapour density: | Currently under determination |
| Particle characteristics | Not applicable |
| | Product is a liquid |

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with strong acids.
Reacts with strong oxidants.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

Oxides of carbon.

SECTION 11: Toxicological information

1.1 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 CAS-No. | Value type | Value | Species | Method |
|---|--|---------------|---------|---|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | Acute toxicity estimate (ATE) | 2.001 mg/kg | | Expert judgement |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | LD50 | > 5.000 mg/kg | rat | not specified |
| Hydroxypropyl methacrylate 27813-02-1 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| Acrylic acid 79-10-7 | LD50 | 1.500 mg/kg | rat | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| Alcohols, C11-15- secondary, ethoxylated, 9EO 68131-40-8 | LD50 | > 412 mg/kg | rat | not specified |
| Alcohols, C11-15- secondary, ethoxylated, 9EO 68131-40-8 | Acute toxicity estimate (ATE) | 413 mg/kg | | Expert judgement |
| Cumene hydroperoxide 80-15-9 | LD50 | 382 mg/kg | rat | other guideline: |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | LD50 | 10.837 mg/kg | rat | not specified |
| methacrylic acid 79-41-4 | LD50 | 1.320 mg/kg | rat | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| methyl methacrylate 80-62-6 | LD50 | 9.400 mg/kg | rat | not specified |
| Acetic acid, 2- phenylhydrazide 114-83-0 | LD50 | 270 mg/kg | rat | not specified |

Acute dermal toxicity:

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

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|--|-------------------------------|-------------------|---------|--|
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | LD50 | > 3.000 mg/kg | rabbit | not specified |
| Hydroxypropyl methacrylate 27813-02-1 | LD50 | > 5.000 mg/kg | rabbit | not specified |
| Acrylic acid 79-10-7 | Acute toxicity estimate (ATE) | 1.100 mg/kg | | Expert judgement |
| Acrylic acid 79-10-7 | LD50 | > 2.000 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | LD50 | > 14.000 mg/kg | rat | not specified |
| Cumene hydroperoxide 80-15-9 | Acute toxicity estimate (ATE) | 1.100 mg/kg | | Expert judgement |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | Acute toxicity estimate (ATE) | > 5.000 mg/kg | | Expert judgement |
| methacrylic acid 79-41-4 | LD50 | 500 - 1.000 mg/kg | rabbit | Dermal Toxicity Screening |
| methacrylic acid 79-41-4 | Acute toxicity estimate (ATE) | 500 mg/kg | | Expert judgement |
| methyl methacrylate 80-62-6 | LD50 | > 5.000 mg/kg | rabbit | not specified |

Acute inhalative toxicity:

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

| Hazardous substances CAS-No. | Value type | Value | Test atmosphere | Exposure time | Species | Method |
|---|--|------------|-----------------|------------------|---------|---|
| Acrylic acid 79-10-7 | LC0 | 5,1 mg/l | vapour | 4 h | rat | equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity) |
| Acrylic acid 79-10-7 | Acute toxicity estimate (ATE) | 11 mg/l | vapour | | | Expert judgement |
| Alcohols, C11-15- secondary, ethoxylated, 9EO 68131-40-8 | LC50 | 1,06 mg/l | dust/mist | 4 h | rat | not specified |
| Cumene hydroperoxide 80-15-9 | LC50 | 1,370 mg/l | vapour | 4 h | rat | not specified |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | Acute toxicity estimate (ATE) | 28,17 mg/l | dust/mist | | | Expert judgement |
| methacrylic acid 79-41-4 | LC50 | > 3,6 mg/l | dust/mist | 4 h | rat | OECD Guideline 403 (Acute Inhalation Toxicity) |
| methacrylic acid 79-41-4 | Acute toxicity estimate (ATE) | 3,61 mg/l | dust/mist | | | Expert judgement |
| methyl methacrylate 80-62-6 | LC50 | 29,8 mg/l | vapour | 4 h | rat | not specified |

Skin corrosion/irritation:

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

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|---|---------------------------|------------------|---------|--|
| Hydroxypropyl methacrylate 27813-02-1 | not irritating | 24 h | rabbit | Draize Test |
| Acrylic acid 79-10-7 | Category 1 (corrosive) | 3 min | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Cumene hydroperoxide 80-15-9 | corrosive | | rabbit | Draize Test |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | not irritating | 24 h | rabbit | Draize Test |
| methacrylic acid 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 CAS-No. | Result | Exposure time | Species | Method |
|---|---|------------------|---------|---|
| Hydroxypropyl methacrylate 27813-02-1 | Category 2B (mildly irritating to eyes) | | rabbit | Draize Test |
| Acrylic acid 79-10-7 | Category 1 (irreversible effects on the eye) | | rabbit | BASF Test |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | not irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| methacrylic acid 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 CAS-No. | Result | Test type | Species | Method |
|--|-----------------|------------------------------------|------------|--|
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Hydroxypropyl methacrylate 27813-02-1 | not sensitising | Mouse local lymphnode assay (LLNA) | mouse | equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Hydroxypropyl methacrylate 27813-02-1 | sensitising | Guinea pig maximisation test | guinea pig | not specified |
| Acrylic acid 79-10-7 | not sensitising | Freund's complete adjuvant test | guinea pig | Klecak Method |
| Acrylic acid 79-10-7 | not sensitising | Split adjuvant test | guinea pig | Maguire Method |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| methacrylic acid 79-41-4 | not sensitising | Buehler test | guinea pig | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |
| methyl methacrylate 80-62-6 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |

Germ cell mutagenicity:

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

| Hazardous substances CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|--|----------|--|--|---------|---|
| Hydroxypropyl methacrylate 27813-02-1 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Hydroxypropyl methacrylate 27813-02-1 | positive | in vitro mammalian chromosome aberration test | with and without | | Chromosome Aberration Test |
| Hydroxypropyl methacrylate 27813-02-1 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Acrylic acid 79-10-7 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Acrylic acid 79-10-7 | negative | mammalian cell gene mutation assay | with and without | | equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Acrylic acid 79-10-7 | negative | DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro | without | | equivalent or similar to OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells) |
| Cumene hydroperoxide 80-15-9 | positive | bacterial reverse mutation assay (e.g Ames test) | without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | negative | in vitro mammalian cell micronucleus test | with and without | | OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) |
| methacrylic acid 79-41-4 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| methyl methacrylate 80-62-6 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | not specified |

Carcinogenicity

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

| Hazardous components CAS-No. | Result | Route of application | Exposure time / Frequency of treatment | Species | Sex | Method |
|---|------------------|-------------------------|---|---------|-------------|---|
| Hydroxypropyl methacrylate 27813-02-1 | not carcinogenic | inhalation | 2 y 6 h/d, 5 d/w | rat | male | equivalent or similar OECD Guideline 451 (Carcinogenicity Studies) |
| Acrylic acid 79-10-7 | not carcinogenic | oral: drinking water | 26 - 28 m continuously | rat | male/female | OECD Guideline 451 (Carcinogenicity Studies) |
| Acrylic acid 79-10-7 | not carcinogenic | dermal | 21 m 3 times/w | mouse | male/female | not specified |
| methacrylic acid 79-41-4 | not carcinogenic | inhalation | 2 y | mouse | male/female | OECD Guideline 451 (Carcinogenicity Studies) |

Reproductive toxicity:

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

| Hazardous substances CAS-No. | Result / Value | Test type | Route of application | Species | Method |
|---|--|-----------------------------|----------------------------|---------|---|
| Hydroxypropyl methacrylate 27813-02-1 | NOAEL P 300 mg/kg NOAEL F1 1.000 mg/kg | screening | oral: gavage | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Hydroxypropyl methacrylate 27813-02-1 | NOAEL P 400 mg/kg NOAEL F1 400 mg/kg | two- generation study | oral: gavage | rat | OECD Guideline 416 (Two- Generation Reproduction Toxicity Study) |
| Acrylic acid 79-10-7 | NOAEL P 83 mg/kg NOAEL F1 250 mg/kg | one- generation study | oral: drinking water | rat | equivalent or similar to OECD Guideline 415 (One- Generation Reproduction Toxicity Study) |
| Acrylic acid 79-10-7 | NOAEL P 240 mg/kg NOAEL F1 53 mg/kg NOAEL F2 53 mg/kg | two- generation study | oral: drinking water | rat | OECD Guideline 416 (Two- Generation Reproduction Toxicity Study) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | NOAEL P 1.000 mg/kg NOAEL F1 1.000 mg/kg | | oral: gavage | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| methacrylic acid 79-41-4 | NOAEL P 50 mg/kg NOAEL F1 400 mg/kg NOAEL F2 400 mg/kg | Two generation study | oral: gavage | rat | OECD Guideline 416 (Two- Generation Reproduction Toxicity Study) |

STOT-single exposure:

No data available.

STOT-repeated exposure::

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

| Hazardous substances CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---|-------------------|----------------------------|--|---------|---|
| Hydroxypropyl methacrylate 27813-02-1 | NOAEL 300 mg/kg | oral: gavage | 49 d daily | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Hydroxypropyl methacrylate 27813-02-1 | NOAEL 0,352 mg/l | inhalation | 90 d 6 h/d, 5 d/w | rat | OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day) |
| Acrylic acid 79-10-7 | NOAEL 40 mg/kg | oral: drinking water | 12 m daily | rat | equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies) |
| Acrylic acid 79-10-7 | NOAEL 0,015 mg/l | inhalation: vapour | 90 d 6 h/d, 5 d/w | mouse | equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day) |
| Cumene hydroperoxide 80-15-9 | | inhalation: aerosol | 6 h/d 5 d/w | rat | not specified |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | NOAEL 1.000 mg/kg | oral: gavage | daily | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| methacrylic acid 79-41-4 | | inhalation | 90 d 6 h/d, 5 d/w | rat | OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day) |
| methyl methacrylate 80-62-6 | LOAEL 2000 ppm | inhalation | 14 weeks 6 hrs/day, 5 days/wk | mouse | Dose Range Finding Study |
| methyl methacrylate 80-62-6 | NOAEL 1000 ppm | inhalation | 14 weeks 6 hrs/day, 5 days/wk | mouse | Dose Range Finding Study |

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---------------|--------------------------------|---------------|--|---|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | LC50 | Toxicity > Water solubility | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | LC50 | 32,5 mg/l | 48 h | | DIN 38412-15 |
| Hydroxypropyl methacrylate 27813-02-1 | LC50 | 493 mg/l | 48 h | Leuciscus idus melanotus | DIN 38412-15 |
| Acrylic acid 79-10-7 | LC50 | 27 mg/l | 96 h | Salmo gairdneri (new name: Oncorhynchus mykiss) | EPA OTS 797.1400 (Fish Acute Toxicity Test) |
| Acrylic acid 79-10-7 | NOEC | >= 10,1 mg/l | 45 d | Oryzias latipes | OECD Guideline 210 (fish early lite stage toxicity test) |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | LC50 | 3,2 - 3,6 mg/l | 96 h | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Cumene hydroperoxide 80-15-9 | LC50 | 3,9 mg/l | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | LC50 | 16,4 mg/l | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| methacrylic acid 79-41-4 | LC50 | 85 mg/l | 96 h | Salmo gairdneri (new name: Oncorhynchus mykiss) | EPA OTS 797.1400 (Fish Acute Toxicity Test) |
| methyl methacrylate 80-62-6 | LC50 | 350 mg/l | 96 h | Leuciscus idus | OECD Guideline 203 (Fish, Acute Toxicity Test) |

Toxicity (Daphnia):

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---------------|--------------------------------|---------------|---------------|---|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | EC50 | Toxicity > Water solubility | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Hydroxypropyl methacrylate 27813-02-1 | EC50 | > 143 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Acrylic acid 79-10-7 | EC50 | 95 mg/l | 48 h | Daphnia magna | EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids) |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | EC50 | 7,3 mg/l | 48 h | Daphnia magna | not specified |
| Cumene hydroperoxide 80-15-9 | EC50 | 18,84 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| methacrylic acid 79-41-4 | EC50 | > 130 mg/l | 48 h | Daphnia magna | EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids) |
| methyl methacrylate 80-62-6 | EC50 | 69 mg/l | 48 h | Daphnia magna | EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---------------|----------------|---------------|---------------|--|
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | NOEC | 5,09 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Hydroxypropyl methacrylate 27813-02-1 | NOEC | 45,2 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Acrylic acid 79-10-7 | NOEC | 19 mg/l | 21 d | Daphnia magna | EPA OTS 797.1330 (Daphnid Chronic Toxicity Test) |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | NOEC | > 0,1 - 1 mg/l | 21 day | Daphnia magna | not specified |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | NOEC | 32 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| methyl methacrylate 80-62-6 | NOEC | 37 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |

Toxicity (Algae):

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---------------|--------------------------------|---------------|--|--|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | EC50 | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | EC10 | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | EC50 | 9,79 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | NOEC | 2,11 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Hydroxypropyl methacrylate 27813-02-1 | EC50 | > 97,2 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Hydroxypropyl methacrylate 27813-02-1 | NOEC | > 97,2 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Acrylic acid 79-10-7 | EC10 | 0,03 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | EU Method C.3 (Algal Inhibition test) |
| Acrylic acid 79-10-7 | EC50 | 0,13 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | EU Method C.3 (Algal Inhibition test) |
| Cumene hydroperoxide 80-15-9 | EC50 | 3,1 mg/l | 72 h | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Cumene hydroperoxide 80-15-9 | NOEC | 1 mg/l | 72 h | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | EC50 | > 100 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | NOEC | 18,6 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| methacrylic acid 79-41-4 | NOEC | 8,2 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| methacrylic acid 79-41-4 | EC50 | 45 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| methyl methacrylate 80-62-6 | EC50 | 170 mg/l | 96 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| methyl methacrylate 80-62-6 | NOEC | 100 mg/l | 96 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---------------|--------------------------------|---------------|--|---|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | EC50 | Toxicity > Water solubility | 3 h | activated sludge of a predominantly domestic sewage | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | NOEC | 20 mg/l | 28 d | activated sludge, domestic | not specified |
| Hydroxypropyl methacrylate 27813-02-1 | EC10 | 1.140 mg/l | 16 h | | not specified |
| Acrylic acid 79-10-7 | EC20 | 900 mg/l | 30 min | activated sludge, domestic | ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge) |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | EC50 | > 1.000 mg/l | 16 h | not specified | not specified |
| Cumene hydroperoxide 80-15-9 | EC10 | 70 mg/l | 30 min | not specified | not specified |
| methacrylic acid 79-41-4 | EC10 | 100 mg/l | 17 h | | not specified |

| | | | | | |
|--------------------------------|------|------------------|--------|----------------------------|--|
| methyl methacrylate 80-62-6 | EC20 | > 150 - 200 mg/l | 30 min | activated sludge, domestic | ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge) |
|--------------------------------|------|------------------|--------|----------------------------|--|

12.2. Persistence and degradability

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|--|----------------------------|-----------|---------------|---------------|--|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | not readily biodegradable. | aerobic | 63 % | 28 day | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | readily biodegradable | aerobic | 84 % | 28 d | OECD Guideline 310 (Ready Biodegradability/CO ₂ in Sealed Vessels (Headspace Test)) |
| Hydroxypropyl methacrylate 27813-02-1 | readily biodegradable | aerobic | 94,2 % | 28 d | OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test) |
| Acrylic acid 79-10-7 | inherently biodegradable | aerobic | 100 % | 28 d | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test) |
| Acrylic acid 79-10-7 | readily biodegradable | aerobic | 81 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | readily biodegradable | aerobic | > 60 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Cumene hydroperoxide 80-15-9 | not readily biodegradable. | aerobic | 3 % | 28 d | OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | readily biodegradable | aerobic | 85 % | 28 d | OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test) |
| methacrylic acid 79-41-4 | inherently biodegradable | aerobic | 100 % | 14 d | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test) |
| methacrylic acid 79-41-4 | readily biodegradable | aerobic | 86 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| methyl methacrylate 80-62-6 | readily biodegradable | aerobic | 94 % | 14 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |

12.3. Bioaccumulative potential

| Hazardous substances CAS-No. | Bioconcentration factor (BCF) | Exposure time | Temperature | Species | Method |
|--|-------------------------------|---------------|-------------|-------------|---|
| Acrylic acid 79-10-7 | 3,16 | | | | QSAR (Quantitative Structure Activity Relationship) |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | 29 | | | calculation | OECD Guideline 305 (Bioconcentration: Flow-through Fish Test) |
| Cumene hydroperoxide 80-15-9 | 9,1 | | | calculation | OECD Guideline 305 (Bioconcentration: Flow-through Fish Test) |

12.4. Mobility in soil

| Hazardous substances CAS-No. | LogPow | Temperature | Method |
|--|-------------|-------------|--|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | 5,83 - 6,07 | 30 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| Hydroxypropyl methacrylate 27813-02-1 | 0,97 | 20 °C | not specified |
| Acrylic acid 79-10-7 | 0,46 | 25 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Alcohols, C11-15-secondary, ethoxylated, 9EO 68131-40-8 | 2,72 | | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Cumene hydroperoxide 80-15-9 | 1,6 | 25 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | 2,3 | | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| methacrylic acid 79-41-4 | 0,93 | 22 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| methyl methacrylate 80-62-6 | 1,38 | 20 °C | other guideline: |
| Acetic acid, 2-phenylhydrazide 114-83-0 | 0,74 | | not specified |

12.5. Results of PBT and vPvB assessment

| Hazardous substances CAS-No. | PBT / vPvB |
|--|---|
| 4-t-Butylcyclohexyl methacrylate 46729-07-1 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 1-Methyltrimethylene dimethacrylate 1189-08-8 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Hydroxypropyl methacrylate 27813-02-1 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Acrylic acid 79-10-7 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Cumene hydroperoxide 80-15-9 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| methacrylic acid 79-41-4 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| methyl methacrylate 80-62-6 | 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.

Contribution of this product to waste is very insignificant in comparison to article in which it is used

Disposal of uncleaned packages:

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

Disposal must be made according to official regulations.

Waste code

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

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

SECTION 14: Transport information

14.1. UN number or ID number

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not 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 | 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 precautions for user

| | |
|------|----------------|
| ADR | not applicable |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

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

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

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

H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 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.

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

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