



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

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LOCTITE 518 CR 25ML FR/NL/DE

SDS No. : 544621
V004.0

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

1.1. Product identifier

LOCTITE 518 CR 25ML FR/NL/DE

Contains:

3,3,5 Trimethylcyclohexyl methacrylate
2-Hydroxyethyl methacrylate
Methacryloyloxyethyl succinate
Acetic acid, 2-phenylhydrazide
Limonene

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 AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 211 797 0
Fax-no.: +49 211 798 2009

ua-productsafety.uk@uk.henkel.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

| | |
|--|------------|
| Skin irritation | Category 2 |
| H315 Causes skin irritation. | |
| Serious eye 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 | |

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Signal word:

Warning

Hazard statement:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statement:

For consumer use only: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P501 Dispose of waste and residues in accordance with local authority requirements

**Precautionary statement:
Prevention**

P261 Avoid breathing vapours.
P280 Wear protective gloves.

**Precautionary statement:
Response**

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: 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.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:

Anaerobic Sealant

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

| Hazardous components CAS-No. | EC Number REACH-Reg No. | content | Classification |
|---|-------------------------------|---------------|--|
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | 231-927-0 | 10- 20 % | STOT SE 3 H335 Skin Irrit. 2 H315 Eye Irrit. 2 H319 |
| 2-Hydroxyethyl methacrylate 868-77-9 | 212-782-2 01-2119490169-29 | 5- < 10 % | Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 |
| Methacryloyloxyethyl succinate 20882-04-6 | 244-096-4 01-2120137902-58 | 0,1- < 1 % | Skin Sens. 1; Dermal H317 Eye Dam. 1 H318 |
| 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 |
| Acrylic acid 79-10-7 | 201-177-9 01-2119452449-31 | 0,1- < 1 % | Flam. Liq. 3 H226 Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Skin Corr. 1A H314 Acute Tox. 4; Inhalation H332 STOT SE 3 H335 Aquatic Acute 1 H400 Aquatic Chronic 2 H411 |
| 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 |
| Limonene 5989-27-5 | 205-341-0, 227- 813-5 | 0,1- < 0,25 % | Flam. Liq. 3 H226 Skin Irrit. 2 H315 Asp. Tox. 1 H304 Skin Sens. 1 H317 Aquatic Chronic 1 H410 Aquatic Acute 1 H400 |

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

Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

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

Ingestion:

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

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

SKIN: Redness, inflammation.

SKIN: Rash, Urticaria.

EYE: Irritation, conjunctivitis.

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

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

None known

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.
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.

Avoid contact with skin and eyes.

Ensure adequate ventilation.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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

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

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

Temperatures between + 10 °C and + 25 °C

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 |
|--|-----|-------------------|-----------------------------------|--|-----------------|
| Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, INHALABLE DUST] | | 6 | Time Weighted Average (TWA): | | EH40 WEL |
| Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, RESPIRABLE DUST] | | 2,4 | Time Weighted Average (TWA): | | EH40 WEL |
| Methacrylic acid 79-41-4 [METHACRYLIC ACID] | 40 | 143 | Short Term Exposure Limit (STEL): | | EH40 WEL |
| Methacrylic acid 79-41-4 [METHACRYLIC ACID] | 20 | 72 | Time Weighted Average (TWA): | | EH40 WEL |

Occupational Exposure LimitsValid for
Ireland

| Ingredient [Regulated substance] | ppm | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|---|-----|-------------------|-----------------------------------|--|-----------------|
| Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, TOTAL INHALABLE DUST] | | 6 | Time Weighted Average (TWA): | | IR_OEL |
| Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, RESPIRABLE DUST] | | 2,4 | Time Weighted Average (TWA): | | IR_OEL |
| Acrylic acid 79-10-7 [ACRYLIC ACID] | 2 | 6 | Time Weighted Average (TWA): | | 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): | | IR_OEL |

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|---|------------------------------------|-----------------|-------|-----|-------|------------------|---------|
| | | | mg/l | ppm | mg/kg | others | |
| 2-Hydroxyethyl methacrylate 868-77-9 | aqua (freshwater) | | | | | 0,482 mg/L | |
| 2-Hydroxyethyl methacrylate 868-77-9 | aqua (marine water) | | | | | 0,482 mg/L | |
| 2-Hydroxyethyl methacrylate 868-77-9 | sewage treatment plant (STP) | | | | | 10 mg/L | |
| 2-Hydroxyethyl methacrylate 868-77-9 | aqua (intermittent releases) | | | | | 1 mg/L | |
| 2-Hydroxyethyl methacrylate 868-77-9 | sediment (freshwater) | | | | | 3,79 mg/kg | |
| 2-Hydroxyethyl methacrylate 868-77-9 | sediment (marine water) | | | | | 3,79 mg/kg | |
| 2-Hydroxyethyl methacrylate 868-77-9 | soil | | | | | 0,476 mg/kg | |
| 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 | aqua (intermittent releases) | | | | | 0,0013 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 | | | | | 0,0023 mg/kg | |
| Acrylic acid 79-10-7 | Predator | | | | | 0,03 g/kg | |
| 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 | |

Derived No-Effect Level (DNEL):

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|---|--------------------|-------------------|---|---------------|------------------------|---------|
| 2-Hydroxyethyl methacrylate 868-77-9 | Workers | dermal | Long term exposure - systemic effects | | 1,3 mg/kg bw/day | |
| 2-Hydroxyethyl methacrylate 868-77-9 | Workers | Inhalation | Long term exposure - systemic effects | | 4,9 mg/m ³ | |
| 2-Hydroxyethyl methacrylate 868-77-9 | General population | dermal | Long term exposure - systemic effects | | 0,83 mg/kg bw/day | |
| 2-Hydroxyethyl methacrylate 868-77-9 | General population | Inhalation | Long term exposure - systemic effects | | 2,9 mg/m ³ | |
| 2-Hydroxyethyl methacrylate 868-77-9 | General population | oral | Long term exposure - systemic effects | | 0,83 mg/kg bw/day | |
| Acrylic acid 79-10-7 | Workers | inhalation | Long term exposure - local effects | | 30 mg/m ³ | |
| Acrylic acid 79-10-7 | Workers | inhalation | Acute/short term exposure - local effects | | 30 mg/m ³ | |
| Acrylic acid 79-10-7 | Workers | dermal | Acute/short term exposure - local effects | | 1 mg/cm ² | |
| Acrylic acid 79-10-7 | General population | dermal | Acute/short term exposure - local effects | | 1 mg/cm ² | |
| Acrylic acid 79-10-7 | General population | inhalation | Acute/short term exposure - local effects | | 3,6 mg/m ³ | |
| Acrylic acid 79-10-7 | General population | inhalation | Long term exposure - local effects | | 3,6 mg/m ³ | |
| 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 - systemic effects | | 29,6 mg/m ³ | |
| Methacrylic acid 79-41-4 | Workers | dermal | Long term exposure - systemic effects | | 4,25 mg/kg bw/day | |
| 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 bw/day | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

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

Filter type: A (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; \geq 0.4 mm thickness)

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

nitrile rubber (NBR; \geq 0.4 mm thickness)

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

Eye protection:

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

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 | gel liquid red |
| Odor | mild |
| Odour threshold | No data available / Not applicable |
| pH | No data available / Not applicable |
| Initial boiling point | > 150 °C (> 302 °F) |
| Flash point | > 100 °C (> 212 °F); no method |
| Decomposition temperature | No data available / Not applicable |
| Vapour pressure | No data available / Not applicable |
| Density | 1,1 g/cm ³ |
| () | |
| Bulk density | No data available / Not applicable |
| Viscosity | < 1.100.000 mPa.s |
| () | |
| Viscosity (kinematic) | No data available / Not applicable |
| Explosive properties | No data available / Not applicable |
| Solubility (qualitative) | No data available / Not applicable |
| Solidification temperature | No data available / Not applicable |
| Melting point | No data available / Not applicable |
| Flammability | No data available / Not applicable |
| Auto-ignition temperature | No data available / Not applicable |
| Explosive limits | No data available / Not applicable |
| Partition coefficient: n-octanol/water | No data available / Not applicable |
| Evaporation rate | No data available / Not applicable |
| Vapor density | No data available / Not applicable |
| Oxidising properties | No data available / Not applicable |

9.2. Other information

No data available / Not applicable

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

Reaction with strong acids.
Reacts with strong oxidants.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

Oxides of carbon.

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

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

STOT-single exposure:

May cause respiratory irritation.

Oral toxicity:

May cause irritation to the digestive tract.

Skin irritation:

Causes skin irritation.

Eye irritation:

Causes serious eye irritation.

Sensitizing:

May cause an allergic skin reaction.

Acute oral toxicity:

| Hazardous components CAS-No. | Value type | Value | Route of application | Exposure time | Species | Method |
|---|---------------|---------------|-------------------------|------------------|---------|---|
| 2-Hydroxyethyl methacrylate 868-77-9 | LD50 | > 5.000 mg/kg | oral | | rat | not specified |
| Methacryloyloxyethyl succinate 20882-04-6 | LD50 | > 2.000 mg/kg | oral | | rat | OECD Guideline 423 (Acute Oral toxicity) |
| Acrylic acid 79-10-7 | LD50 | 1.500 mg/kg | oral | | rat | BASF Test |
| Methacrylic acid 79-41-4 | LD50 | 1.320 mg/kg | oral | | rat | OECD Guideline 401 (Acute Oral Toxicity) |

Acute inhalative toxicity:

| Hazardous components CAS-No. | Value type | Value | Route of application | Exposure time | Species | Method |
|---------------------------------|--|------------|-------------------------|------------------|---------|---|
| Acrylic acid 79-10-7 | LC50 | > 5,1 mg/l | Vapor. | 4 h | rat | OECD Guideline 403 (Acute Inhalation Toxicity) |
| Acrylic acid 79-10-7 | Acute toxicity estimate (ATE) | 11 mg/l | vapour | | | Expert judgement |
| Methacrylic acid 79-41-4 | LC50 | > 3,6 mg/l | aerosol | 4 h | rat | OECD Guideline 403 (Acute Inhalation Toxicity) |

Acute dermal toxicity:

| Hazardous components CAS-No. | Value type | Value | Route of application | Exposure time | Species | Method |
|--|--|----------------------|-------------------------|------------------|---------|---|
| 2-Hydroxyethyl methacrylate 868-77-9 | LD50 | > 3.000 mg/kg | dermal | | rabbit | not specified |
| Acrylic acid 79-10-7 | Acute toxicity estimate (ATE) | 1.100 mg/kg | dermal | | | Expert judgement |
| Acrylic acid 79-10-7 | LD50 | > 2.000 mg/kg | | | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| Methacrylic acid 79-41-4 | Acute toxicity estimate (ATE) | 500 mg/kg | dermal | | | Expert judgement |
| Methacrylic acid 79-41-4 | LD50 | 500 - 1.000 mg/kg | | | rabbit | Dermal Toxicity Screening |

Skin corrosion/irritation:

| Hazardous components CAS-No. | Result | Exposure time | Species | Method |
|---|-------------------------|------------------|--|--|
| Methacryloyloxyethyl succinate 20882-04-6 | not irritating | 0,25 h | Human, EPISKIIN™ Reconstitute d Human Epidermis model | OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method) |
| Methacryloyloxyethyl succinate 20882-04-6 | Not Classified | 4 h | Human, EPISKIIN™ Reconstitute d Human Epidermis model | OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method) |
| Acrylic acid 79-10-7 | highly corrosive | 3 min | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Methacrylic acid 79-41-4 | Category 1A (corrosive) | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Limonene 5989-27-5 | moderately irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

Serious eye damage/irritation:

| Hazardous components CAS-No. | Result | Exposure time | Species | Method |
|---|------------|------------------|-------------------------------------|---------------------------|
| Methacryloyloxyethyl succinate 20882-04-6 | Category I | 10 min | Bovine, cornea, in vitro test | OECD Guideline 437 (BCOP) |
| Acrylic acid 79-10-7 | corrosive | 21 d | rabbit | BASF Test |
| Methacrylic acid 79-41-4 | Category I | | rabbit | Draize Test |

Respiratory or skin sensitization:

| Hazardous components CAS-No. | Result | Test type | Species | Method |
|---------------------------------|-----------------|------------------------------------|------------|---|
| Acrylic acid 79-10-7 | not sensitising | Skin painting test | guinea pig | not specified |
| Methacrylic acid 79-41-4 | not sensitising | Buehler test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| Limonene 5989-27-5 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |

Germ cell mutagenicity:

| Hazardous components CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|--|----------|--|---|---------|--|
| 2-Hydroxyethyl methacrylate 868-77-9 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| | positive | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Methacryloyloxyethyl succinate 20882-04-6 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Acrylic acid 79-10-7 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | not specified |
| Methacrylic acid 79-41-4 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Methacrylic acid 79-41-4 | negative | inhalation | | mouse | OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test) |

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

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

12.1. Toxicity**Ecotoxicity:**

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

| Hazardous components CAS-No. | Value type | Value | Acute Toxicity Study | Exposure time | Species | Method |
|---|---------------|--------------|----------------------------|------------------|--|---|
| 2-Hydroxyethyl methacrylate 868-77-9 | LC50 | 227 mg/l | Fish | 96 h | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 2-Hydroxyethyl methacrylate 868-77-9 | EC50 | 380 mg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 2-Hydroxyethyl methacrylate 868-77-9 | EC50 | 345 mg/l | Algae | 72 h | Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| | NOEC | 160 mg/l | Algae | 72 h | Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) not specified |
| 2-Hydroxyethyl methacrylate 868-77-9 | EC0 | > 3.000 mg/l | Bacteria | 16 h | | |
| 2-Hydroxyethyl methacrylate 868-77-9 | NOEC | 24,1 mg/l | chronic Daphnia | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Methacryloyloxyethyl succinate 20882-04-6 | EC50 | > 515,4 mg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Methacryloyloxyethyl succinate 20882-04-6 | EC50 | > 312 mg/l | Algae | 72 h | Pseudokirchnerella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Acrylic acid 79-10-7 | LC50 | 27 mg/l | Fish | 96 h | Salmo gairdneri (new name: Oncorhynchus mykiss) | EPA OTS 797.1400 (Fish Acute Toxicity Test) |
| Acrylic acid 79-10-7 | EC10 | 0,03 mg/l | Algae | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| | EC50 | 0,13 mg/l | Algae | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) not specified |
| Acrylic acid 79-10-7 | EC10 | 41 mg/l | Bacteria | 16 h | | |
| Acrylic acid 79-10-7 | NOEC | 19 mg/l | chronic Daphnia | 21 d | Daphnia magna | EPA OTS 797.1330 (Daphnid Chronic Toxicity Test) |
| Methacrylic acid 79-41-4 | LC50 | 85 mg/l | Fish | 96 h | Salmo gairdneri (new name: Oncorhynchus mykiss) | EPA OTS 797.1400 (Fish Acute Toxicity Test) |
| Methacrylic acid 79-41-4 | EC50 | > 130 mg/l | Daphnia | 48 h | Daphnia magna | EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids) |
| Methacrylic acid 79-41-4 | NOEC | 8,2 mg/l | Algae | 72 h | Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| | EC50 | 45 mg/l | Algae | 72 h | Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) not specified |
| Methacrylic acid 79-41-4 | EC10 | 100 mg/l | Bacteria | 17 h | | |
| Limonene 5989-27-5 | LC50 | 0,702 mg/l | Fish | 96 h | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Limonene 5989-27-5 | EC50 | 577 µg/l | Daphnia | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

12.2. Persistence and degradability**Persistence and Biodegradability:**

No data available for the product.

| Hazardous components CAS-No. | Result | Route of application | Degradability | Method |
|--|--|-------------------------|---------------|---|
| 2-Hydroxyethyl methacrylate 868-77-9 | readily biodegradable | aerobic | 92 - 100 % | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| Methacryloyloxyethyl succinate 20882-04-6 | readily biodegradable, but failing 10-day window | aerobic | 80 % | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Acrylic acid 79-10-7 | readily biodegradable | aerobic | 81 % | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| | inherently biodegradable | aerobic | 100 % | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test) |
| Methacrylic acid 79-41-4 | inherently biodegradable | aerobic | 100 % | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test) |
| | readily biodegradable | aerobic | 86 % | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Limonene 5989-27-5 | readily biodegradable | | 41 - 98 % | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |

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

Cured adhesives are immobile.

Bioaccumulative potential:

No data available for the product.

| Hazardous components CAS-No. | LogPow | Bioconcentration factor (BCF) | Exposure time | Species | Temperature | Method |
|--|--------|----------------------------------|------------------|---------|-------------|---|
| Methacryloyloxyethyl succinate 20882-04-6 | 0,783 | | | | 23 °C | EU Method A.8 (Partition Coefficient) |
| Acetic acid, 2-phenylhydrazide 114-83-0 | 0,74 | | | | | not specified |
| Acrylic acid 79-10-7 Acrylic acid 79-10-7 | 0,46 | 3,16 | | | 25 °C | not specified OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Methacrylic acid 79-41-4 | 0,93 | | | | 22 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Limonene 5989-27-5 | 4,57 | | | | | not specified |

12.5. Results of PBT and vPvB assessment

| Hazardous components CAS-No. | PBT/vPvB |
|---------------------------------|----------|
| | |

| | |
|---|---|
| 2-Hydroxyethyl methacrylate 868-77-9 | 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. |
| Methacrylic acid 79-41-4 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

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

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

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

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

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

14.4. Packing group

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

14.5. Environmental hazards

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

14.6. Special precautions for user

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

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

VOC content < 3 %
(2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

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

- H226 Flammable liquid and vapor.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

Further information:

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

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.