



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

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LOCTITE 542

SDS No. : 168433

V007.0

Revision: 19.01.2024

printing date: 20.01.2024

Replaces version from: 12.06.2023

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

1.1. Product identifier

LOCTITE 542

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

Intended use:

Threadlocker

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com

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

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 irritation

Category 2

H319 Causes serious eye irritation.

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

Cumene hydroperoxide

| | |
|--|--|
| Signal word: | Warning |
| Hazard statement: | H319 Causes serious eye irritation. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects. |
| Supplemental information | Contains: methyl methacrylate May produce an allergic reaction. |
| 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. |
| Precautionary statement: Response | P337+P313 If eye irritation persists: Get medical advice/attention. |

2.3. Other hazards

None if used properly.

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

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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

| Hazardous components CAS-No. EC Number REACH-Reg No. | Concentration | Classification | Specific Conc. Limits, M- factors and ATEs | Add. Information |
|--|---------------|---|--|---------------------|
| Cumene hydroperoxide 80-15-9 201-254-7 01-2119475796-19 | 1- < 3 % | 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 | 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 >= 1 % Skin Corr. 1B; H314; C >= 10 % ===== dermal:ATE = 1.100 mg/kg | |
| N,N-Diethyl-p-toluidine 613-48-9 210-345-0 | 0,1- < 1 % | Acute Tox. 3, Oral, H301 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Inhalation, H331 STOT RE 2, H373 Aquatic Chronic 3, H412 Skin Irrit. 2, H315 | dermal:ATE = 300 mg/kg oral:ATE = 100 mg/kg inhalation:ATE = 3 mg/l; vapour | |
| N,N-dimethyl-o-toluidine 609-72-3 210-199-8 | 0,1- < 1 % | STOT RE 2, H373 Acute Tox. 3, Oral, H301 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Inhalation, H331 Aquatic Chronic 3, H412 | | |
| 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 | | EU OEL |
| 1,4-Naphthalenedione 130-15-4 204-977-6 | 0,01- < 0,1 % | Acute Tox. 3, Oral, H301 Skin Corr. 1C, H314 Skin Sens. 1, H317 Eye Dam. 1, H318 Acute Tox. 1, Inhalation, H330 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M acute = 10 M chronic = 1 | |

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.
For full text of the H - statements and other abbreviations see section 16 "Other information".

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation:**

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

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

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

Ingestion:

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

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

EYE: Irritation, conjunctivitis.

Prolonged or repeated contact may cause skin irritation.

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 (NO_x) 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)

Threadlocker

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 |
|---|-----|-------------------|-----------------------------------|--|-----------------|
| 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 | ECTLV |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 50 | | Time Weighted Average (TWA): | Indicative | ECTLV |
| 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 |
|---|-----|-------------------|-----------------------------------|--|-----------------|
| 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 [METHYL METHACRYLATE] | 50 | | Time Weighted Average (TWA): | Indicative OELV | IR_OEL |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 100 | | Short Term Exposure Limit (STEL): | Indicative | ECTLV |
| Methyl methacrylate 80-62-6 [METHYL METHACRYLATE] | 50 | | Time Weighted Average (TWA): | Indicative | ECTLV |
| 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 | |
| .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 | | |
| methacrylic acid 79-41-4 | aqua (freshwater) | | 0,82 mg/l | | | | |
| methacrylic acid 79-41-4 | Freshwater - intermittent | | 0,45 mg/l | | | | |
| methacrylic acid 79-41-4 | aqua (marine water) | | 0,082 mg/l | | | | |
| methacrylic acid 79-41-4 | sewage treatment plant (STP) | | 100 mg/l | | | | |
| methacrylic acid 79-41-4 | sediment (freshwater) | | | | 3,09 mg/kg | | |
| methacrylic acid 79-41-4 | sediment (marine water) | | | | 0,309 mg/kg | | |
| methacrylic acid 79-41-4 | Soil | | | | 0,137 mg/kg | | |
| methacrylic acid 79-41-4 | Predator | | | | | | no potential for bioaccumulation |
| 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 |
|---|--------------------|-------------------|---|---------------|-------------|----------------------------------|
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | Workers | inhalation | Long term exposure - systemic effects | | 6 mg/m3 | |
| methacrylic acid 79-41-4 | Workers | Inhalation | Long term exposure - local effects | | 88 mg/m3 | no potential for bioaccumulation |
| methacrylic acid 79-41-4 | Workers | Inhalation | Long term exposure - systemic effects | | 29,6 mg/m3 | no potential for bioaccumulation |
| methacrylic acid 79-41-4 | Workers | dermal | Long term exposure - systemic effects | | 4,25 mg/kg | no potential for bioaccumulation |
| methacrylic acid 79-41-4 | General population | Inhalation | Long term exposure - local effects | | 6,55 mg/m3 | no potential for bioaccumulation |
| methacrylic acid 79-41-4 | General population | Inhalation | Long term exposure - systemic effects | | 6,3 mg/m3 | no potential for bioaccumulation |
| methacrylic acid 79-41-4 | General population | dermal | Long term exposure - systemic effects | | 2,55 mg/kg | no potential for bioaccumulation |
| methyl methacrylate 80-62-6 | Workers | Inhalation | Long term exposure - systemic effects | | 348,4 mg/m3 | |
| methyl methacrylate 80-62-6 | Workers | Inhalation | Long term exposure - local effects | | 208 mg/m3 | |
| methyl methacrylate 80-62-6 | Workers | inhalation | Acute/short term exposure - local effects | | 416 mg/m3 | |
| methyl methacrylate 80-62-6 | Workers | dermal | Long term exposure - systemic effects | | 13,67 mg/kg | |
| methyl methacrylate 80-62-6 | Workers | dermal | Long term exposure - local effects | | 1,5 mg/cm2 | |
| methyl methacrylate 80-62-6 | Workers | dermal | Acute/short term exposure - local effects | | 1,5 mg/cm2 | |
| methyl methacrylate 80-62-6 | General population | Inhalation | Long term exposure - systemic effects | | 74,3 mg/m3 | |
| methyl methacrylate 80-62-6 | General population | Inhalation | Long term exposure - local effects | | 104 mg/m3 | |
| methyl methacrylate 80-62-6 | General population | inhalation | Acute/short term exposure - local effects | | 208 mg/m3 | |
| methyl methacrylate 80-62-6 | General population | dermal | Long term exposure - systemic effects | | 8,2 mg/kg | |
| methyl methacrylate 80-62-6 | General population | dermal | Long term exposure - local effects | | 1,5 mg/cm2 | |
| methyl methacrylate 80-62-6 | General population | dermal | Acute/short term exposure - local effects | | 1,5 mg/cm2 | |
| methyl methacrylate 80-62-6 | General population | oral | Long term exposure - systemic effects | | | |

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

| | |
|---|---|
| Delivery form | liquid |
| Colour | brown |
| Odor | mild, Acrylic |
| Physical state | liquid |
| Melting point | Not applicable, Product is a liquid |
| Solidification temperature | < -30 °C (< -22 °F) |
| Initial boiling point | > 150 °C (> 302 °F) |
| Flammability | The product is not flammable. |
| Explosive limits | Not applicable, The product is not flammable. |
| Flash point | > 100 °C (> 212 °F) No flash point up to 100 °C |
| Auto-ignition temperature | > 300 °C (> 572 °F) |
| Decomposition temperature | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH | Not applicable, Product is non-polar/aprotic. |
| Viscosity (kinematic) (40 °C (104 °F);) | > 20,5 mm ² /s |
| Solubility (qualitative) (20 °C (68 °F); Solvent: Water) | Slight |
| Solubility (qualitative) | Not miscible |

| | |
|--|---------------------------------------|
| (Solvent: Water) | |
| Partition coefficient: n-octanol/water | Not applicable |
| | Mixture |
| Vapour pressure (27 °C (80.6 °F)) | < 5 mm hg |
| Vapour pressure (50 °C (122 °F)) | < 300 mbar;no method / method unknown |
| Vapour pressure (20 °C (68 °F)) | < 1 mm hg |
| Density (20 °C (68 °F)) | 1,08 g/cm3 None |
| Relative vapour density: (20 °C) | > 1 |
| 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

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

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

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

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

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

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|-------------------------------------|--|-------------|---------|---|
| Cumene hydroperoxide 80-15-9 | LD50 | 382 mg/kg | rat | other guideline: |
| N,N-Diethyl-p-toluidine 613-48-9 | Acute toxicity estimate (ATE) | 100 mg/kg | | Expert judgement |
| 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 |
| 1,4-Naphthalenedione 130-15-4 | LD50 | 124 mg/kg | rat | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |

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 |
|-------------------------------------|--|----------------------|---------|---|
| Cumene hydroperoxide 80-15-9 | Acute toxicity estimate (ATE) | 1.100 mg/kg | | Expert judgement |
| N,N-Diethyl-p-toluidine 613-48-9 | Acute toxicity estimate (ATE) | 300 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 | equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity) |

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 |
|-------------------------------------|--|------------|-----------------|------------------|---------|---|
| Cumene hydroperoxide 80-15-9 | LC50 | 1,370 mg/l | vapour | 4 h | rat | not specified |
| N,N-Diethyl-p-toluidine 613-48-9 | Acute toxicity estimate (ATE) | 3 mg/l | vapour | | | 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 |
| 1,4-Naphthalenedione 130-15-4 | LC50 | 0,046 mg/l | dust/mist | 4 h | rat | OECD Guideline 403 (Acute Inhalation Toxicity) |

Skin corrosion/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 |
|-------------------------------------|----------------------------|------------------|---------|--|
| Cumene hydroperoxide 80-15-9 | corrosive | | rabbit | Draize Test |
| N,N-Diethyl-p-toluidine 613-48-9 | irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| methacrylic acid 79-41-4 | corrosive | 3 min | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| 1,4-Naphthalenedione 130-15-4 | Category 1C (corrosive) | | 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 |
|---------------------------------|-----------|------------------|---------|-------------|
| 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 |
|----------------------------------|-----------------|---------------------------------------|------------|--|
| 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) |
| 1,4-Naphthalenedione 130-15-4 | sensitising | not specified | guinea pig | not specified |

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 |
|---------------------------------|----------|--|--|---------|--|
| Cumene hydroperoxide 80-15-9 | positive | bacterial reverse mutation assay (e.g Ames test) | without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 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 |
|---------------------------------|------------------|-------------------------|---|---------|-------------|--|
| 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 |
|---------------------------------|--|----------------------------|-------------------------|---------|--|
| 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 |
|---------------------------------|----------------|-------------------------|--|---------|---|
| Cumene hydroperoxide 80-15-9 | | inhalation: aerosol | 6 h/d 5 d/w | rat | not specified |
| 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.

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--------------------------------------|---------------|------------|---------------|--|---|
| Cumene hydroperoxide 80-15-9 | LC50 | 3,9 mg/l | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| N,N-Diethyl-p-toluidine 613-48-9 | LC50 | 78,62 mg/l | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| N,N-dimethyl-o-toluidine 609-72-3 | LC 50 | 46 mg/l | 96 h | Fathead minnow (Pimephales promelas) | |
| 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) |
| methacrylic acid 79-41-4 | NOEC | 10 mg/l | 35 d | Danio rerio | OECD Guideline 210 (fish early lite stage toxicity test) |
| methyl methacrylate 80-62-6 | LC50 | 350 mg/l | 96 h | Leuciscus idus | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 1,4-Naphthalenedione 130-15-4 | LC50 | 0,045 mg/l | 96 h | Oryzias latipes | OECD Guideline 203 (Fish, Acute Toxicity Test) |

Toxicity (aquatic invertebrates):

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

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|-------------------------------------|---------------|------------|---------------|---------------|---|
| Cumene hydroperoxide 80-15-9 | EC50 | 18,84 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| N,N-Diethyl-p-toluidine 613-48-9 | EC50 | 10,34 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) |
| 1,4-Naphthalenedione 130-15-4 | EC50 | 0,026 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

Chronic toxicity (aquatic invertebrates):

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|---------------------------------|---------------|---------|---------------|---------------|--|
| methacrylic acid 79-41-4 | NOEC | 53 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.

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|-------------------------------------|---------------|------------|---------------|---|--|
| 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) |
| N,N-Diethyl-p-toluidine 613-48-9 | EC50 | 7,42 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| N,N-Diethyl-p-toluidine 613-48-9 | EC50 | 23,69 mg/l | 72 h | Raphidocelis subcapitata (new name: 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) |
| 1,4-Naphthalenedione 130-15-4 | NOEC | 0,07 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1,4-Naphthalenedione 130-15-4 | EC50 | 0,42 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |

Toxicity (microorganisms):

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

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|----------------------------------|---------------|------------------|---------------|--|---|
| 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 | Pseudomonas putida | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test) |
| 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) |
| 1,4-Naphthalenedione 130-15-4 | EC50 | 5,94 mg/l | 3 h | activated sludge of a predominantly domestic sewage | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |

12.2. Persistence and degradability

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

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|--------------------------------------|----------------------------|---------------|---------------|------------------|---|
| Cumene hydroperoxide 80-15-9 | not readily biodegradable. | aerobic | 3 % | 28 d | OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test) |
| N,N-Diethyl-p-toluidine 613-48-9 | not readily biodegradable. | not specified | 1 % | 28 day | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| N,N-dimethyl-o-toluidine 609-72-3 | not readily biodegradable. | | 1 % | 14 d | other guideline: |
| methacrylic acid 79-41-4 | readily biodegradable | aerobic | 86 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| methacrylic acid 79-41-4 | inherently biodegradable | aerobic | 100 % | 14 d | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test) |
| methyl methacrylate 80-62-6 | readily biodegradable | aerobic | 94 % | 14 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| 1,4-Naphthalenedione 130-15-4 | not readily biodegradable. | aerobic | 0 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |

12.3. Bioaccumulative potential

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

| Hazardous substances CAS-No. | Bioconcentration factor (BCF) | Exposure time | Temperature | Species | Method |
|---------------------------------|-------------------------------|---------------|-------------|-------------|---|
| Cumene hydroperoxide 80-15-9 | 9,1 | | | calculation | OECD Guideline 305 (Bioconcentration: Flow-through Fish Test) |

12.4. Mobility in soil

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

| Hazardous substances CAS-No. | LogPow | Temperature | Method |
|-------------------------------------|--------|-------------|--|
| Cumene hydroperoxide 80-15-9 | 1,6 | 25 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| N,N-Diethyl-p-toluidine 613-48-9 | 3,7 | | QSAR (Quantitative Structure Activity Relationship) |
| 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: |
| 1,4-Naphthalenedione 130-15-4 | 1,71 | | not specified |

12.5. Results of PBT and vPvB assessment

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

| Hazardous substances CAS-No. | PBT / vPvB |
|----------------------------------|---|
| Cumene hydroperoxide 80-15-9 | 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. |
| 1,4-Naphthalenedione 130-15-4 | 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:

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 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 | < 5 % |

(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:

H225 Highly 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.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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

Further information:

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