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



SDS No. : 724145
V002.0

LOCTITE 3D IND402 A70 High Rebound Grey

Revision: 27.06.2022
printing date: 20.03.2023
Replaces version from: 10.11.2021

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

**1.1. Product identifier**
LOCTITE 3D IND402 A70 High Rebound Grey

**1.2. Relevant identified uses of the substance or mixture and uses advised against**
Intended use:
3D Printing

**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):**

| | |
|---|---|
| Acute toxicity | Category 4 |
| H302 Harmful if swallowed. | |
| Route of Exposure: Oral | |
| Skin irritation | Category 2 |
| H315 Causes skin irritation. | |
| 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 | |
| Specific target organ toxicity - repeated exposure | Category 2 |
| H373 May cause damage to organs through prolonged or repeated exposure. | |
| Chronic hazards to the aquatic environment | Category 2 |
| H411 Toxic to aquatic life with long lasting effects. | |

**2.2. Label elements**

**Label elements (CLP):**

**Hazard pictogram:**

**Contains** Aliphatic Urethane Acrylate Oligomer

Morpholine, 4-(1-oxo-2-propenyl)-
1H-Pyrrole-2,5-dione, 1-phenyl-
2-Hydroxyethyl methacrylate

Reaction mass of pentamethyl-4-piperidylsebacates
1-Cyclohexyl-1H-pyrrole-2,5-dione

Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide
Triacrylate ester
2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester

**Signal word:** Danger

**Hazard statement:**
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statement: Prevention**
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection.
P261 Avoid breathing vapors.

**Precautionary statement: Response**
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
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.

**Following substances are present in a concentration >= 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 ≥ 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<br>CAS-No.<br>EC Number<br>REACH-Reg No. | Concentration | Classification | Specific Conc. Limits, M-factors and ATEs | Add. Information |
|---|---|---|---|---|
| Aliphatic Urethane Acrylate Oligomer | 50- 100 % | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335 | | |
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4<br>418-140-1 | 10- 20 % | Acute Tox. 4, Oral, H302<br>Skin Sens. 1, H317<br>Eye Dam. 1, H318<br>STOT RE 2, H373 | dermal:ATE = 2.500 mg/kg | |
| 1H-Pyrrole-2,5-dione, 1-phenyl-<br>941-69-5<br>213-382-0 | 5- < 10 % | Acute Tox. 3, Oral, H301<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 | M acute = 1<br>M chronic = 1 | |
| 2-Hydroxyethyl methacrylate<br>868-77-9<br>212-782-2<br>01-2119490169-29 | 1- < 5 % | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Eye Irrit. 2, H319 | | |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5<br>915-687-0<br>01-2119491304-40 | 0,1- < 1 % | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Skin Sens. 1A, H317<br>Repr. 2, H361f | M acute = 1<br>M chronic = 1<br>=====<br>dermal:ATE = 3.171 mg/kg | |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0<br>216-630-6 | 0,1- < 1 % | Acute Tox. 3, Oral, H301<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335<br>Skin Sens. 1A, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 3, H412 | M acute = 1 | |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8<br>278-355-8<br>01-2119972295-29 | 0,1- < 1 % | Repr. 2, H361f<br>Aquatic Chronic 2, H411<br>Skin Sens. 1B, H317 | | |
| Triacrylate ester<br>52408-84-1<br>500-114-5<br>500-114-5<br>01-2119487948-12 | 0,1- < 1 % | Eye Irrit. 2, H319<br>Skin Sens. 1B, H317 | | |
| Butyl hydroxytoluene<br>128-37-0<br>204-881-4<br>01-2119565113-46 | 0,1- < 1 % | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 | M acute = 1<br>M chronic = 1 | |
| 2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester<br>2351-43-1 | 0,1- < 1 % | Eye Irrit. 2, H319<br>Skin Sens. 1, H317 | | |

**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: Rash, Urticaria.

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

INGESTION: Nausea, vomiting, diarrhea, abdominal pain.

SKIN: Redness, inflammation.

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

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

## SECTION 5: Firefighting measures

**5.1. Extinguishing media**
**Suitable extinguishing media:**
water, carbon dioxide, foam, powder

**Extinguishing media which must not be used for safety reasons:**
High pressure waterjet

**5.2. Special hazards arising from the substance or mixture**
In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.

**5.3. Advice for firefighters**
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Additional information:**
In case of fire, keep containers cool with water spray.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Avoid contact with skin and eyes.
Wear protective equipment.
Ensure adequate ventilation.
Keep away from sources of ignition.

**6.2. Environmental precautions**
Do not empty into drains / surface water / ground water.

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

**6.4. Reference to other sections**
See advice in section 8

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

Avoid skin and eye contact.
See advice in section 8

Hygiene measures:

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

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

Ensure good ventilation/extraction.
Keep container tightly sealed.
Refer to Technical Data Sheet

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

3D Printing

## 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 |
|---|---|---|---|---|---|
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0<br>[2,6-DI-TERT-BUTYL-P-CRESOL] | | 10 | Time Weighted Average (TWA): | | 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 |
|---|---|---|---|---|---|
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0<br>[2,6-DITERTIARY-BUTYL-PARA-CRESOL] | | 2 | Time Weighted Average (TWA): | | 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 | | |
| 2-Hydroxyethyl methacrylate 868-77-9 | Predator | | | | | | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate 868-77-9 | Marine water - intermittent | | 1 mg/l | | | | |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | aqua (freshwater) | | 0,002 mg/l | | | | |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | aqua (marine water) | | 0,00022 mg/l | | | | |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | aqua (intermittent releases) | | 0,009 mg/l | | | | |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | sewage treatment plant (STP) | | 1 mg/l | | | | |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | sediment (freshwater) | | | | 1,05 mg/kg | | |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | sediment (marine water) | | | | 0,11 mg/kg | | |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | Soil | | | | 0,21 mg/kg | | |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | Predator | | | | | | no potential for bioaccumulation |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | aqua (freshwater) | | 0,0014 mg/l | | | | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | aqua (marine water) | | 0,00014 mg/l | | | | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | Freshwater - intermittent | | 0,014 mg/l | | | | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | Marine water - intermittent | | 0,0014 mg/l | | | | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | sediment (freshwater) | | | | 0,115 mg/kg | | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | sediment (marine water) | | | | 0,0115 mg/kg | | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | Soil | | | | 0,0222 mg/kg | | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | aqua (freshwater) | | 0,006 mg/l | | | | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO | aqua (intermittent | | 0,057 mg/l | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 52408-84-1 | releases) | | | | | | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | Sewage treatment plant | | 10 mg/l | | | | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | sediment (freshwater) | | | | 0,017 mg/kg | | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | sediment (marine water) | | | | 0,002 mg/kg | | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | aqua (marine water) | | 0,001 mg/l | | | | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | oral | | | | 5,6 mg/kg | | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | Soil | | | | 0,012 mg/kg | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | aqua (freshwater) | | 0,000199 mg/l | | | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | aqua (marine water) | | 0,00002 mg/l | | | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | sewage treatment plant (STP) | | 0,17 mg/l | | | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | sediment (freshwater) | | | | 0,0996 mg/kg | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | sediment (marine water) | | | | 0,00996 mg/kg | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | Soil | | | | 0,04769 mg/kg | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | oral | | | | 8,33 mg/kg | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | aqua (intermittent releases) | | 0,00199 mg/l | | | | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | Air | | | | | | no hazard identified |

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

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|---|---|---|---|---|---|---|
| 4-(1-oxo-2-propenyl)-morpholine 5117-12-4 | Workers | inhalation | Long term exposure - systemic effects | | 5,3 mg/m3 | |
| 2-Hydroxyethyl methacrylate 868-77-9 | Workers | dermal | Long term exposure - systemic effects | | 1,3 mg/kg | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate 868-77-9 | Workers | Inhalation | Long term exposure - systemic effects | | 4,9 mg/m3 | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate 868-77-9 | General population | dermal | Long term exposure - systemic effects | | 0,83 mg/kg | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate 868-77-9 | General population | Inhalation | Long term exposure - systemic effects | | 2,9 mg/m3 | no potential for bioaccumulation |
| 2-Hydroxyethyl methacrylate 868-77-9 | General population | oral | Long term exposure - systemic effects | | 0,83 mg/kg | no potential for bioaccumulation |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | Workers | inhalation | Long term exposure - systemic effects | | 1,27 mg/m3 | no potential for bioaccumulation |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | Workers | dermal | Long term exposure - systemic effects | | 1,8 mg/kg | no potential for bioaccumulation |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | General population | dermal | Long term exposure - systemic effects | | 0,9 mg/kg | no potential for bioaccumulation |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | General population | inhalation | Long term exposure - systemic effects | | 0,31 mg/m3 | no potential for bioaccumulation |
| Reaction mass of pentamethyl-4-piperidylsebacates 1065336-91-5 | General population | oral | Long term exposure - systemic effects | | 0,18 mg/kg | no potential for bioaccumulation |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | Workers | inhalation | Long term exposure - systemic effects | | 0,822 mg/m3 | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | Workers | dermal | Long term exposure - systemic effects | | 0,233 mg/kg | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | General population | inhalation | Long term exposure - systemic effects | | 0,145 mg/m3 | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | General population | dermal | Long term exposure - systemic effects | | 0,0833 mg/kg | |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 | General population | oral | Long term exposure - systemic effects | | 0,0833 mg/kg | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | Workers | inhalation | Long term exposure - systemic effects | | 16,22 mg/m3 | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | Workers | dermal | Long term exposure - systemic effects | | 1,92 mg/kg | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | General population | oral | Long term exposure - systemic effects | | 1,39 mg/kg | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | General population | inhalation | Long term exposure - systemic effects | | 4,87 mg/m3 | |
| Glycerol, propoxylated, esters with acrylic acid 1-6.5PO 52408-84-1 | General population | dermal | Long term exposure - systemic effects | | 1,15 mg/kg | |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | Workers | inhalation | Long term exposure - systemic effects | | 3,5 mg/m3 | no hazard identified |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | Workers | dermal | Long term exposure - systemic effects | | 0,5 mg/kg | no hazard identified |
| 2,6-Di-tert-butyl-p-cresol 128-37-0 | General population | inhalation | Long term exposure - | | 0,86 mg/m3 | no hazard identified |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | systemic effects | | | |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | General population | dermal | Long term exposure - systemic effects | | 0,25 mg/kg | no hazard identified |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | General population | oral | Long term exposure - systemic effects | | 0,25 mg/kg | no hazard identified |

**Biological Exposure Indices:**
None

**8.2. Exposure controls:**

Engineering controls:
Ensure good ventilation/extraction.

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

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 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 | grey |
| Odor | Acrylic |
| Melting point | Currently under determination |
| Initial boiling point | Currently under determination |
| Flammability | Currently under determination |
| Explosive limits | Currently under determination |
| Flash point | > 93,3 °C (> 199.94 °F) |
| Auto-ignition temperature | Currently under determination |
| Decomposition temperature | Currently under determination |
| pH | Not applicable |
| Viscosity (kinematic) | Currently under determination |

| | |
|---|---|
| Viscosity, dynamic | 13.000 mPa.s no method |
| () | |
| Solubility (qualitative) | Currently under determination |
| Partition coefficient: n-octanol/water | Currently under determination |
| Vapour pressure | Currently under determination |
| Density | 1,10 g/cm3 no method |
| () | |
| Relative vapour density: | Currently under determination |
| Particle characteristics | Currently under determination |

**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

**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<br>CAS-No. | Value type | Value | Species | Method |
|---|---|---|---|---|
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4 | LD50 | 588 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 1H-Pyrrole-2,5-dione, 1-phenyl-<br>941-69-5 | LD50 | 128 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | LD50 | 5.564 mg/kg | rat | FDA Guideline |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | LD50 | 3.230 mg/kg | rat | OECD Guideline 423 (Acute Oral toxicity) |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | LD50 | 130,5 mg/kg | rat | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | LD50 | > 5.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| Triacrylate ester<br>52408-84-1 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| Butyl hydroxytoluene<br>128-37-0 | LD50 | > 6.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester<br>2351-43-1 | LD50 | 5.564 mg/kg | rat | FDA Guideline |

**Acute dermal toxicity:**

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

| Hazardous substances<br>CAS-No. | Value type | Value | Species | Method |
|---|---|---|---|---|
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4 | Acute toxicity estimate (ATE) | 2.500 mg/kg | | Expert judgement |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | LD50 | > 5.000 mg/kg | rabbit | not specified |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | LD50 | > 3.170 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | Acute toxicity estimate (ATE) | 3.171 mg/kg | | Expert judgement |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| Triacrylate ester<br>52408-84-1 | LD50 | > 2.000 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| Butyl hydroxytoluene<br>128-37-0 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| 2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester<br>2351-43-1 | 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<br>CAS-No. | Value type | Value | Test atmosphere | Exposure time | Species | Method |
|---|---|---|---|---|---|---|
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4 | LC50 | 5,28 mg/l | mist | 4 h | rat | not specified |

**Skin corrosion/irritation:**

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

| Hazardous substances<br>CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| 2-Hydroxyethyl methacrylate<br>868-77-9 | slightly irritating | 24 h | rabbit | Draize Test |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | irritating | | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | not irritating | 24 h | rabbit | not specified |
| Triacrylate ester<br>52408-84-1 | not irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Butyl hydroxytoluene<br>128-37-0 | not irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| 2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester<br>2351-43-1 | not irritating | 24 h | rabbit | Draize Test |

**Serious eye damage/irritation:**

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

| Hazardous substances<br>CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| 2-Hydroxyethyl methacrylate<br>868-77-9 | Category 2B (mildly irritating to eyes) | | rabbit | Draize Test |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | corrosive | | rabbit | equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | not irritating | | rabbit | not specified |
| Triacrylate ester<br>52408-84-1 | irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| Butyl hydroxytoluene<br>128-37-0 | slightly irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| 2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester<br>2351-43-1 | irritating | | rabbit | Draize Test |

**Respiratory or skin sensitization:**

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

| Hazardous substances<br>CAS-No. | Result | Test type | Species | Method |
|---|---|---|---|---|
| 2-Hydroxyethyl methacrylate<br>868-77-9 | not sensitising | Buehler test | guinea pig | Buehler test |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | sensitising | Guinea pig maximisation test | guinea pig | Magnusson and Kligman Method |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Triacrylate ester<br>52408-84-1 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Butyl hydroxytoluene<br>128-37-0 | not sensitising | Draize Test | guinea pig | Draize Test |

**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 |
|---|---|---|---|---|---|
| 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) |
| 2-Hydroxyethyl methacrylate 868-77-9 | positive | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| 2-Hydroxyethyl methacrylate 868-77-9 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione 1631-25-0 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Triacrylate ester 52408-84-1 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Triacrylate ester 52408-84-1 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Triacrylate ester 52408-84-1 | positive | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Butyl hydroxytoluene 128-37-0 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | not specified |
| Butyl hydroxytoluene 128-37-0 | negative | in vitro mammalian chromosome aberration test | with and without | | not specified |
| Butyl hydroxytoluene 128-37-0 | negative | mammalian cell gene mutation assay | with | | 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 |
|---|---|---|---|---|---|---|
| 2-Hydroxyethyl methacrylate 868-77-9 | not carcinogenic | inhalation | 2 y 6 h/d, 5 d/w | rat | female | equivalent or similar OECD Guideline 451 (Carcinogenicity Studies) |
| 2-Hydroxyethyl methacrylate 868-77-9 | not carcinogenic | inhalation | 2 y 6 h/d, 5 d/w | rat | male | equivalent or similar OECD Guideline 451 (Carcinogenicity Studies) |
| Butyl hydroxytoluene 128-37-0 | | oral: feed | 2 y daily | rat | male | |

**Reproductive toxicity:**

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

| Hazardous substances<br>CAS-No. | Result / Value | Test type | Route of application | Species | Method |
|---|---|---|---|---|---|
| 2-Hydroxyethyl methacrylate<br>868-77-9 | NOAEL P >= 1.000 mg/kg<br><br>NOAEL F1 >= 1.000 mg/kg | screening | oral: gavage | rat | equivalent or similar to OECD Guideline 422 (Combined Repeated Dose Toxicity Study) |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | NOAEL P < 221 mg/kg<br><br>NOAEL F1 221 mg/kg | | oral: feed | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Triacrylate ester<br>52408-84-1 | NOAEL P 750 mg/kg<br><br>NOAEL F1 >= 750 mg/kg | screening | oral: gavage | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Butyl hydroxytoluene<br>128-37-0 | NOAEL P 500 mg/kg | Two generation study | oral: feed | rat | not specified |

**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<br>CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---|---|---|---|---|---|
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4 | NOAEL 20 - 50 mg/kg | oral: unspecified | 90 d | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | NOAEL 100 mg/kg | oral: gavage | 49 d<br>daily | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | NOAEL 0,352 mg/l | inhalation | 90 d<br>6 h/d, 5 d/w | rat | OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | NOAEL 100 mg/kg | oral: gavage | 3 m<br>5 d/w | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| Triacrylate ester<br>52408-84-1 | NOAEL 250 mg/kg | oral: gavage | 28-52 d<br>daily | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Butyl hydroxytoluene<br>128-37-0 | NOAEL 25 mg/kg | oral: feed | daily | rat | not specified |

**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<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| 1H-Pyrrole-2,5-dione, 1-phenyl-<br>941-69-5 | LC50 | 0,32 mg/l | 96 h | Fundulus sp. | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | LC50 | > 100 mg/l | 96 h | Oryzias latipes | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | LC50 | 0,9 mg/l | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | LC50 | 1,4 mg/l | 96 h | Cyprinus carpio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Triacrylate ester<br>52408-84-1 | LC50 | 5,74 mg/l | 96 h | Danio rerio (reported as Brachydanio rerio) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Butyl hydroxytoluene<br>128-37-0 | LC50 | Toxicity > Water solubility | 96 h | Brachydanio rerio (new name: Danio rerio) | EU Method C.1 (Acute Toxicity for Fish) |
| Butyl hydroxytoluene<br>128-37-0 | NOEC | 0,053 mg/l | 30 d | Oryzias latipes | OECD Guideline 210 (fish early lite stage toxicity test) |

**Toxicity (Daphnia):**

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

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4 | EC50 | 120 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 1H-Pyrrole-2,5-dione, 1-phenyl-<br>941-69-5 | EC50 | 1,4 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | EC50 | 380 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | EC50 | 0,131 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | EC50 | 3,53 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Triacrylate ester<br>52408-84-1 | EC50 | 91,4 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Butyl hydroxytoluene<br>128-37-0 | EC50 | 0,48 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

**Chronic toxicity to aquatic invertebrates**

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

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| 2-Hydroxyethyl methacrylate<br>868-77-9 | NOEC | 24,1 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | NOEC | 1 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |

| | | | | | |
|---|---|---|---|---|---|
| Butyl hydroxytoluene<br>128-37-0 | NOEC | 0,069 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<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4 | EC50 | > 120 mg/l | 72 h | not specified | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1H-Pyrrole-2,5-dione, 1-phenyl-<br>941-69-5 | NOEC | < 0,49 mg/l | 96 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1H-Pyrrole-2,5-dione, 1-phenyl-<br>941-69-5 | EC50 | 0,88 mg/l | 72 h | Pseudokirchneriella subcapitata | EPA OTS 797.1050 (Algal Toxicity, Tiers I and II) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | EC50 | 836 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | NOEC | 400 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | NOEC | 0,22 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | EC50 | 1,68 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | EC50 | 0,646 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | NOEC | 0,646 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | EC50 | > 2,01 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | EC10 | 1,56 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Triacrylate ester<br>52408-84-1 | EC50 | 12,2 mg/l | 72 h | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Triacrylate ester<br>52408-84-1 | EC10 | 2,06 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Butyl hydroxytoluene<br>128-37-0 | EC50 | Toxicity > Water solubility | 72 h | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | EU Method C.3 (Algal Inhibition test) |
| Butyl hydroxytoluene<br>128-37-0 | EC10 | 0,4 mg/l | 72 h | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | EU Method C.3 (Algal Inhibition test) |

**Toxicity to microorganisms**

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

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| 2-Hydroxyethyl methacrylate<br>868-77-9 | EC0 | > 3.000 mg/l | 16 h | Pseudomonas fluorescens | other guideline: |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | IC50 | 100 mg/l | 3 h | activated sludge | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | EC 50 | > 1.000 mg/l | 30 min | | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| Triacrylate ester<br>52408-84-1 | EC20 | 507 mg/l | 3 h | activated sludge | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| Butyl hydroxytoluene<br>128-37-0 | EC50 | Toxicity > Water solubility | 3 h | activated sludge | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |

**12.2. Persistence and degradability**

| Hazardous substances<br>CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|---|---|---|---|---|---|
| Aliphatic Urethane Acrylate Oligomer | readily biodegradable | | > 60 % | 28 day | OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test) |
| 1H-Pyrrole-2,5-dione, 1-phenyl-<br>941-69-5 | not readily biodegradable. | not specified | 6 % | 28 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | readily biodegradable | aerobic | 92 - 100 % | 14 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | not readily biodegradable. | aerobic | 38 % | 28 d | OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test) |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | readily biodegradable | aerobic | 82 % | 28 d | EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | not readily biodegradable. | aerobic | 0 - 10 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Triacrylate ester<br>52408-84-1 | readily biodegradable | aerobic | 72 - 85 % | 28 d | OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test) |
| Butyl hydroxytoluene<br>128-37-0 | not readily biodegradable. | aerobic | 4,5 % | 28 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| Butyl hydroxytoluene<br>128-37-0 | not inherently biodegradable | aerobic | 5,2 - 5,6 % | 35 d | OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II)) |
| 2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester<br>2351-43-1 | readily biodegradable | aerobic | 92 - 100 % | 14 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |

### 12.3. Bioaccumulative potential

| Hazardous substances<br>CAS-No. | Bioconcentration factor (BCF) | Exposure time | Temperature | Species | Method |
|---|---|---|---|---|---|
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | < 31,4 | 56 d | 24,5 °C | Cyprinus carpio | other guideline: |
| Butyl hydroxytoluene<br>128-37-0 | 330 - 1.800 | 56 d | | Cyprinus carpio | OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish) |

### 12.4. Mobility in soil

| Hazardous substances<br>CAS-No. | LogPow | Temperature | Method |
|---|---|---|---|
| 1H-Pyrrole-2,5-dione, 1-phenyl-<br>941-69-5 | 1,16 | 25 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | 0,42 | 25 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | > 2,37 - 2,77 | 25 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| 1-Cyclohexyl-1H-pyrrole-2,5-dione<br>1631-25-0 | 2,57 | 23 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | 3,1 | 23 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| Butyl hydroxytoluene<br>128-37-0 | 5,1 | | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |

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

| Hazardous substances<br>CAS-No. | PBT / vPvB |
|---|---|
| Morpholine, 4-(1-oxo-2-propenyl)-<br>5117-12-4 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Reaction mass of pentamethyl-4-piperidylsebacates<br>1065336-91-5 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide<br>75980-60-8 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Triacrylate ester<br>52408-84-1 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Butyl hydroxytoluene<br>128-37-0 | 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**

| | |
|---|---|
| ADR | 3082 |
| RID | 3082 |
| ADN | 3082 |
| IMDG | 3082 |
| IATA | 3082 |

**14.2. UN proper shipping name**

| | |
|---|---|
| ADR | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (n-Phenylmaleimide) |
| RID | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (n-Phenylmaleimide) |
| ADN | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (n-Phenylmaleimide) |
| IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (n-Phenylmaleimide) |
| IATA | Environmentally hazardous substance, liquid, n.o.s. (n-Phenylmaleimide) |

**14.3. Transport hazard class(es)**

| | |
|---|---|
| ADR | 9 |
| RID | 9 |
| ADN | 9 |
| IMDG | 9 |
| IATA | 9 |

**14.4. Packing group**

| | |
|---|---|
| ADR | III |
| RID | III |
| ADN | III |
| IMDG | III |
| IATA | III |

**14.5. Environmental hazards**

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

**14.6. Special precautions for user**

| | |
|---|---|
| ADR | not applicable<br>Tunnelcode: |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), A197 (IATA), 2.10.2.7 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

**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 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:

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H361f Suspected of damaging fertility.
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:**

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel´s Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

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.

Dear Customer,
Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your_company.com).

**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.**

## Annex - Exposure Scenarios:

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