



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

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LOCTITE 278

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

1.1. Product identifier

LOCTITE 278

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

Intended use:

Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 211 797 0

Fax-no.: +49 211 798 2009

ua-productsafety.de@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

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

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	
Chronic hazards to the aquatic environment	Category 3
H412 Harmful to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Contains**

2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methylene) ester

Hydroxypropyl methacrylate
Methacryloyloxyethyl succinate
2-Hydroxyethyl methacrylate

Hydroxyethyl methacrylate phosphate
Acetic acid, 2-phenylhydrazide
maleic acid

Signal word:

Danger

Hazard statement:

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

Precautionary statement:

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

**Precautionary statement:
Prevention**

P261 Avoid breathing vapors.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection.

**Precautionary statement:
Response**

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.

SECTION 3: Composition/information on ingredients
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3.2. Mixtures

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	609-946-4 01-2119980659-17	50- 100 %	Aquatic Chronic 4 H413
2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diy)bis(methylene) ester 43048-08-4	256-062-6 01-2120164868-39	10- 20 %	STOT SE 3 H335 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Skin Sens. 1B H317 Aquatic Chronic 2 H411
Hydroxypropyl methacrylate 27813-02-1	248-666-3 01-2119490226-37	5- < 10 %	Skin Sens. 1 H317 Eye Irrit. 2 H319
Methacryloyloxyethyl succinate 20882-04-6	244-096-4 01-2120137902-58	5- < 10 %	Skin Sens. 1 H317 Eye Dam. 1 H318
Cumene hydroperoxide 80-15-9	201-254-7 01-2119475796-19	1- < 2,5 %	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
2-Hydroxyethyl methacrylate 868-77-9	212-782-2 01-2119490169-29	0,1- < 1 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319
Hydroxyethyl methacrylate phosphate 52628-03-2	258-053-2	0,1- < 1 %	Skin Corr. 1C H314 Skin Sens. 1 H317 Eye Dam. 1 H318
Acetic acid, 2-phenylhydrazide 114-83-0	204-055-3	0,1- < 1 %	Acute Tox. 3; Oral H301 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 STOT SE 3; Inhalation H335 Carc. 2 H351
maleic acid 110-16-7	203-742-5 01-2119488705-25	0,1- < 1 %	Acute Tox. 4; Oral H302 Eye Irrit. 2 H319 STOT SE 3 H335 Skin Irrit. 2 H315 Skin Sens. 1 H317 Acute Tox. 4; Dermal H312
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
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**For full text of the H - statements and other abbreviations see section 16 "Other information".
 Substances without classification may have community workplace exposure limits available.**

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin contact:

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

Eye contact:

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

Ingestion:

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

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

SKIN: Redness, inflammation.

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

SKIN: Rash, Urticaria.

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 (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:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry place.

Refer to Technical Data Sheet

7.3. Specific end use(s)

Adhesive

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Methacrylic acid 79-41-4	50	180	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Methacrylic acid 79-41-4			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Bisphenol A, 2-EO dimethacrylate 41637-38-1	aqua (freshwater)						no hazard identified
Bisphenol A, 2-EO dimethacrylate 41637-38-1	aqua (marine water)						no hazard identified
Bisphenol A, 2-EO dimethacrylate 41637-38-1	sewage treatment plant (STP)						no hazard identified
Bisphenol A, 2-EO dimethacrylate 41637-38-1	sediment (freshwater)						
Bisphenol A, 2-EO dimethacrylate 41637-38-1	sediment (marine water)						
Bisphenol A, 2-EO dimethacrylate 41637-38-1	Air						no hazard identified
Bisphenol A, 2-EO dimethacrylate 41637-38-1	soil						
Bisphenol A, 2-EO dimethacrylate 41637-38-1	Predator						
(Octahydro-4,7-methano-1H- indenediyl)bis(methylene) bismethacrylate 43048-08-4	aqua (freshwater)		0,0016 mg/l				
(Octahydro-4,7-methano-1H- indenediyl)bis(methylene) bismethacrylate 43048-08-4	aqua (intermittent releases)		0,016 mg/l				
(Octahydro-4,7-methano-1H- indenediyl)bis(methylene) bismethacrylate 43048-08-4	aqua (marine water)		0,00016 mg/l				
(Octahydro-4,7-methano-1H- indenediyl)bis(methylene) bismethacrylate 43048-08-4	Sewage treatment plant		10 mg/l				
(Octahydro-4,7-methano-1H- indenediyl)bis(methylene) bismethacrylate 43048-08-4	sediment (freshwater)				1,6 mg/kg		
(Octahydro-4,7-methano-1H- indenediyl)bis(methylene) bismethacrylate 43048-08-4	sediment (marine water)				0,16 mg/kg		
(Octahydro-4,7-methano-1H- indenediyl)bis(methylene) bismethacrylate 43048-08-4	Soil				0,32 mg/kg		
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	aqua (freshwater)		0,904 mg/l				
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	aqua (marine water)		0,904 mg/l				
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	sewage treatment plant (STP)		10 mg/l				
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	aqua (intermittent releases)		0,972 mg/l				
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	sediment (freshwater)				6,28 mg/kg		
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	sediment (marine water)				6,28 mg/kg		
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	Soil				0,727 mg/kg		
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (freshwater)		0,0031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (marine water)		0,00031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (intermittent releases)		0,031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide	Sewage treatment plant		0,35 mg/l				

80-15-9							
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	sediment (freshwater)				0,023 mg/kg		
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	sediment (marine water)				0,0023 mg/kg		
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Soil				0,0029 mg/kg		
2-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-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	aqua (freshwater)		0,068 mg/l				
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	aqua (marine water)		0,007 mg/l				
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	sewage treatment plant (STP)		0,546 mg/l				
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	sediment (freshwater)				0,481 mg/kg		
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	sediment (marine water)				0,048 mg/kg		
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	Soil				0,056 mg/kg		
Maleic acid 110-16-7	aqua (freshwater)		0,1 mg/l				
Maleic acid 110-16-7	aqua (intermittent releases)		0,4281 mg/l				
Maleic acid 110-16-7	sediment (freshwater)				0,334 mg/kg		
Maleic acid 110-16-7	sewage treatment plant (STP)		44,6 mg/l				
Maleic acid 110-16-7	aqua (marine water)		0,01 mg/l				
Maleic acid 110-16-7	sediment (marine water)				0,0334 mg/kg		
Maleic acid 110-16-7	Soil				0,0415 mg/kg		
methacrylic acid 79-41-4	aqua (freshwater)		0,82 mg/l				
methacrylic acid 79-41-4	aqua (marine water)		0,82 mg/l				
methacrylic acid 79-41-4	sewage treatment plant (STP)		10 mg/l				
methacrylic acid 79-41-4	aqua (intermittent releases)		0,82 mg/l				
methacrylic acid 79-41-4	Soil				1,2 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Bisphenol A, 2-EO dimethacrylate 41637-38-1	Workers	inhalation	Long term exposure - systemic effects		3,52 mg/m ³	no hazard identified
Bisphenol A, 2-EO dimethacrylate 41637-38-1	Workers	dermal	Long term exposure - systemic effects		2 mg/kg	no hazard identified
Bisphenol A, 2-EO dimethacrylate 41637-38-1	General population	inhalation	Long term exposure - systemic effects		0,87 mg/m ³	no hazard identified
Bisphenol A, 2-EO dimethacrylate 41637-38-1	General population	dermal	Long term exposure - systemic effects		1 mg/kg	no hazard identified
Bisphenol A, 2-EO dimethacrylate 41637-38-1	General population	oral	Long term exposure - systemic effects		0,5 mg/kg	no hazard identified
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Workers	dermal	Long term exposure - systemic effects		4,2 mg/kg	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Workers	Inhalation	Long term exposure - systemic effects		14,7 mg/m ³	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	dermal	Long term exposure - systemic effects		2,5 mg/kg	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	Inhalation	Long term exposure - systemic effects		8,8 mg/m ³	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	oral	Long term exposure - systemic effects		2,5 mg/kg	
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Workers	inhalation	Long term exposure - systemic effects		6 mg/m ³	
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/m ³	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/m ³	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
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	Workers	inhalation	Long term exposure - systemic effects		7,04 mg/m ³	
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	Workers	dermal	Long term exposure - systemic effects		1 mg/kg	
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	General population	inhalation	Long term exposure - systemic effects		1,74 mg/m ³	
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate 52628-03-2	General population	dermal	Long term exposure - systemic effects		0,5 mg/kg	
Maleic acid 110-16-7	Workers	dermal	Acute/short term exposure - local effects		0,55 mg/cm ²	
Maleic acid 110-16-7	Workers	dermal	Long term exposure - local effects		0,04 mg/cm ²	
Maleic acid 110-16-7	Workers	dermal	Acute/short term exposure - systemic effects		58 mg/kg	
Maleic acid 110-16-7	Workers	dermal	Long term exposure -		3,3 mg/kg	

			systemic effects		
Maleic acid 110-16-7	Workers	inhalation	Acute/short term exposure - local effects	3 mg/m ³	
Maleic acid 110-16-7	Workers	inhalation	Long term exposure - systemic effects	3 mg/m ³	
Maleic acid 110-16-7	Workers	inhalation	Long term exposure - local effects	3 mg/m ³	
Maleic acid 110-16-7	Workers	inhalation	Acute/short term exposure - systemic effects	3 mg/m ³	
methacrylic acid 79-41-4	Workers	Inhalation	Long term exposure - local effects	88 mg/m ³	
methacrylic acid 79-41-4	Workers	Inhalation	Long term exposure - systemic effects	29,6 mg/m ³	
methacrylic acid 79-41-4	Workers	dermal	Long term exposure - systemic effects	4,25 mg/kg	
methacrylic acid 79-41-4	General population	Inhalation	Long term exposure - local effects	6,55 mg/m ³	
methacrylic acid 79-41-4	General population	Inhalation	Long term exposure - systemic effects	6,3 mg/m ³	
methacrylic acid 79-41-4	General population	dermal	Long term exposure - systemic effects	2,55 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

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

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

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

nitrile rubber (NBR; \geq 0.4 mm thickness)

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

nitrile rubber (NBR; \geq 0.4 mm thickness)

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

Eye protection:

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

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid liquid green
Odor	characteristic
Odour threshold	No data available / Not applicable
pH	Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	> 149 °C (> 300.2 °F)
Flash point	> 100 °C (> 212 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure (50 °C (122 °F))	< 300 mbar
Relative vapour density:	No data available / Not applicable
Density (ρ)	1,11 - 1,14 g/cm ³
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity (Cone and plate; Instrument: Haake cone and plate, RV1, C35/2°Ti; 25 °C (77 °F); Shear gradient: 129 s ⁻¹)	1.500 - 2.500 mPa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

carbon oxides.

Hydrocarbons

nitrogen oxides

Rapid polymerisation may generate excessive heat and pressure.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute oral toxicity:**

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
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
2-Propenoic acid, 2- methyl-, (octahydro-4,7- methano-1H-indene-5- diyl)bis(methylene) ester 43048-08-4	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Hydroxypropyl methacrylate 27813-02-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Methacryloyloxyethyl succinate 20882-04-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Cumene hydroperoxide 80-15-9	LD50	382 mg/kg	rat	other guideline:
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 5.000 mg/kg	rat	not specified
Hydroxyethyl methacrylate phosphate 52628-03-2	LD50	> 2.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Hydroxyethyl methacrylate phosphate 52628-03-2	Acute toxicity estimate (ATE)	2.500 mg/kg		Expert judgement
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	rat	not specified
maleic acid 110-16-7	LD50	708 mg/kg	rat	not specified
methacrylic acid 79-41-4	LD50	1.320 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

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
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diy)bis(methylene) ester 43048-08-4	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Hydroxypropyl methacrylate 27813-02-1	LD50	> 5.000 mg/kg	rabbit	not specified
Cumene hydroperoxide 80-15-9	LD50	530 - 1.060 mg/kg	rat	other guideline:
Cumene hydroperoxide 80-15-9	Acute toxicity estimate (ATE)	1.100 mg/kg		Expert judgement
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 5.000 mg/kg	rabbit	not specified
maleic acid 110-16-7	LD50	1.560 mg/kg	rabbit	not specified
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

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
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				Expert judgement

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
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hydroxypropyl methacrylate 27813-02-1	not irritating	24 h	rabbit	Draize Test
Methacryloyloxyethyl succinate 20882-04-6	not irritating	0,25 h	Human, EPISKIIN™ Reconstituted Human Epidermis model	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Methacryloyloxyethyl succinate 20882-04-6	Not Classified	4 h	Human, EPISKIIN™ Reconstituted Human Epidermis model	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Cumene hydroperoxide 80-15-9	corrosive		rabbit	Draize Test
Hydroxyethyl methacrylate phosphate 52628-03-2	corrosive	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
maleic acid 110-16-7	irritating	24 h	human	Patch Test
methacrylic acid 79-41-4	corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

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

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Hydroxypropyl methacrylate 27813-02-1	irritating		rabbit	Draize Test
Methacryloyloxyethyl succinate 20882-04-6	Category I	10 min	Bovine, cornea, in vitro test	OECD Guideline 437 (BCOP)
2-Hydroxyethyl methacrylate 868-77-9	irritating		rabbit	Draize Test
maleic acid 110-16-7	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
methacrylic acid 79-41-4	corrosive		rabbit	Draize Test

Respiratory or skin sensitization:

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

Hazardous substances CAS-No.	Result	Test type	Species	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methylene) ester 43048-08-4	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Hydroxypropyl methacrylate 27813-02-1	sensitising	Guinea pig maximisation test	guinea pig	not specified
2-Hydroxyethyl methacrylate 868-77-9	sensitising	Guinea pig maximisation test	guinea pig	not specified
maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	guinea pig	OECD Guideline 406 (Skin Sensitisation)
methacrylic acid 79-41-4	not sensitising	Buehler test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

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

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	positive	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydroxypropyl methacrylate 27813-02-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydroxypropyl methacrylate 27813-02-1	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Methacryloyloxyethyl succinate 20882-04-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Cumene hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
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)
2-Hydroxyethyl methacrylate 868-77-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
Hydroxyethyl methacrylate phosphate 52628-03-2	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydroxyethyl methacrylate phosphate 52628-03-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydroxyethyl methacrylate phosphate 52628-03-2	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
maleic acid 110-16-7	negative	bacterial reverse mutation assay (e.g Ames test)	no data		Ames Test
maleic acid 110-16-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
methacrylic acid 79-41-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydroxypropyl methacrylate 27813-02-1	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Cumene hydroperoxide 80-15-9	negative	dermal		mouse	not specified
2-Hydroxyethyl methacrylate 868-77-9	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
methacrylic acid 79-41-4	negative	inhalation		mouse	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant

					Lethal Test)
methacrylic acid 79-41-4	negative	oral: gavage		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

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

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Hydroxypropyl methacrylate 27813-02-1	not carcinogenic	inhalation	2 years (102 weeks) 6 hours/day, 5 days/week	rat	male	OECD Guideline 451 (Carcinogenicity Studies)
2-Hydroxyethyl methacrylate 868-77-9		inhalation	102 weeks 6 hours/day, 5 days/week	rat	female	OECD Guideline 451 (Carcinogenicity Studies)
maleic acid 110-16-7	not carcinogenic	oral: feed	2 y daily	rat	male/female	OECD Guideline 451 (Carcinogenicity Studies)
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
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	NOAEL P 250 mg/kg NOAEL F1 1.000 mg/kg		oral: gavage	rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
Hydroxypropyl methacrylate 27813-02-1	NOAEL P 400 mg/kg	two- generation study	oral: gavage	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
2-Hydroxyethyl methacrylate 868-77-9	NOAEL P >= 1.000 mg/kg NOAEL F1 >= 1.000 mg/kg	screening	oral: gavage	rat	OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)
maleic acid 110-16-7	NOAEL F1 150 mg/kg NOAEL F2 55 mg/kg	Two generation study	oral: gavage	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
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
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	NOAEL 300 mg/kg	oral: gavage	4 weeks daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Hydroxypropyl methacrylate 27813-02-1	NOAEL 300 mg/kg	oral: gavage		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Cumene hydroperoxide 80-15-9		inhalation: aerosol	6 h/d 5 d/w	rat	not specified
2-Hydroxyethyl methacrylate 868-77-9	NOAEL 100 mg/kg	oral: gavage	once daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
maleic acid 110-16-7	NOAEL >= 40 mg/kg	oral: feed	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
methacrylic acid 79-41-4		inhalation	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	LL50	Toxicity > Water solubility	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methylene) ester 43048-08-4	LC50	1,65 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroxypropyl methacrylate 27813-02-1	LC50	493 mg/l	48 h	Leuciscus idus melanotus	DIN 38412-15
Cumene hydroperoxide 80-15-9	LC50	3,9 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	LC50	> 100 mg/l	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroxyethyl methacrylate phosphate 52628-03-2	LC50	> 112 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
maleic acid 110-16-7	LC50	> 245 mg/l	48 h	Leuciscus idus	DIN 38412-15
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)

Toxicity (Daphnia):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	EL50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methylene) ester 43048-08-4	EC50	2,36 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroxypropyl methacrylate 27813-02-1	EC50	> 143 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacryloyloxyethyl succinate 20882-04-6	EC50	> 515,4 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Cumene hydroperoxide 80-15-9	EC50	18,84 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroxyethyl methacrylate phosphate 52628-03-2	EC50	68 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
maleic acid 110-16-7	EC50	42,81 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)

Chronic toxicity to aquatic invertebrates

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	NOEC	45,2 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
2-Hydroxyethyl methacrylate 868-77-9	NOEC	24,1 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
maleic acid 110-16-7	NOEC	10 mg/l	21 d	Daphnia magna	other guideline:

Toxicity (Algae):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	EL50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	EL10	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methylene) ester 43048-08-4	EC50	1,6 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methylene) ester 43048-08-4	EC10	0,64 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroxypropyl methacrylate 27813-02-1	EC50	> 97,2 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroxypropyl methacrylate 27813-02-1	NOEC	> 97,2 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacryloyloxyethyl succinate 20882-04-6	EC50	> 312 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacryloyloxyethyl succinate 20882-04-6	NOEC	21,1 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	EC50	3,1 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	NOEC	1 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 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 868-77-9	NOEC	400 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroxyethyl methacrylate phosphate 52628-03-2	EC50	> 120 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroxyethyl methacrylate phosphate 52628-03-2	NOEC	> 30 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC50	74,35 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC10	11,8 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
methacrylic acid 79-41-4	NOEC	8,2 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
methacrylic acid 79-41-4	EC50	45 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	EC50	Toxicity > Water solubility	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Hydroxypropyl methacrylate 27813-02-1	EC10	1.140 mg/l	16 h		not specified
Cumene hydroperoxide 80-15-9	EC10	70 mg/l	30 min		not specified
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3.000 mg/l	16 h	Pseudomonas fluorescens	other guideline:
maleic acid 110-16-7	EC10	44,6 mg/l	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas)

					Zellvermehrungshemm-Test)
methacrylic acid 79-41-4	EC10	100 mg/l	17 h		not specified

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	not readily biodegradable.	aerobic	24 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methylene) ester 43048-08-4	not readily biodegradable.	aerobic	28 %	28 d	other guideline:
Hydroxypropyl methacrylate 27813-02-1	readily biodegradable	aerobic	94,2 %	28 d	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Methacryloyloxyethyl succinate 20882-04-6	readily biodegradable, but failing 10-day window	aerobic	80 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Cumene hydroperoxide 80-15-9	not readily biodegradable.	aerobic	3 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	14 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Hydroxyethyl methacrylate phosphate 52628-03-2	readily biodegradable	aerobic	78,3 %	28 day	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
maleic acid 110-16-7	readily biodegradable	aerobic	97,08 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
methacrylic acid 79-41-4	inherently biodegradable	aerobic	100 %	14 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
methacrylic acid 79-41-4	readily biodegradable	aerobic	86 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

12.3. Bioaccumulative potential

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

Hazardous substances CAS-No.	LogPow	Temperature	Method
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	5,3 - 5,62		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Hydroxypropyl methacrylate 27813-02-1	0,97	20 °C	not specified
Methacryloyloxyethyl succinate 20882-04-6	0,783	23 °C	EU Method A.8 (Partition Coefficient)
Cumene hydroperoxide 80-15-9	1,6	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
2-Hydroxyethyl methacrylate 868-77-9	0,42	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Hydroxyethyl methacrylate phosphate 52628-03-2	1 - < 2,72	30 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Acetic acid, 2-phenylhydrazide 114-83-0	0,74		not specified
maleic acid 110-16-7	-1,3	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
methacrylic acid 79-41-4	0,93	22 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
Ethoxylated bisphenol A dimethacrylate esters 41637-38-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydroxypropyl methacrylate 27813-02-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Cumene hydroperoxide 80-15-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2-Hydroxyethyl methacrylate 868-77-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydroxyethyl methacrylate phosphate 52628-03-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
maleic acid 110-16-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
methacrylic acid 79-41-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

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

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

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

Waste code

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

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

SECTION 14: Transport information

14.1. UN number

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

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

not applicable

SECTION 15: Regulatory information

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

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

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC): Not applicable

VOC content < 5 %
(2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK: WGK 2: significantly water endangering (Ordinance on facilities for handling substances that are hazardous to water (AwSV))
Classification according to AwSV, Annex 1 (5.2)

Storage class according to TRGS 510: 10

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:

H242 Heating may cause a fire.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

Further information:

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

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.