

**LOCTITE 518** 

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

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SDS No.: 816757

V002.0 Revision: 25.11.2024

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Replaces version from: 29.06.2023

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

#### 1.1. Product identifier

LOCTITE 518

UFI: XG6A-TX84-A20Q-77MS

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

Intended use:

Anaerobic Adhesive

#### 1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website www.mysds.henkel.com 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):

Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Chronic hazards to the aquatic environment	Category 3
H412 Harmful to aquatic life with long lasting effects.	

### 2.2. Label elements

Label elements (CLP):

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**Contains** 3-Phenoxy-2-hydroxypropyl methacyrlate

3,3,5 Trimethylcyclohexyl methacrylate

2-Hydroxyethyl methacrylate

Methacryloyloxyethyl succinate Acetic acid, 2-phenylhydrazide 2-Carboxyethyl acrylate

	2-Carboxyethyl acrylate
Signal word:	Warning
Hazard statement:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects.
Precautionary statement: Prevention	P273 Avoid release to the environment. P280 Wear protective gloves.
Precautionary statement: Response	P302+P352 IF ON SKIN: Wash with plenty of soap and water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention.

# 2.3. Other hazards

None if used properly.

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

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

# **SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

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

Hazardous components CAS-No. EC Number	Concentration	Classification	Specific Conc. Limits, M- factors and ATEs	Add. Information
REACH-Reg No.  3-Phenoxy-2-hydroxypropyl methacyrlate 16926-87-7 240-994-5 01-2120940473-56	10-< 20 %	Skin Sens. 1B, H317		
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 231-927-0 01-2120748527-45	5-< 10 %	Aquatic Chronic 2, H411 Skin Sens. 1B, H317 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Irrit. 2, H319	STOT SE 3; H335; C >= 10 %	
2-Hydroxyethyl methacrylate 868-77-9 212-782-2 01-2119490169-29	5-< 10 %	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319		
Methacryloyloxyethyl succinate 20882-04-6 244-096-4 01-2120137902-58	0,1-< 1 %	Skin Sens. 1, H317 Eye Dam. 1, H318		
Acetic acid, 2-phenylhydrazide 114-83-0 204-055-3 01-2120951382-56	0,1-< 1 %	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Acute Tox. 4, Oral, H302 Skin Sens. 1, H317 Carc. 2, H351	M acute = 1 M chronic = 1	
2-Propenoic acid, homopolymer (oligomers) 9003-01-4 01-2120754771-50	0,1-< 1 %	Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Acute Tox. 4, Oral, H302 Eye Dam. 1, H318 STOT SE 3, H335	M acute = 1	
methacrylic acid 79-41-4 201-204-4 01-2119463884-26	0,1-< 1 %	Acute Tox. 4, Oral, H302 Acute Tox. 3, Dermal, H311 Acute Tox. 4, Inhalation, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335	STOT SE 3; H335; C >= 1 %  =====  dermal:ATE = 500 mg/kg inhalation:ATE = 3,19 mg/l;dust/mist	
2-Carboxyethyl acrylate 24615-84-7 246-359-9	0,1-< 1 %	Aquatic Chronic 2, H411 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335		
Acrylic acid 79-10-7 201-177-9 01-2119452449-31	0,1-< 1 %	Acute Tox. 4, Dermal, H312 Skin Corr. 1A, H314 Flam. Liq. 3, H226 Acute Tox. 4, Oral, H302 Acute Tox. 4, Inhalation, H332 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 STOT SE 3, H335 Eye Dam. 1, H318	STOT SE 3; H335; C >= 1 %  =====  M acute = 1  =====  dermal:ATE = 1.100 mg/kg inhalation:ATE = 11 mg/l;vapour	EU OEL

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

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# **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.

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

#### 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.

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#### 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)

Anaerobic Adhesive

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# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

# **Occupational Exposure Limits**

Valid for

Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, INHALABLE DUST]		6	Time Weighted Average (TWA):		EH40 WEL
Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, RESPIRABLE DUST]		2,4	Time Weighted Average (TWA):		EH40 WEL
Silicon dioxide 112945-52-5 [Dust, respirable dust]		4	Time Weighted Average (TWA):		EH40 WEL
Silicon dioxide 112945-52-5 [Dust, inhalable dust]		10	Time Weighted Average (TWA):		EH40 WEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	72	Time Weighted Average (TWA):		EH40 WEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	40	143	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Acrylic acid 79-10-7 [ACRYLIC ACID (PROP-2-ENOIC ACID)]	10	29	Time Weighted Average (TWA):	Indicative	ECTLV
Acrylic acid 79-10-7 [ACRYLIC ACID (PROP-2-ENOIC ACID)]	20	59	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Acrylic acid 79-10-7 [ACRYLIC ACID]	10	29	Time Weighted Average (TWA):		EH40 WEL
Acrylic acid 79-10-7 [Acrylic acid]	20	59	Short Term Exposure Limit (STEL):	1 minute	EH40 WEL

# **Occupational Exposure Limits**

Valid for

Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS]		6	Time Weighted Average (TWA):		IR_OEL
Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS]		2,4	Time Weighted Average (TWA):		IR_OEL
Silicon dioxide 112945-52-5 [DUSTS NON-SPECIFIC]		10	Time Weighted Average (TWA):		IR_OEL
Silicon dioxide 112945-52-5 [DUSTS NON-SPECIFIC]		4	Time Weighted Average (TWA):		IR_OEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	70	Time Weighted Average (TWA):		IR_OEL
Methacrylic acid 79-41-4	40	140	Short Term Exposure Limit (STEL):	15 minutes	IR_OEL

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[METHACRYLIC ACID]					
Acrylic acid 79-10-7 [ACRYLIC ACID (PROP-2-ENOIC ACID)]	10	29	Time Weighted Average (TWA):	Indicative	ECTLV
Acrylic acid 79-10-7 [ACRYLIC ACID (PROP-2-ENOIC ACID)]	20	59	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Acrylic acid 79-10-7 [ACRYLIC ACID]	20	59	Short Term Exposure Limit (STEL):	1 minute Indicative OELV	IR_OEL
Acrylic acid 79-10-7 [ACRYLIC ACID]	10	29	Time Weighted Average (TWA):	Indicative OELV	IR_OEL

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# **Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental Compartment	Exposure period	Value				Remarks
	, sample and pro-	periou	mg/l	ppm	mg/kg	others	
3,3,5 Trimethylcyclohexyl methacrylate	aqua		0,0019				
7779-31-9	(freshwater)		mg/l				
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	aqua (marine water)		0,00019 mg/l				
3,3,5 Trimethylcyclohexyl methacrylate	aqua		0,019 mg/l				
7779-31-9	(intermittent		0,017 mg/1				
	releases)						
3,3,5 Trimethylcyclohexyl methacrylate	sewage		100 mg/l				
7779-31-9	treatment plant						
3,3,5 Trimethylcyclohexyl methacrylate	(STP) sediment				0,141		
7779-31-9	(freshwater)				mg/kg		
3,3,5 Trimethylcyclohexyl methacrylate	sediment				0,014		
7779-31-9	(marine water)				mg/kg		
3,3,5 Trimethylcyclohexyl methacrylate	Soil				0,027		
7779-31-9 2-Hydroxyethyl methacrylate			0.492/1		mg/kg		
868-77-9	aqua (freshwater)		0,482 mg/l				
2-Hydroxyethyl methacrylate	aqua (marine		0,482 mg/l				
868-77-9	water)		, ,				
2-Hydroxyethyl methacrylate	sewage		10 mg/l				
868-77-9	treatment plant						
2-Hydroxyethyl methacrylate	(STP) aqua		1 mg/l				
868-77-9	(intermittent		1 mg/1				
	releases)						
2-Hydroxyethyl methacrylate	sediment				3,79 mg/kg		
868-77-9	(freshwater)						
2-Hydroxyethyl methacrylate 868-77-9	sediment (marine water)				3,79 mg/kg		
2-Hydroxyethyl methacrylate	Soil				0,476		
868-77-9	Son				mg/kg		
2-Hydroxyethyl methacrylate	Predator				8 8		no potential for
868-77-9							bioaccumulation
2-Hydroxyethyl methacrylate	Marine water -		1 mg/l				
868-77-9 2-Propenoic acid, homopolymer (oligomers)	intermittent		0.010/1				
9003-01-4	aqua (freshwater)		0,018 mg/l				
2-Propenoic acid, homopolymer (oligomers)	aqua (marine		0,0018				
9003-01-4	water)		mg/l				
2-Propenoic acid, homopolymer (oligomers)	sewage		0,9 mg/l				
9003-01-4	treatment plant						
2-Propenoic acid, homopolymer (oligomers)	(STP) sediment				2,76 mg/kg		
9003-01-4	(freshwater)				2,70 mg/kg		
2-Propenoic acid, homopolymer (oligomers)	sediment				0,276		
9003-01-4	(marine water)				mg/kg		
2-Propenoic acid, homopolymer (oligomers)	Soil				0,416		
9003-01-4 methacrylic acid	aqua		0,82 mg/l		mg/kg		
79-41-4	(freshwater)		0,62 mg/1				
methacrylic acid	Freshwater -		0,45 mg/l				
79-41-4	intermittent						
methacrylic acid	aqua (marine		0,082 mg/l				
79-41-4 methacrylic acid	water)		100 mg/l				
79-41-4	sewage treatment plant		100 Hig/I				
	(STP)						
methacrylic acid	sediment				3,09 mg/kg		
79-41-4	(freshwater)			<u> </u>	0.200		
methacrylic acid 79-41-4	sediment (marine water)				0,309		
methacrylic acid	Soil			1	mg/kg 0,137		
79-41-4	5011				mg/kg		
methacrylic acid	Predator						no potential for
79-41-4							bioaccumulation

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Acrylic acid 79-10-7	aqua (freshwater)	0,003 mg/l		
Acrylic acid 79-10-7	aqua (marine water)	0,0003 mg/l		
Acrylic acid 79-10-7	sewage treatment plant (STP)	0,9 mg/l		
Acrylic acid 79-10-7	sediment (freshwater)		0,0236 mg/kg	
Acrylic acid 79-10-7	sediment (marine water)		0,00236 mg/kg	
Acrylic acid 79-10-7	Soil		1 mg/kg	
Acrylic acid 79-10-7	oral		0,03 g/kg	
Acrylic acid 79-10-7	Air			no hazard identified

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

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	Workers	inhalation	Long term exposure - systemic effects		16,45 mg/m3	
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	Workers	dermal	Long term exposure - systemic effects	Long term 46,7 mg/ xposure -		
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	General population	inhalation	Long term exposure - systemic effects		2,9 mg/m3	
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	General population	dermal	Long term exposure - systemic effects		1,67 mg/kg	
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	General population	oral	Long term exposure - systemic effects		1,67 mg/kg	
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
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	Workers	inhalation	Long term exposure - systemic effects	rm 1,97 mg/m3		
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	Workers	dermal	Long term exposure - systemic effects		0,56 mg/kg	
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	General population	inhalation	Long term exposure - systemic effects		0,348 mg/m3	
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	General population	dermal	Long term exposure - systemic effects		0,2 mg/kg	
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	General population	oral	Long term exposure - systemic effects		0,2 mg/kg	
methacrylic acid 79-41-4	Workers	Inhalation	Long term exposure - local effects		88 mg/m3	no potential for bioaccumulation
methacrylic acid 79-41-4	Workers	Inhalation	Long term exposure - systemic effects		29,6 mg/m3	no potential for bioaccumulation
methacrylic acid 79-41-4	Workers	dermal	Long term exposure - systemic effects		4,25 mg/kg	no potential for bioaccumulation
methacrylic acid 79-41-4	General population	Inhalation	Long term exposure - local effects		6,55 mg/m3	no potential for bioaccumulation
methacrylic acid 79-41-4	General population	Inhalation	Long term exposure - systemic effects		6,3 mg/m3	no potential for bioaccumulation
methacrylic acid 79-41-4	General population	dermal	Long term exposure - systemic effects		2,55 mg/kg	no potential for bioaccumulation
Acrylic acid 79-10-7	Workers	inhalation	Long term exposure - local effects		30 mg/m3	no hazard identified
Acrylic acid 79-10-7	Workers	inhalation	Acute/short term exposure - local		30 mg/m3	no hazard identified

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			effects		
Acrylic acid 79-10-7	Workers	dermal	Acute/short term exposure - local effects	1 mg/cm2	no hazard identified
Acrylic acid 79-10-7	General population	dermal	Acute/short term exposure - local effects	1 mg/cm2	no hazard identified
Acrylic acid 79-10-7	General population	inhalation	Acute/short term exposure - local effects	3,6 mg/m3	no hazard identified
Acrylic acid 79-10-7	General population	inhalation	Long term exposure - local effects	3,6 mg/m3	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

Delivery form liquid
Colour red
Odor Acrylic
Physical state liquid

Melting point Not applicable, Product is a liquid

Solidification temperature  $< -30 \,^{\circ}\text{C} (< -22 \,^{\circ}\text{F})$ 

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Initial boiling point

Flammability

Explosive limits Flash point

Auto-ignition temperature

Decomposition temperature

pН

Viscosity (kinematic) (40 °C (104 °F); ) Viscosity, dynamic

()

Solubility (qualitative) (20 °C (68 °F); Solvent: Water) Partition coefficient: n-octanol/water

Vapour pressure (20 °C (68 °F)) Density

()

Relative vapour density:

Particle characteristics

> 150 °C (> 302 °F);; Boiling point

otherNot applicable

Non flammable product (flash point is greater than 93°C)

Not applicable, The product is not flammable. > 100 °C (> 212 °F); Flash Point, Pensky-Martens Not applicable, The product is not flammable.

Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use

Not applicable, Product is non-polar/aprotic.

> 20,5 mm2/s ;. HST-US A20K; Kinematic Viscosity

< 1.100.000 mPa.s LCT STM 738; Rheological Data from flow

curves Slight

Not applicable Mixture

< 700 mbar;no method / method unknown

1,1 g/cm3 LCT STM 82; Bulk density

> 1

Not applicable Product is a liquid

#### 9.2. Other information

Other information not applicable for this product

# **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Reacts with strong oxidants.

Acids.

Reducing agents. Strong bases.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

See section reactivity

### 10.4. Conditions to avoid

Stable under normal conditions of storage and use.

#### 10.5. Incompatible materials

See section reactivity.

### 10.6. Hazardous decomposition products

carbon oxides.

Hydrocarbons

nitrogen oxides

Rapid polymerisation may generate excessive heat and pressure.

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# **SECTION 11: Toxicological information**

# 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

# Acute oral toxicity:

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

Hazardous substances CAS-No.	Value type	Value	Species	Method
3-Phenoxy-2- hydroxypropyl methacyrlate 16926-87-7	LD50	> 2.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LD0	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
2-Hydroxyethyl methacrylate 868-77-9	LD50	5.564 mg/kg	rat	FDA Guideline
Methacryloyloxyethyl succinate 20882-04-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	310 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	LD50	1.500 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
methacrylic acid 79-41-4	LD50	1.320 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Acrylic acid 79-10-7	LD50	1.500 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

# 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	Value	Species	Method
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LD0	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 5.000 mg/kg	rabbit	not specified
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	LD50	> 2.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
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
Acrylic acid 79-10-7	Acute toxicity estimate (ATE)	1.100 mg/kg		Expert judgement

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# Acute inhalative toxicity:

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

Hazardous substances	Value	Value	Test atmosphere	Exposure	Species	Method
CAS-No.	type			time		
2-Propenoic acid,	LC50	> 5,1 mg/l	vapour	4 h	rat	equivalent or similar to OECD
homopolymer (oligomers)						Guideline 403 (Acute
9003-01-4						Inhalation Toxicity)
methacrylic acid	LC50	3,19 - 6,5 mg/l	dust/mist	4 h	rat	equivalent or similar to OECD
79-41-4						Guideline 403 (Acute
						Inhalation Toxicity)
methacrylic acid	Acute	3,19 mg/l	dust/mist			Expert judgement
79-41-4	toxicity					
	estimate					
	(ATE)					
Acrylic acid	LC0	5,1 mg/l	vapour	4 h	rat	equivalent or similar to OECD
79-10-7						Guideline 403 (Acute
						Inhalation Toxicity)
Acrylic acid	Acute	11 mg/l	vapour			Expert judgement
79-10-7	toxicity					
	estimate					
	(ATE)					

# 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
3-Phenoxy-2- hydroxypropyl methacyrlate 16926-87-7	not corrosive		Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
3-Phenoxy-2- hydroxypropyl methacyrlate 16926-87-7	not irritating		Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
2-Hydroxyethyl methacrylate 868-77-9	slightly irritating	24 h	rabbit	Draize Test
Methacryloyloxyethyl succinate 20882-04-6	not irritating	0,25 h	Human, EPISKIIN <sup>TM</sup> Reconstituted Human Epidermis model	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Methacryloyloxyethyl succinate 20882-04-6	not corrosive	4 h	Human, EPISKIIN <sup>TM</sup> Reconstituted Human Epidermis model	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Acetic acid, 2- phenylhydrazide 114-83-0	not corrosive		Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Acetic acid, 2- phenylhydrazide 114-83-0	not irritating		Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
methacrylic acid 79-41-4	corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

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2-Carboxyethyl acrylate 24615-84-7	corrosive	24 h	rabbit	not specified
Acrylic acid	Sub-Category	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
79-10-7	1A (corrosive)			

# Serious eye damage/irritation:

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

Hazardous substances	Result	Exposure	Species	Method
CAS-No.		time		
3-Phenoxy-2-	not irritating		Chicken, eye,	OECD Guideline 438 (Isolated Chicken Eye Test Method)
hydroxypropyl			isolated	
methacyrlate				
16926-87-7				
2-Hydroxyethyl	Category 2B		rabbit	Draize Test
methacrylate	(mildly			
868-77-9	irritating to			
	eyes)			
Methacryloyloxyethyl	Category I	10 min	Bovine, cornea,	OECD Guideline 437 (BCOP)
succinate			in vitro test	
20882-04-6				
Acetic acid, 2-	not irritating		Chicken, eye,	OECD Guideline 438 (Isolated Chicken Eye Test Method)
phenylhydrazide			isolated	
114-83-0				
2-Propenoic acid,	Category 1		rabbit	BASF Test
homopolymer (oligomers)	(irreversible			
9003-01-4	effects on the			
	eve)			
methacrylic acid	corrosive		rabbit	Draize Test
79-41-4				
Acrylic acid	Category 1		rabbit	BASF Test
79-10-7	(irreversible			
	effects on the			
	eve)			

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# Respiratory or skin sensitization:

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

Hazardous substances	Result	Test type	Species	Method
CAS-No.				
3-Phenoxy-2-	Sub-Category 1B	Mouse local lymphnode	mouse	OECD Guideline 429 (Skin Sensitisation:
hydroxypropyl	(sensitising)	assay (LLNA)		Local Lymph Node Assay)
methacyrlate				
16926-87-7				
3,3,5 Trimethylcyclohexyl	sensitising	Mouse local lymphnode	mouse	OECD Guideline 429 (Skin Sensitisation:
methacrylate		assay (LLNA)		Local Lymph Node Assay)
7779-31-9				
2-Hydroxyethyl	not sensitising	Buehler test	guinea pig	Buehler test
methacrylate				
868-77-9				
2-Hydroxyethyl	sensitising	Guinea pig maximisation	guinea pig	Magnusson and Kligman Method
methacrylate		test		
868-77-9				
Acetic acid, 2-	positive	Direct peptide reactivity	cysteine and	OECD Guideline 442C (Direct Peptide
phenylhydrazide		assay (DPRA)	lysine, in	Reactivity Assay (DPRA))
114-83-0			chemico test	
Acetic acid, 2-	positive	Activation of keratinocytes	human	OECD Guideline 442D (ARE-Nrf2
phenylhydrazide			keratinocytes,	Luciferase Test Method)
114-83-0			in vitro test	
Acetic acid, 2-	positive	activation of dendritic cells	human	OECD Guideline 442E (H-CLAT:
phenylhydrazide			monocytes, in	Human Cell Line Activation Test)
114-83-0			vitro test	
2-Propenoic acid,	not sensitising	Freund's complete adjuvant	guinea pig	Klecak Method
homopolymer (oligomers)		test		
9003-01-4		0.11: 11:		N . N . 1
2-Propenoic acid,	not sensitising	Split adjuvant test	guinea pig	Maguire Method
homopolymer (oligomers)				
9003-01-4		D 11 ( )		' 1 / OFCD C '11'
methacrylic acid	not sensitising	Buehler test	guinea pig	equivalent or similar to OECD Guideline
79-41-4		26 1 11 1 1		406 (Skin Sensitisation)
2-Carboxyethyl acrylate	sensitising	Mouse local lymphnode	mouse	OECD Guideline 429 (Skin Sensitisation:
24615-84-7		assay (LLNA)		Local Lymph Node Assay)
Acrylic acid	not sensitising	Freund's complete adjuvant	guinea pig	Klecak Method
79-10-7		test		Manada Mada d
Acrylic acid	not sensitising	Split adjuvant test	guinea pig	Maguire Method
79-10-7		ĺ		

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# Germ cell mutagenicity:

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

egative egative egative egative egative ositive egative	bacterial reverse mutation assay (e.g Ames test) bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test) bacterial reverse	Exposure time with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro Mammalian Cell Gene
ositive egative egative ositive	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro
ositive egative egative ositive	mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	with and without		(Bacterial Reverse Mutation Assay)  OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)  OECD Guideline 476 (In vitro
egative egative ositive	Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	with and without		Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro
egative egative ositive	in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro
egative egative ositive	chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	with and without		Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro
egative ositive	aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)			Aberration Test) OECD Guideline 476 (In vitro
egative ositive	mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 476 (In vitro
egative ositive	bacterial reverse mutation assay (e.g Ames test)			
ositive	bacterial reverse mutation assay (e.g Ames test)	with and without		
ositive	mutation assay (e.g Ames test)	with and without	i	Mutation Test)
ositive	Ames test)			OECD Guideline 471
				(Bacterial Reverse Mutation
	bacterial reverse			Assay)
agativo		with and without		OECD Guideline 471
egativa	mutation assay (e.g			(Bacterial Reverse Mutation
	Ames test)			Assay)
egauve	in vitro mammalian	with and without		OECD Guideline 487 (In vitro Mammalian Cell
				Micronucleus Test)
egative		with and without		equivalent or similar to OECD
egative		with and without		Guideline 471 (Bacterial
				Reverse Mutation Assay)
egative	in vitro mammalian	with and without		equivalent or similar to OECD
Č .	chromosome			Guideline 473 (In vitro
	aberration test			Mammalian Chromosome
				Aberration Test)
egative		with and without		equivalent or similar to OECD
	gene mutation assay			Guideline 476 (In vitro
				Mammalian Cell Gene Mutation Test)
egative	bacterial reverse mutation assay (e.g	with and without		equivalent or similar to OECD Guideline 471 (Bacterial
4:				Reverse Mutation Assay)
eganve		with and without		equivalent or similar to OECD Guideline 471 (Bacterial
				Reverse Mutation Assay)
egative	mammalian cell	with and without		equivalent or similar to OECD
Č .	gene mutation assay			Guideline 476 (In vitro
				Mammalian Cell Gene
				Mutation Test)
egative		without		equivalent or similar to OECD
	T .			Guideline 482 (Genetic Toxicology: DNA Damage
				and Repair, Unscheduled
				DNA Synthesis in Mammalian
	vitro			Cells
egative	oral: gavage		rat	OECD Guideline 474
				(Mammalian Erythrocyte
				Micronucleus Test)
egative	oral: gavage			not specified
			melanogaster	
agativa	oral: gazaga		rot	equivalent or similar to OECD
egative	orar. gavage		Tat	Guideline 475 (Mammalian
				Bone Marrow Chromosome
				Aberration Test)
egative	inhalation		mouse	equivalent or similar to OECD
-				Guideline 478 (Genetic
				Toxicology: Rodent Dominant
				Lethal Test)
egative	oral: gavage		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus
e e e e e e	gative gative gative gative gative gative gative gative	mutation assay (e.g. Ames test)  gative in vitro mammalian chromosome aberration test  gative mammalian cell gene mutation assay  gative bacterial reverse mutation assay (e.g. Ames test)  gative bacterial reverse mutation assay (e.g. Ames test)  gative bacterial reverse mutation assay (e.g. Ames test)  gative DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro  gative oral: gavage  gative oral: gavage  gative inhalation	gative bacterial reverse mutation assay (e.g. Ames test)  gative in vitro mammalian chromosome aberration test  gative mammalian cell gene mutation assay  gative bacterial reverse mutation assay (e.g. Ames test)  gative mammalian cell gene mutation assay  gative DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro  gative oral: gavage  gative oral: gavage  gative inhalation	gative bacterial reverse mutation assay (e.g Ames test)  gative mammalian chromosome aberration test  gative bacterial reverse mutation assay (e.g Ames test)  gative oral: gavage with and without or repair assay, unscheduled DNA synthesis in mammalian cells in vitro  gative oral: gavage rat  gative oral: gavage rat  gative inhalation mouse

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Acrylic acid 79-10-7	negative	oral: gavage	rat	equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Acrylic acid 79-10-7	negative	oral: gavage	mouse	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)
Acetic acid, 2- phenylhydrazide 114-83-0	carcinogenic	oral: drinking water	continuous	mouse	male/female	not specified
methacrylic acid 79-41-4	not carcinogenic	inhalation	2 y	mouse	male/female	OECD Guideline 451 (Carcinogenicity Studies)
Acrylic acid 79-10-7	not carcinogenic	oral: drinking water	26 - 28 m continuously	rat	male/female	OECD Guideline 451 (Carcinogenicity Studies)
Acrylic acid 79-10-7	not carcinogenic	dermal	21 m 3 times/w	mouse	male/female	not specified

# 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
2-Hydroxyethyl methacrylate 868-77-9	NOAEL P >= $1.000 \text{ mg/kg}$ NOAEL F1 >= $1.000 \text{ mg/kg}$	screening	oral: gavage	rat	equivalent or similar to OECD Guideline 422 (Combined Repeated Dose Toxicity Study)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	NOAEL P 240 mg/kg NOAEL F1 53 mg/kg NOAEL F2 53 mg/kg	two- generation study	oral: drinking water	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
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)
Acrylic acid 79-10-7	NOAEL P 83 mg/kg NOAEL F1 250 mg/kg	one- generation study	oral: drinking water	rat	equivalent or similar to OECD Guideline 415 (One- Generation Reproduction Toxicity Study)
Acrylic acid 79-10-7	NOAEL P 240 mg/kg NOAEL F1 53 mg/kg NOAEL F2 53 mg/kg	two- generation study	oral: drinking water	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)

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# STOT-single exposure:

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

Hazardous substances	Assessment	Route of	Target Organs	Remarks
CAS-No.		exposure		
2-Propenoic acid,	May cause respiratory irritation.			
homopolymer (oligomers)				
9003-01-4				
methacrylic acid	May cause respiratory irritation.			
79-41-4				
2-Carboxyethyl acrylate	May cause respiratory irritation.			
24615-84-7				
Acrylic acid	May cause respiratory irritation.			
79-10-7				

# 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
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	NOAEL 1.000 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2-Hydroxyethyl methacrylate 868-77-9	NOAEL 100 mg/kg	oral: gavage	49 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2-Hydroxyethyl methacrylate 868-77-9	NOAEL 0,352 mg/l	inhalation	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	NOAEL 40 mg/kg	oral: drinking water	12 m daily	rat	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
methacrylic acid 79-41-4		inhalation	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Acrylic acid 79-10-7	NOAEL 40 mg/kg	oral: drinking water	12 m daily	rat	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
Acrylic acid 79-10-7	NOAEL 0,015 mg/l	inhalation: vapour	90 d 6 h/d, 5 d/w	mouse	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

# **Aspiration hazard:**

No data available.

### 11.2 Information on other hazards

not applicable

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# **SECTION 12: Ecological information**

# General ecological information:

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

# 12.1. Toxicity

# **Toxicity (Fish):**

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

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

Hazardous substances CAS-No.	Value	Value	Exposure time	Species	Method
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LC50	1,9 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	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)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	LC50	27 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	NOEC	> 10,1 mg/l	45 d	Oryzias latipes	OECD Guideline 210 (fish early lite stage toxicity test)
methacrylic acid 79-41-4	LC50	85 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
methacrylic acid 79-41-4	NOEC	10 mg/l	35 d	Danio rerio	OECD Guideline 210 (fish early lite stage toxicity test)
Acrylic acid 79-10-7	LC50	27 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Acrylic acid 79-10-7	NOEC	>= 10,1 mg/l	45 d	Oryzias latipes	OECD Guideline 210 (fish early lite stage toxicity test)

### **Toxicity (aquatic invertebrates):**

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

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
3-Phenoxy-2-hydroxypropyl	EC50	> 100 mg/l	48 h	Daphnia magna	OECD Guideline 202
methacyrlate					(Daphnia sp. Acute
16926-87-7					Immobilisation Test)
3,3,5 Trimethylcyclohexyl	EC50	14,43 mg/l	48 h	Daphnia magna	OECD Guideline 202
methacrylate					(Daphnia sp. Acute
7779-31-9					Immobilisation Test)
2-Hydroxyethyl methacrylate	EC50	380 mg/l	48 h	Daphnia magna	OECD Guideline 202
868-77-9					(Daphnia sp. Acute
					Immobilisation Test)
Methacryloyloxyethyl	EC50	> 515,4 mg/l	48 h	Daphnia magna	OECD Guideline 202
succinate					(Daphnia sp. Acute
20882-04-6					Immobilisation Test)
Acetic acid, 2-	EC50	1,1 mg/l	48 h	Daphnia magna	OECD Guideline 202
phenylhydrazide					(Daphnia sp. Acute
114-83-0					Immobilisation Test)
2-Propenoic acid,	EC50	47 mg/l	48 h	Daphnia magna	OECD Guideline 202
homopolymer (oligomers)					(Daphnia sp. Acute
9003-01-4					Immobilisation Test)
methacrylic acid	EC50	> 130 mg/l	48 h	Daphnia magna	EPA OTS 797.1300
79-41-4					(Aquatic Invertebrate Acute
					Toxicity Test, Freshwater
					Daphnids)
Acrylic acid	EC50	95 mg/l	48 h	Daphnia magna	EPA OTS 797.1300
79-10-7					(Aquatic Invertebrate Acute
					Toxicity Test, Freshwater
					Daphnids)

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# Chronic toxicity (aquatic invertebrates):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	NOEC	24,1 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	NOEC	19 mg/l	21 d	Daphnia magna	EPA OTS 797.1330 (Daphnid Chronic Toxicity Test)
methacrylic acid 79-41-4	NOEC	53 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Acrylic acid 79-10-7	NOEC	19 mg/l	21 d	Daphnia magna	EPA OTS 797.1330 (Daphnid Chronic Toxicity Test)

Toxicity (Algae):

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

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
3-Phenoxy-2-hydroxypropyl methacyrlate 16926-87-7	EC50	18,69 mg/l	72 h	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
3-Phenoxy-2-hydroxypropyl methacyrlate 16926-87-7	NOEC	3,1 mg/l	72 h	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	EC10	0,43 mg/l	72 h		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)
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)
Acetic acid, 2- phenylhydrazide 114-83-0	EC50	0,258 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Acetic acid, 2- phenylhydrazide 114-83-0	NOEC	0,012 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	EC50	0,13 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	EC10	0,03 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal 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)
2-Carboxyethyl acrylate 24615-84-7	EC50	> 1,71 - 3,55 mg/l	72 h		OECD Guideline 201 (Alga, Growth Inhibition Test)
Acrylic acid 79-10-7	EC10	0,03 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC50	0,13 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)

# **Toxicity (microorganisms):**

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

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3.000 mg/l	16 h	Pseudomonas fluorescens	other guideline:
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	EC20	900 mg/l	30 min	<i>U</i> ,	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
methacrylic acid 79-41-4	EC10	100 mg/l	17 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)
Acrylic acid	EC20	900 mg/l	30 min	activated sludge, domestic	ISO 8192 (Test for

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79-10-7	1 1		Inhibition of Oxygen
			Consumption by Activated
			Sludge)

# ${\bf 12.2.\ Persistence\ and\ degradability}$

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

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
3-Phenoxy-2-hydroxypropyl methacyrlate 16926-87-7	not readily biodegradable.	aerobic	34,5 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	not readily biodegradable.	aerobic	16,8 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	14 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
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)
Acetic acid, 2- phenylhydrazide 114-83-0	not readily biodegradable.	aerobic	39 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	readily biodegradable	aerobic	87,4 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	inherently biodegradable	aerobic	100 %	28 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)
methacrylic acid 79-41-4	inherently biodegradable	aerobic	100 %	14 d	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
2-Carboxyethyl acrylate 24615-84-7	not readily biodegradable.	not specified	> 0 - 60 %	28 d	OECD 301 A - F
Acrylic acid 79-10-7	inherently biodegradable	aerobic	100 %	28 d	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
Acrylic acid 79-10-7	readily biodegradable	aerobic	81 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

# 12.3. Bioaccumulative potential

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

Hazardous substances	Bioconcentratio	Exposure time	Temperature	Species	Method
CAS-No.	n factor (BCF)				
Acrylic acid 79-10-7	3,16				QSAR (Quantitative Structure Activity Relationship)

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# 12.4. Mobility in soil

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

Hazardous substances CAS-No.	LogPow	Temperature	Method
3-Phenoxy-2-hydroxypropyl methacyrlate 16926-87-7	2,43	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	5,25	20 °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)
Methacryloyloxyethyl succinate 20882-04-6	0,783	23 °C	EU Method A.8 (Partition Coefficient)
Acetic acid, 2- phenylhydrazide 114-83-0	0,74		QSAR (Quantitative Structure Activity Relationship)
2-Propenoic acid, homopolymer (oligomers) 9003-01-4	0,23		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)
2-Carboxyethyl acrylate 24615-84-7	0,46		
Acrylic acid 79-10-7	0,46	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

### 12.5. Results of PBT and vPvB assessment

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

Hazardous substances	PBT / vPvB
CAS-No.	
3-Phenoxy-2-hydroxypropyl methacyrlate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
16926-87-7	Bioaccumulative (vPvB) criteria.
3,3,5 Trimethylcyclohexyl methacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
7779-31-9	Bioaccumulative (vPvB) criteria.
2-Hydroxyethyl methacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
868-77-9	Bioaccumulative (vPvB) criteria.
Acetic acid, 2-phenylhydrazide	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
114-83-0	Bioaccumulative (vPvB) criteria.
2-Propenoic acid, homopolymer (oligomers)	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
9003-01-4	Bioaccumulative (vPvB) criteria.
methacrylic acid	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
79-41-4	Bioaccumulative (vPvB) criteria.
Acrylic acid	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
79-10-7	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

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#### Product disposal:

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

Dispose of in accordance with local and national regulations.

#### Disposal of uncleaned packages:

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

#### Waste code

08 04 09\* waste adhesives and sealants containing organic solvents and other dangerous substances. The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

# **SECTION 14: Transport information**

#### 14.1. UN number or ID number

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

#### 14.2. UN proper shipping name

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

### 14.3. Transport hazard class(es)

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

# 14.4. Packing group

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

#### 14.5. Environmental hazards

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

### 14.6. Special precautions for user

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

### 14.7. 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 2024/590): Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): Persistent organic pollutants (Regulation (EU) 2019/1021):

Not applicable Not applicable Not applicable

VOC content (2010/75/EC)

< 3 %

### 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

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### **SECTION 16: Other information**

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

H226 Flammable liquid and vapour.

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.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

ED: Substance identified as having endocrine disrupting properties

EU OEL:

Substance with a Union workplace exposure limit

EU EXPLD 1:

Substance listed in Annex I, Reg (EC) No. 2019/1148

EU EXPLD 2

Substance listed in Annex II, Reg (EC) No. 2019/1148

SVHC:

Substance of very high concern (REACH Candidate List)

PBT:

Substance fulfilling persistent, bioaccumulative and toxic criteria

PBT/vPvB: Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very

bioaccumulative criteria

vPvB: Substance fulfilling very persistent and very bioaccumulative criteria

#### **Further information:**

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