

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

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LOCTITE 2701

SDS No. : 173107 V008.0 Revision: 18.10.2024 printing date: 30.10.2024 Replaces version from: 15.05.2024

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

1.1. Product identifier

LOCTITE 2701 UFI: D2J5-GX9E-520A-M1G8

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 AG & Co. KGaA Henkelstr. 67 40589 Düsseldorf

Germany

Phone: +49 211 797 0

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

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):	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	
Chronic hazards to the aquatic environment	Category 2
H411 Toxic to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:	
Contains	Hydroxypropyl methacrylate
	2,2'-Ethylenedioxydiethyl dimethacrylate
	Methacryloyloxyethyl succinate Cumene hydroperoxide Acetic acid, 2-phenylhydrazide 2-Hydroxyethyl methacrylate
	methyl methacrylate
	Propylene glycol dimethacrylate
Signal word:	Warning
Hazard statement:	H317 May cause an allergic skin reaction.H319 Causes serious eye irritation.H335 May cause respiratory irritation.H411 Toxic 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.
Precautionary statement: Response	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

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

Hazardous components	Concentration	Specific Conc. Limits, M-	Add.	
CAS-No.			factors and ATEs	Information
EC Number				
REACH-Reg No.				
Hydroxypropyl methacrylate 27813-02-1	25- < 50 %	Skin Sens. 1, H317		
27813-02-1 248-666-3		Eye Irrit. 2, H319		
01-2119490226-37				
01 2113 (30220 2)				
2,2'-Ethylenedioxydiethyl	5-< 10 %	Skin Sens. 1B, H317	dermal:ATE = > 5.000 mg/kg	
dimethacrylate			inhalation: $ATE = 28,17$	
109-16-0			mg/l;dust/mist	
203-652-6 01-2119969287-21				
01-2119909287-21				
Methacryloyloxyethyl succinate	1-< 3 %	Skin Sens. 1, H317		
20882-04-6		Eye Dam. 1, H318		
244-096-4				
01-2120137902-58				
Cumana hudronorovida	0,25-< 2,5 %	STOT RE 2. H373	Eye Irrit. 2; H319; C 1 - < 3 %	
Cumene hydroperoxide 80-15-9	0,25- < 2,5 %	Skin Corr. 1B, H314	Skin Irrit. 2: H315: C 3 - < 10 %	
201-254-7		Acute Tox. 2, Inhalation, H330	Eye Dam. 1; H318; C 3 - < 10 %	
01-2119475796-19		Aquatic Chronic 2, H411	STOT SE 3; H335; C >= 1 %	
		Acute Tox. 4, Oral, H302	Skin Corr. 1B; H314; C >= 10 %	
		Acute Tox. 4, Dermal, H312		
		Org. Perox. E, H242	dermal:ATE = 1.100 mg/kg	
		STOT SE 3, H335		
methacrylic acid	0,1-< 1 %	Acute Tox. 4, Oral, H302	STOT SE 3; H335; C >= 1 %	
79-41-4	0,1-< 1 /0	Acute Tox. 3, Dermal, H311	====	
201-204-4		Acute Tox. 4, Inhalation, H332	dermal:ATE = 500 mg/kg	
01-2119463884-26		Skin Corr. 1A, H314	inhalation: $ATE = 3,19$	
		Eye Dam. 1, H318	mg/l;dust/mist	
		STOT SE 3, H335		
	0.1 1.04			
Acetic acid, 2-phenylhydrazide 114-83-0	0,1-< 1 %	Aquatic Acute 1, H400	M acute = 1 M chronic = 10	
204-055-3		Aquatic Chronic 1, H410 Acute Tox. 4, Oral, H302	M chrome = 10	
01-2120951382-56		Skin Sens. 1, H317		
		Carc. 2, H351		
		,		
2-Hydroxyethyl methacrylate	0,1-< 1%	Skin Irrit. 2, H315		
868-77-9		Skin Sens. 1, H317		
212-782-2		Eye Irrit. 2, H319		
01-2119490169-29				
methyl methacrylate	0,1-< 1 %	Flam. Liq. 2, H225		EU OEL
80-62-6	.,	STOT SE 3, H335		
201-297-1		Skin Irrit. 2, H315		
01-2119452498-28		Skin Sens. 1, H317		
Propylene glycol dimethacrylate 7559-82-2	0,1-<1%	STOT SE 3, H335	dermal:ATE = $> 5.000 \text{ mg/kg}$	
1339-82-2		Skin Sens. 1B, H317 Aquatic Chronic 3, H412		
		Aquate enfolie 5, H412		

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Move to fresh air. If symptoms persist, seek medical advice. Skin contact: Rinse with running water and soap. Obtain medical attention if irritation persists.

Eye contact:

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

Ingestion:

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

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

EYE: Irritation, conjunctivitis.

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

SKIN: Rash, Urticaria.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: water, carbon dioxide, foam, powder

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

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Wear protective equipment. Ensure adequate ventilation. Keep away from sources of ignition.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact. See advice in section 8

Hygiene measures:

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

7.2. Conditions for safe storage, including any incompatibilities

Refer to Technical Data Sheet.

7.3. Specific end use(s)

Anaerobic 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
Methyl methacrylate 80-62-6	50	210	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
Methyl methacrylate 80-62-6			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
Methyl methacrylate 80-62-6 [METHYL METHACRYLATE]	100		Short Term Exposure Limit (STEL):	Indicative	ECTLV
Methyl methacrylate 80-62-6 [METHYL METHACRYLATE]	50		Time Weighted Average (TWA):	Indicative	ECTLV

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental	-	Value				Remarks
	Compartment	period	mg/l	ppm	mg/kg	others	
Methacrylic acid, monoester with propane-	aqua		0,904 mg/l	ppm	iiig/kg	others	
1,2-diol 27813-02-1	(freshwater)						
Methacrylic acid, monoester with propane- 1,2-diol	aqua (marine water)		0,904 mg/l				
27813-02-1 Methacrylic acid, monoester with propane-	sewage		10 mg/l				
1,2-diol 27813-02-1	treatment plant (STP)		10 mg/1				
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	aqua (intermittent releases)		0,972 mg/l				
Methacrylic acid, monoester with propane-	sediment				6,28 mg/kg		
1,2-diol 27813-02-1	(freshwater)						
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	Soil				0,727 mg/kg		
27813-02-1 Methacrylic acid, monoester with propane-	Marine water -		0,972 mg/l				
1,2-diol 27813-02-1	intermittent		0,972 mg/1				
Methacrylic acid, monoester with propane- 1,2-diol	Air						no hazard identified
27813-02-1 Methacrylic acid, monoester with propane- 1,2-diol	Predator						no potential for bioaccumulation
27813-02-1			0.1.1.1				
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	aqua (freshwater)		0,164 mg/l				
2,2'-Ethylenedioxydiethyl dimethacrylate	aqua (marine		0,0164				
109-16-0 2,2'-Ethylenedioxydiethyl dimethacrylate	water) sewage		mg/l 10 mg/l				
109-16-0	treatment plant (STP)		10 llig/1				
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	aqua (intermittent releases)		0,164 mg/l				
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	sediment (freshwater)				1,85 mg/kg		
2,2'-Ethylenedioxydiethyl dimethacrylate	sediment				0,185		
109-16-0 2,2'-Ethylenedioxydiethyl dimethacrylate	(marine water) Soil				mg/kg 0,274		
109-16-0	5011				0,274 mg/kg		
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Air						no hazard identified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Predator						no potential for bioaccumulation
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	aqua (freshwater)		0,0031 mg/l				
.alpha.,.alphaDimethylbenzyl hydroperoxide	aqua (intermittent		0,031 mg/l				
80-15-9 .alpha.,.alphaDimethylbenzyl	releases) aqua (marine		0,00031				
hydroperoxide 80-15-9	water)		mg/l				
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	sewage treatment plant		0,35 mg/l				
.alpha.,.alphaDimethylbenzyl hydroperoxide	(STP) sediment (freshwater)				0,023 mg/kg		
80-15-9 .alpha.,.alphaDimethylbenzyl	sediment				0,0023		
hydroperoxide	(marine water)				mg/kg		

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80-15-9	1	1 1	1 1	1
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	Soil		0,0029 mg/kg	
methacrylic acid 79-41-4	aqua (freshwater)	0,82 mg/l		
methacrylic acid 79-41-4	Freshwater - intermittent	0,45 mg/l		
methacrylic acid 79-41-4	aqua (marine water)	0,082 mg/l		
methacrylic acid 79-41-4	sewage treatment plant (STP)	100 mg/l		
methacrylic acid 79-41-4	sediment (freshwater)		3,09 mg/kg	
methacrylic acid 79-41-4	sediment (marine water)		0,309 mg/kg	
methacrylic acid 79-41-4	Soil		0,137 mg/kg	
methacrylic acid 79-41-4	Predator			no potential for bioaccumulation
2-Hydroxyethyl methacrylate 868-77-9	aqua (freshwater)	0,482 mg/l		
2-Hydroxyethyl methacrylate 868-77-9	aqua (marine water)	0,482 mg/l		
2-Hydroxyethyl methacrylate 868-77-9	sewage treatment plant (STP)	10 mg/l		
2-Hydroxyethyl methacrylate 868-77-9	aqua (intermittent releases)	1 mg/l		
2-Hydroxyethyl methacrylate 868-77-9	sediment (freshwater)		3,79 mg/kg	
2-Hydroxyethyl methacrylate 868-77-9	sediment (marine water)		3,79 mg/kg	
2-Hydroxyethyl methacrylate 868-77-9	Soil		0,476 mg/kg	
2-Hydroxyethyl methacrylate 868-77-9	Predator			no potential for bioaccumulation
2-Hydroxyethyl methacrylate 868-77-9	Marine water - intermittent	1 mg/l		
methyl methacrylate 80-62-6	aqua (freshwater)	0,94 mg/l		
methyl methacrylate 80-62-6	aqua (marine water)	0,94 mg/1		
methyl methacrylate 80-62-6	aqua (intermittent releases)	0,94 mg/l		
methyl methacrylate 80-62-6	sewage treatment plant (STP)	10 mg/l		
methyl methacrylate 80-62-6	sediment (freshwater)		5,74 mg/kg	
methyl methacrylate 80-62-6	Soil		1,47 mg/kg	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Methacrylic acid, monoester with propane-	Workers	dermal	Long term		4,2 mg/kg	no hazard identified
1,2-diol 27813-02-1			exposure - systemic effects			
Methacrylic acid, monoester with propane-	Workers	Inhalation	Long term		14,7 mg/m3	no hazard identified
1,2-diol			exposure -		,	
27813-02-1			systemic effects			
Methacrylic acid, monoester with propane-	General	dermal	Long term		2,5 mg/kg	no hazard identified
1,2-diol 27813-02-1	population		exposure - systemic effects			
Methacrylic acid, monoester with propane-	General	Inhalation	Long term		8,8 mg/m3	no hazard identified
1,2-diol	population		exposure -		-,	
27813-02-1			systemic effects			
Methacrylic acid, monoester with propane-	General	oral	Long term		2,5 mg/kg	no hazard identified
1,2-diol 27813-02-1	population		exposure - systemic effects			
2,2'-Ethylenedioxydiethyl dimethacrylate	Workers	inhalation	Long term		48,5 mg/m3	no hazard identified
109-16-0	Workers	initiatation	exposure -		40,5 mg/m5	no hazaru identiried
			systemic effects			
2,2'-Ethylenedioxydiethyl dimethacrylate	Workers	dermal	Long term		13,9 mg/kg	no hazard identified
109-16-0			exposure -			
2,2'-Ethylenedioxydiethyl dimethacrylate	General	inhalation	systemic effects Long term	+	14,5 mg/m3	no hazard identified
109-16-0	population	matation	exposure -		14,5 mg/m5	no nazaru luenumeu
	population		systemic effects			
2,2'-Ethylenedioxydiethyl dimethacrylate	General	dermal	Long term		8,33 mg/kg	no hazard identified
109-16-0	population		exposure -			
			systemic effects		0.00 #	1 1 1 1
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	General population	oral	Long term exposure -		8,33 mg/kg	no hazard identified
109-10-0	population		systemic effects			
.alpha.,.alphaDimethylbenzyl	Workers	inhalation	Long term		6 mg/m3	
hydroperoxide			exposure -		0	
80-15-9			systemic effects			
methacrylic acid	Workers	Inhalation	Long term		88 mg/m3	no potential for
79-41-4			exposure - local effects			bioaccumulation
methacrylic acid	Workers	Inhalation	Long term		29,6 mg/m3	no potential for
79-41-4			exposure -			bioaccumulation
			systemic effects			
methacrylic acid	Workers	dermal	Long term		4,25 mg/kg	no potential for
79-41-4			exposure - systemic effects			bioaccumulation
methacrylic acid	General	Inhalation	Long term		6,55 mg/m3	no potential for
79-41-4	population	minaration	exposure - local		0,55 mg/m5	bioaccumulation
	1 1		effects			
methacrylic acid	General	Inhalation	Long term		6,3 mg/m3	no potential for
79-41-4	population		exposure -			bioaccumulation
methacrylic acid	General	dermal	systemic effects Long term		2,55 mg/kg	no potential for
79-41-4	population	uermai	exposure -		2,55 mg/kg	bioaccumulation
	F -F		systemic effects			
2-Hydroxyethyl methacrylate	Workers	dermal	Long term		1,3 mg/kg	no potential for
868-77-9			exposure -			bioaccumulation
2-Hydroxyethyl methacrylate	Workers	Inhalation	systemic effects Long term		4,9 mg/m3	no potential for
868-77-9	WOIKEIS	minaration	exposure -		4,7 mg/m5	bioaccumulation
			systemic effects			
2-Hydroxyethyl methacrylate	General	dermal	Long term		0,83 mg/kg	no potential for
868-77-9	population		exposure -			bioaccumulation
2 Hudrowyothyl motheseriet	Concers1	Inholotion	systemic effects		2.0 ma/m2	no notortial for
2-Hydroxyethyl methacrylate 868-77-9	General population	Inhalation	Long term exposure -		2,9 mg/m3	no potential for bioaccumulation
	r optimition		systemic effects			- rouse unital attoin
2-Hydroxyethyl methacrylate	General	oral	Long term		0,83 mg/kg	no potential for
868-77-9	population		exposure -			bioaccumulation
	XX 7 1	T 1 1 1	systemic effects		249.4 / 2	
methyl methacrylate	Workers	Inhalation	Long term		348,4 mg/m3	
80-62-6			exposure -			

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1			systemic effects		
methyl methacrylate 80-62-6	Workers	Inhalation	Long term exposure - local effects	208 mg/m3	
methyl methacrylate 80-62-6	Workers	inhalation	Acute/short term exposure - local effects	416 mg/m3	
methyl methacrylate 80-62-6	Workers	dermal	Long term exposure - systemic effects	13,67 mg/kg	
methyl methacrylate 80-62-6	Workers	dermal	Long term exposure - local effects	1,5 mg/cm2	
methyl methacrylate 80-62-6	Workers	dermal	Acute/short term exposure - local effects	1,5 mg/cm2	
methyl methacrylate 80-62-6	General population	Inhalation	Long term exposure - systemic effects	74,3 mg/m3	
methyl methacrylate 80-62-6	General population	Inhalation	Long term exposure - local effects	104 mg/m3	
methyl methacrylate 80-62-6	General population	inhalation	Acute/short term exposure - local effects	208 mg/m3	
methyl methacrylate 80-62-6	General population	dermal	Long term exposure - systemic effects	8,2 mg/kg	
methyl methacrylate 80-62-6	General population	dermal	Long term exposure - local effects	1,5 mg/cm2	
methyl methacrylate 80-62-6	General population	dermal	Acute/short term exposure - local effects	1,5 mg/cm2	
methyl methacrylate 80-62-6	General population	oral	Long term exposure - systemic effects		

Biological Exposure Indices: None

8.2. Exposure controls:

Engineering controls: Ensure good ventilation/extraction.

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

Hand protection:

Chemical-resistant protective gloves (EN 374).

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

nitrile rubber (NBR; >= 0.4 mm thickness)

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

nitrile rubber (NBR; >= 0.4 mm thickness)

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

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing. Protective eye equipment should conform to EN166.

Skin protection: Wear suitable protective clothing. Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Delivery form	liquid
Colour	green
Odor	mild, Acrylic
Physical state	liquid
Melting point	Not applicable, Product is a liquid
Solidification temperature	< -30 °C (< -22 °F)
Initial boiling point	> 150 °C (> 302 °F)None
Flammability	The product is not flammable.
Explosive limits	Not applicable, The product is not flammable.
Flash point	> 100 °C (> 212 °F)
Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic
	peroxide and does not decompose under foreseen conditions of use
pH	Product is non-polar/aprotic., Not applicable
Viscosity (kinematic)	> 20,5 mm2/s
(40 °C (104 °F);)	
Solubility (qualitative)	Partially soluble
(Solvent: Water)	•
Solubility (qualitative)	Miscible
(Solvent: Acetone)	
Solubility (qualitative)	Slight
(20 °C (68 °F); Solvent: Water)	C C C C C C C C C C C C C C C C C C C
Partition coefficient: n-octanol/water	Not applicable
	Mixture
Vapour pressure	< 0,13 mbar
(20 °C (68 °F))	
Density	1,1 g/cm3 None
(20 °C (68 °F))	
Relative vapour density:	>1
(20 °C)	
Particle characteristics	Not applicable
	Product is a liquid
	-

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

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

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

General toxicological information:

Prolonged or repeated contact may cause skin irritation.

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

Acute oral toxicity:

Hazardous substances	Value	Value	Species	Method
CAS-No.	type			
Hydroxypropyl	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
methacrylate				
27813-02-1				
2,2'-Ethylenedioxydiethyl	LD50	10.837 mg/kg	rat	not specified
dimethacrylate				
109-16-0				
Methacryloyloxyethyl	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
succinate				
20882-04-6				
Cumene hydroperoxide	LD50	382 mg/kg	rat	other guideline:
80-15-9		0.0		0
methacrylic acid	LD50	1.320 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral
79-41-4		0.0		Toxicity)
Acetic acid, 2-	LD50	310 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down
phenylhydrazide				Procedure)
114-83-0				
2-Hydroxyethyl	LD50	5.564 mg/kg	rat	FDA Guideline
methacrylate				
868-77-9				
methyl methacrylate	LD50	9.400 mg/kg	rat	not specified
80-62-6		0.0		L L
Propylene glycol	LD50	8.700 mg/kg	rat	FDA Guideline
dimethacrylate		0.0		
7559-82-2				

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

Acute dermal toxicity:

Hazardous substances	Value	Value	Species	Method
CAS-No.	type			
Hydroxypropyl methacrylate 27813-02-1	LD50	> 5.000 mg/kg	rabbit	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Acute toxicity estimate (ATE)	> 5.000 mg/kg		Expert judgement
Cumene hydroperoxide 80-15-9	Acute toxicity estimate (ATE)	1.100 mg/kg		Expert judgement
methacrylic acid 79-41-4	LD50	500 - 1.000 mg/kg	rabbit	Dermal Toxicity Screening
methacrylic acid 79-41-4	Acute toxicity estimate (ATE)	500 mg/kg		Expert judgement
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 5.000 mg/kg	rabbit	not specified
methyl methacrylate 80-62-6	LD50	> 5.000 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Propylene glycol dimethacrylate 7559-82-2	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Propylene glycol dimethacrylate 7559-82-2	Acute toxicity estimate (ATE)	> 5.000 mg/kg		Expert judgement

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

Acute inhalative toxicity:

Hazardous substances	Value	Value	Test atmosphere	Exposure	Species	Method
CAS-No.	type			time		
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Acute toxicity estimate (ATE)	28,17 mg/l	dust/mist			Expert judgement
Cumene hydroperoxide 80-15-9	LC50	1,370 mg/l	vapour	4 h	rat	not specified
methacrylic acid 79-41-4	LC50	3,19 - 6,5 mg/l	dust/mist	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
methacrylic acid 79-41-4	Acute toxicity estimate (ATE)	3,19 mg/l	dust/mist			Expert judgement
methyl methacrylate 80-62-6	LC50	29,8 mg/l	vapour	4 h	rat	not specified

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

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
Hydroxypropyl methacrylate 27813-02-1	not irritating	24 h	rabbit	Draize Test
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	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 corrosive	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
methacrylic acid 79-41-4	corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
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-Hydroxyethyl methacrylate 868-77-9	slightly irritating	24 h	rabbit	Draize Test
Propylene glycol dimethacrylate 7559-82-2	not irritating	24 h	rabbit	FDA Guideline

Serious eye damage/irritation:

Non corrosive to eyes according to test method OECD 438 or based on analogy to similar products tested.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	Category 2B (mildly irritating to eyes)		rabbit	Draize Test
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Methacryloyloxyethyl succinate 20882-04-6	Category I	10 min	Bovine, cornea, in vitro test	OECD Guideline 437 (BCOP)
methacrylic acid 79-41-4	corrosive		rabbit	Draize Test
Acetic acid, 2- phenylhydrazide 114-83-0	not irritating		Chicken, eye, isolated	OECD Guideline 438 (Isolated Chicken Eye Test Method)
2-Hydroxyethyl methacrylate 868-77-9	Category 2B (mildly irritating to eyes)		rabbit	Draize Test
Propylene glycol dimethacrylate 7559-82-2	not irritating		rabbit	Draize Test

Respiratory or skin sensitization:

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

Hazardous substances	Result	Test type	Species	Method
CAS-No.				
Hydroxypropyl methacrylate 27813-02-1	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Hydroxypropyl methacrylate 27813-02-1	sensitising	Guinea pig maximisation test	guinea pig	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
methacrylic acid 79-41-4	not sensitising	Buehler test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Acetic acid, 2- phenylhydrazide 114-83-0	positive	Direct peptide reactivity assay (DPRA)	cysteine and lysine, in chemico test	OECD Guideline 442C (Direct Peptide Reactivity Assay (DPRA))
Acetic acid, 2- phenylhydrazide 114-83-0	positive	Activation of keratinocytes	human keratinocytes, in vitro test	OECD Guideline 442D (ARE-Nrf2 Luciferase Test Method)
Acetic acid, 2- phenylhydrazide 114-83-0	positive	activation of dendritic cells	human monocytes, in vitro test	OECD Guideline 442E (H-CLAT: Human Cell Line Activation Test)
2-Hydroxyethyl methacrylate 868-77-9	not sensitising	Buehler test	guinea pig	Buehler test
2-Hydroxyethyl methacrylate 868-77-9	sensitising	Guinea pig maximisation test	guinea pig	Magnusson and Kligman Method
methyl methacrylate 80-62-6	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Propylene glycol dimethacrylate 7559-82-2	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

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
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	positive	in vitro mammalian chromosome aberration test	with and without		Chromosome Aberration Test
Hydroxypropyl methacrylate 27813-02-1	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus 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)
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)
Acetic acid, 2- phenylhydrazide 114-83-0	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Acetic acid, 2- phenylhydrazide 114-83-0	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
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)
methyl methacrylate 80-62-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified

Carcinogenicity

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

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Hydroxypropyl methacrylate 27813-02-1	not carcinogenic	inhalation	2 y 6 h/d, 5 d/w	rat	male	equivalent or similar OECD Guideline 451 (Carcinogenicity Studies)
methacrylic acid 79-41-4	not carcinogenic	inhalation	2 y	mouse	male/female	OECD Guideline 451 (Carcinogenicity Studies)
Acetic acid, 2- phenylhydrazide 114-83-0	carcinogenic	oral: drinking water	continuous	mouse	male/female	not specified
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)

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
Hydroxypropyl methacrylate 27813-02-1	NOAEL P 300 mg/kg NOAEL F1 1.000 mg/kg	screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Hydroxypropyl methacrylate 27813-02-1	NOAEL P 400 mg/kg NOAEL F1 400 mg/kg	two- generation study	oral: gavage	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	NOAEL P 1.000 mg/kg NOAEL F1 1.000 mg/kg		oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
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)
2-Hydroxyethyl methacrylate 868-77-9	NOAEL P >= 1.000 mg/kg NOAEL F1 >= 1.000 mg/kg	screening	oral: gavage	rat	equivalent or similar to OECD Guideline 422 (Combined Repeated Dose Toxicity Study)

STOT-single exposure:

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

Hazardous substances CAS-No.	Assessment	Route of exposure	Target Organs	Remarks
methacrylic acid 79-41-4	May cause respiratory irritation.			
Propylene glycol dimethacrylate 7559-82-2	May cause respiratory irritation.			

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
Hydroxypropyl methacrylate 27813-02-1	NOAEL 300 mg/kg	oral: gavage	49 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Hydroxypropyl methacrylate 27813-02-1	NOAEL 0,352 mg/l	inhalation	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	NOAEL 1.000 mg/kg	oral: gavage	daily	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
methacrylic acid 79-41-4		inhalation	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
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)
methyl methacrylate 80-62-6	LOAEL 2000 ppm	inhalation	14 weeks 6 hrs/day, 5 days/wk	mouse	Dose Range Finding Study
methyl methacrylate 80-62-6	NOAEL 1000 ppm	inhalation	14 weeks 6 hrs/day, 5 days/wk	mouse	Dose Range Finding Study

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

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

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	LC50	493 mg/l	48 h	Leuciscus idus melanotus	DIN 38412-15
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LC50	16,4 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Cumene hydroperoxide 80-15-9	LC50	3,9 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute 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)
2-Hydroxyethyl methacrylate 868-77-9	LC50	> 100 mg/l	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
methyl methacrylate 80-62-6	LC50	350 mg/l	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Propylene glycol dimethacrylate 7559-82-2	LC50	15,95 mg/l	96 h	Danio rerio (reported as Brachydanio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (aquatic invertebrates):

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

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
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)
methacrylic acid 79-41-4	EC50	> 130 mg/l	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Acetic acid, 2- phenylhydrazide 114-83-0	EC50	1,1 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)
methyl methacrylate 80-62-6	EC50	69 mg/l	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Propylene glycol dimethacrylate 7559-82-2	EC50	44,9 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity (aquatic invertebrates):

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Hydroxypropyl methacrylate 27813-02-1	NOEC	45,2 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	NOEC	32 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
methacrylic acid 79-41-4	NOEC	53 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)
methyl methacrylate 80-62-6	NOEC	37 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Propylene glycol dimethacrylate 7559-82-2	NOEC	5,05 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

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

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
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)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	EC50	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	NOEC	18,6 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)
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)
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	0,01 mg/l	72 h	Pseudokirchneriella subcapitata	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)
methyl methacrylate 80-62-6	EC50	170 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
methyl methacrylate 80-62-6	NOEC	100 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Propylene glycol dimethacrylate 7559-82-2	EC50	17,3 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Propylene glycol dimethacrylate 7559-82-2	EC10	6,93 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity (microorganisms):

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

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
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	not specified
methacrylic acid 79-41-4	EC10	100 mg/l	17 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas

					Zellvermehrungshemm- Test)
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3.000 mg/l	16 h	Pseudomonas fluorescens	other guideline:
methyl methacrylate 80-62-6	EC20	> 150 - 200 mg/l	30 min		ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
Propylene glycol dimethacrylate 7559-82-2	EC50	570 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

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

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Hydroxypropyl methacrylate 27813-02-1	readily biodegradable	aerobic	94,2 %	28 d	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	readily biodegradable	aerobic	85 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution 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)
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)
Acetic acid, 2- phenylhydrazide 114-83-0	not readily biodegradable.	aerobic	39 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	14 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
methyl methacrylate 80-62-6	readily biodegradable	aerobic	94 %	14 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Propylene glycol dimethacrylate 7559-82-2	not readily biodegradable.	aerobic	69 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential

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

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

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
Hydroxypropyl methacrylate 27813-02-1	0,97	20 °C	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	2,3		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
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)
methacrylic acid 79-41-4	0,93	22 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acetic acid, 2- phenylhydrazide 114-83-0	0,74		QSAR (Quantitative Structure Activity Relationship)
2-Hydroxyethyl methacrylate 868-77-9	0,42	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
methyl methacrylate 80-62-6	1,38	20 °C	other guideline:
Propylene glycol dimethacrylate 7559-82-2	2,63		other (calculated)

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

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.	
Hydroxypropyl methacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
27813-02-1	Bioaccumulative (vPvB) criteria.
2,2'-Ethylenedioxydiethyl dimethacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
109-16-0	Bioaccumulative (vPvB) criteria.
Cumene hydroperoxide	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
80-15-9	Bioaccumulative (vPvB) criteria.
methacrylic acid	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
79-41-4	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-Hydroxyethyl methacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
868-77-9	Bioaccumulative (vPvB) criteria.
methyl methacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
80-62-6	Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Do not empty into drains / surface water / ground water. Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

ADR

not applicable

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 numbe	r or ID number
	ADR	3082
	RID	3082
	ADN	3082
	IMDG	3082
	IATA	3082
14.2.	UN proper	shipping name
	ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Acetyl- 2-phenylhydrazine)
	RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Acetyl-
	ADN	2-phenylhydrazine) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Acetyl-
		2-phenylhydrazine)
	IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-Acetyl-
	IMDO	2-phenylhydrazine)
	IATA	Environmentally hazardous substance, liquid, n.o.s. (1-Acetyl-2-phenylhydrazine)
14.3.	Transport	hazard class(es)
	ADR	9
	RID	9
	ADN	9
	IMDG	9
	IATA	9
14.4.	Packing gr	oup
	ADR	Ш
	RID	III
	ADN	III
	IMDG	III
	IATA	III
14.5.	Environme	ental hazards
	ADR	Environmentally Hazardous
	RID	Environmentally Hazardous
	ADN	Environmentally Hazardous
	IMDG	Marine Pollutant
	IATA	Environmentally Hazardous
14.6.	Special pre	cautions for user

	Tunnelcode:
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

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The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), A197 (IATA), 2.10.2.7 (IMDG), NZ 4.3(10) may be applied, which can result in a deviation from the transport classification for packed goods.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental reg	ulations/legislation specific for t	he substance or mixture
Ozone Depleting Substance (ODS) (Regulation	Not applicable	
Prior Informed Consent (PIC) (Regulation (H	EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU	J) 2019/1021):	Not applicable
VOC content	< 3 %	
(2010/75/EC)		
National regulations/information (German	y):	
WGK:	WGK 3: highly hazardous to wa substances that are hazardous to Classification according to AwS	
Storage class according to TRGS 510:		

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text

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of all abbreviations indicated by codes in this safety data sheet are as follows:

H225 Highly flammable liquid and vapour.

- H242 Heating may cause a fire.
- 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.
- H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

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

Further information:

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