

LOCTITE 276

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

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SDS No.: 303460

V008.0

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

1.1. Product identifier

LOCTITE 276

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

Intended use:

Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000 Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.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 damage Category 1

H318 Causes serious eye damage.

Skin sensitizer Category 1

H317 May cause an allergic skin reaction.

Specific target organ toxicity - single exposure Category 3

H335 May cause respiratory irritation.

Target organ: respiratory tract irritation

Chronic hazards to the aquatic environment Category 3

H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains 2-Hydroxyethyl methacrylate

Acrylic acid

Hydroxypropyl methacrylate

Maleic acid

Acetic acid, 2-phenylhydrazide

2,2'-Ethylenedioxydiethyl dimethacrylate

Signal word: Danger

Hazard statement: H318 Causes serious eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction. H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement: "***" ***For consumer use only: P101 If medical advice is needed, have product

container or label at hand. P102 Keep out of reach of children. P501 Dispose of waste and

residues in accordance with local authority requirements***

Precautionary statement: P261 Avoid breathing vapors.

Prevention P273 Avoid release to the environment.

P280 Wear protective gloves/eye protection.

Precautionary statement:

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:

Anaerobic Sealant

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	231-927-0	25- 50 %	STOT SE 3 H335 Skin Irrit. 2 H315 Eye Irrit. 2 H319
2-Hydroxyethyl methacrylate 868-77-9	212-782-2 01-2119490169-29	10- 20 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319
Acrylic acid 79-10-7	201-177-9 01-2119452449-31	1-< 5 %	STOT SE 3 H335 Aquatic Chronic 2 H411 Aquatic Acute 1 H400 Acute Tox. 4; Inhalation H332 Acute Tox. 4; Oral H302 Flam. Liq. 3 H226 Skin Corr. 1A H314 Acute Tox. 4; Dermal H312
Hydroxypropyl methacrylate 27813-02-1	248-666-3 01-2119490226-37	1-< 5%	Skin Sens. 1 H317 Eye Irrit. 2 H319
Maleic acid 110-16-7	203-742-5 01-2119488705-25	0,1-< 1 %	Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 STOT SE 3 H335
Cumene hydroperoxide 80-15-9	201-254-7 01-2119475796-19	0,1-< 1 %	Acute Tox. 4; Dermal H312 STOT RE 2 H373 Acute Tox. 4; Oral H302 Org. Perox. E H242 Acute Tox. 3; Inhalation H331 Aquatic Chronic 2 H411 Skin Corr. 1B H314
Acetic acid, 2-phenylhydrazide 114-83-0	204-055-3	0,1-< 1 %	Acute Tox. 3; Oral H301 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 STOT SE 3; Inhalation H335 Carc. 2 H351
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	203-652-6 01-2119969287-21	0,1-< 1 %	Skin Sens. 1B H317

Methacrylic acid	201-204-4	0,1-< 1 %	Acute Tox. 4
79-41-4	01-2119463884-26		H302
			Acute Tox. 3
			H311
			Acute Tox. 4
			H332
			Skin Corr. 1A
			H314
			Eye Dam. 1
			H318
			STOT SE 3
			H335

For full text of the H - statements and other abbreviations see section 16 "Other information". Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin contact:

Rinse with running water and soap.

Seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.

Seek medical advice.

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

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

SKIN: Redness, inflammation.

SKIN: Rash, Urticaria.

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

4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

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 case of fire, keep containers cool with water spray.

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

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 skin and eye contact.

Wear protective equipment.

Ensure adequate ventilation.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use only in well-ventilated areas. 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)

Adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³		Short term exposure limit category / Remarks	Regulatory list
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	40	143	Short Term Exposure Limit (STEL):		EH40 WEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	72	Time Weighted Average (TWA):		EH40 WEL

Occupational Exposure Limits

Valid for

Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit	Regulatory list
				category / Remarks	
Acrylic acid 79-10-7 [ACRYLIC ACID]	2	6	Time Weighted Average (TWA):		IR_OEL
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
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	70	Time Weighted Average (TWA):		IR_OEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	40	140	Short Term Exposure Limit (STEL):		IR_OEL

$\label{eq:predicted} \textbf{Predicted No-Effect Concentration (PNEC):}$

Name on list	Environmental Compartment	Exposure period	Value				Remarks
	Compartment	periou	mg/l	ppm	mg/kg	others	
2-Hydroxyethyl methacrylate 868-77-9	aqua (freshwater)		0,482 mg/l				
2-Hydroxyethyl methacrylate 868-77-9	aqua (marine water)		0,482 mg/l				
2-Hydroxyethyl methacrylate 868-77-9	sewage treatment plant		10 mg/l				
2-Hydroxyethyl methacrylate	(STP)		1/1				
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						
Acrylic acid 79-10-7	aqua (freshwater)		0,003 mg/l				
Acrylic acid	aqua (marine		0,0003				
79-10-7	water)		mg/l				
Acrylic acid 79-10-7	aqua (intermittent releases)		0,0013 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	sediment				0,00236		
79-10-7	(marine water)				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	Predator				0,03 g/kg		
Acrylic acid 79-10-7	Air						
Methacrylic acid, monoester with propane- 1,2-diol	aqua (freshwater)		0,904 mg/l				
27813-02-1 Methacrylic acid, monoester with propane-	aqua (marine		0,904 mg/l				
1,2-diol 27813-02-1	water)		10. 7				
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	sewage treatment plant (STP)		10 mg/l				
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	aqua (intermittent releases)		0,972 mg/l				
Methacrylic acid, monoester with propane- 1,2-diol	sediment (freshwater)				6,28 mg/kg		
27813-02-1 Methacrylic acid, monoester with propane-	sediment				6,28 mg/kg		
1,2-diol 27813-02-1	(marine water)						
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	Soil				0,727 mg/kg		
Maleic acid 110-16-7	aqua (freshwater)		0,1 mg/l				
Maleic acid	aqua		0,4281				
110-16-7	(intermittent releases)		mg/l				
Maleic acid 110-16-7	sediment (freshwater)				0,334 mg/kg		
Maleic acid	sewage		44,6 mg/l				

110-16-7	treatment plant	1 1	1 1	1
110-10-7	(STP)			
Maleic acid 110-16-7	aqua (marine water)	0,01 mg/l		
Maleic acid	sediment		0,0334	
110-16-7	(marine water)		mg/kg	
Maleic acid 110-16-7	Soil		0,0415 mg/kg	
.alpha.,.alphaDimethylbenzyl	aqua	0,0031		
hydroperoxide 80-15-9	(freshwater)	mg/l		
.alpha.,.alphaDimethylbenzyl	aqua (marine	0,00031		
hydroperoxide 80-15-9	water)	mg/l		
.alpha.,.alphaDimethylbenzyl	aqua	0,031 mg/l		
hydroperoxide	(intermittent	0,031 mg1		
80-15-9	releases)			
.alpha.,.alphaDimethylbenzyl	Sewage	0,35 mg/l		
hydroperoxide 80-15-9	treatment plant			
.alpha.,.alphaDimethylbenzyl	sediment		0,023	
hydroperoxide 80-15-9	(freshwater)		mg/kg	
.alpha.,.alphaDimethylbenzyl	sediment		0,0023	
hydroperoxide 80-15-9	(marine water)		mg/kg	
.alpha.,.alphaDimethylbenzyl	Soil		0,0029	
hydroperoxide			mg/kg	
80-15-9 2,2'-Ethylenedioxydiethyl dimethacrylate		0.164		
109-16-0	aqua (freshwater)	0,164 mg/l		
2,2'-Ethylenedioxydiethyl dimethacrylate	aqua (marine	0,0164		
109-16-0	water)	mg/l		
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	sewage treatment plant (STP)	10 mg/l		
2,2'-Ethylenedioxydiethyl dimethacrylate	aqua	0,164 mg/l		
109-16-0	(intermittent releases)			
2,2'-Ethylenedioxydiethyl dimethacrylate	sediment		1,85 mg/kg	
109-16-0	(freshwater)			
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	sediment (marine water)		0,185 mg/kg	
2,2'-Ethylenedioxydiethyl dimethacrylate	Soil		0,274	
109-16-0 2,2'-Ethylenedioxydiethyl dimethacrylate	Air		mg/kg	
109-16-0				
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Predator			
Methacrylic acid 79-41-4	aqua (freshwater)	0,82 mg/l		
Methacrylic acid	aqua (marine	0,82 mg/l		
79-41-4	water)	10 "		
Methacrylic acid 79-41-4	sewage	10 mg/l		
	treatment plant (STP)			
Methacrylic acid	aqua	0,82 mg/l		
79-41-4	(intermittent releases)			
Methacrylic acid	Soil		1,2 mg/kg	
79-41-4			, , ,	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
2-Hydroxyethyl methacrylate 868-77-9	Workers	dermal	Long term exposure - systemic effects		1,3 mg/kg	
2-Hydroxyethyl methacrylate 868-77-9	Workers	Inhalation	Long term exposure - systemic effects		4,9 mg/m3	
2-Hydroxyethyl methacrylate 868-77-9	General population	dermal	Long term exposure - systemic effects		0,83 mg/kg	
2-Hydroxyethyl methacrylate 868-77-9	General population	Inhalation	Long term exposure - systemic effects		2,9 mg/m3	
2-Hydroxyethyl methacrylate 868-77-9	General population	oral	Long term exposure - systemic effects		0,83 mg/kg	
Acrylic acid 79-10-7	Workers	inhalation	Long term exposure - local effects		30 mg/m3	
Aerylie acid 79-10-7	Workers	inhalation	Acute/short term exposure - local effects		30 mg/m3	
Aerylie acid 79-10-7	Workers	dermal	Acute/short term exposure - local effects		1 mg/cm2	
Acrylic acid 79-10-7	General population	dermal	Acute/short term exposure - local effects		1 mg/cm2	
Aerylie acid 79-10-7	General population	inhalation	Acute/short term exposure - local effects		3,6 mg/m3	
Acrylic acid 79-10-7	General population	inhalation	Long term exposure - local effects		3,6 mg/m3	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	Workers	dermal	Long term exposure - systemic effects		4,2 mg/kg	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	Workers	Inhalation	Long term exposure - systemic effects		14,7 mg/m3	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	General population	dermal	Long term exposure - systemic effects		2,5 mg/kg	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	General population	Inhalation	Long term exposure - systemic effects		8,8 mg/m3	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	General population	oral	Long term exposure - systemic effects		2,5 mg/kg	
Maleic acid 110-16-7	Workers	dermal	Acute/short term exposure - local effects		0,55 mg/cm2	
Maleic acid 110-16-7	Workers	dermal	Long term exposure - local effects		0,04 mg/cm2	
Maleic acid 110-16-7	Workers	dermal	Acute/short term exposure - systemic effects		58 mg/kg	
Maleic acid 110-16-7	Workers	dermal	Long term exposure - systemic effects		3,3 mg/kg	
Maleic acid 110-16-7	Workers	inhalation	Acute/short term exposure - local effects		3 mg/m3	
Maleic acid 110-16-7	Workers	inhalation	Long term exposure - systemic effects		3 mg/m3	
Maleic acid 110-16-7	Workers	inhalation	Long term exposure - local effects		3 mg/m3	
Maleic acid 110-16-7	Workers	inhalation	Acute/short term exposure -		3 mg/m3	

1		1	systemic effects		
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	Workers	inhalation	Long term exposure - systemic effects	6 mg/m3	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Workers	inhalation	Long term exposure - systemic effects	48,5 mg/m3	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Workers	dermal	Long term exposure - systemic effects	13,9 mg/kg	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	General population	inhalation	Long term exposure - systemic effects	14,5 mg/m3	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	General population	dermal	Long term exposure - systemic effects	8,33 mg/kg	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	General population	oral	Long term exposure - systemic effects	8,33 mg/kg	
Methacrylic acid 79-41-4	Workers	Inhalation	Long term exposure - local effects	88 mg/m3	
Methacrylic acid 79-41-4	Workers	Inhalation	Long term exposure - systemic effects	29,6 mg/m3	
Methacrylic acid 79-41-4	Workers	dermal	Long term exposure - systemic effects	4,25 mg/kg	
Methacrylic acid 79-41-4	General population	Inhalation	Long term exposure - local effects	6,55 mg/m3	
Methacrylic acid 79-41-4	General population	Inhalation	Long term exposure - systemic effects	6,3 mg/m3	
Methacrylic acid 79-41-4	General population	dermal	Long term exposure - systemic effects	2,55 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

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

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

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

nitrile rubber (NBR; >= 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:

Wear protective glasses.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

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

Advices to personal protection equipment:

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance liquid green
Odor irritating

Odour threshold No data available / Not applicable

pH No data available / Not applicable
Melting point No data available / Not applicable
Solidification temperature No data available / Not applicable
Initial boiling point No data available / Not applicable

Flash point Not available.

Evaporation rate No data available / Not applicable Flammability No data available / Not applicable No data available / Not applicable Explosive limits Vapour pressure No data available / Not applicable Relative vapour density: No data available / Not applicable No data available / Not applicable Density Bulk density No data available / Not applicable Solubility No data available / Not applicable Solubility (qualitative) No data available / Not applicable Partition coefficient: n-octanol/water No data available / Not applicable Auto-ignition temperature No data available / Not applicable No data available / Not applicable Decomposition temperature No data available / Not applicable Viscosity No data available / Not applicable Viscosity (kinematic) Explosive properties No data available / Not applicable Oxidising properties No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with strong acids. Reacts with strong oxidants.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

Oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

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

Hazardous substances	Value	Value	Species	Method
CAS-No.	type			
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 5.000 mg/kg	rat	not specified
Acrylic acid 79-10-7	LD50	1.500 mg/kg	rat	BASF Test
Hydroxypropyl methacrylate 27813-02-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Maleic acid 110-16-7	LD50	708 mg/kg	rat	not specified
Cumene hydroperoxide 80-15-9	LD50	550 mg/kg	rat	not specified
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	rat	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LD50	10.837 mg/kg	rat	not specified
Methacrylic acid 79-41-4	LD50	1.320 mg/kg	rat	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	Value	Value	Species	Method
CAS-No.	type			
2-Hydroxyethyl	LD50	> 5.000 mg/kg	rabbit	not specified
methacrylate				
868-77-9				
Acrylic acid	Acute	1.100 mg/kg		Expert judgement
79-10-7	toxicity			
	estimate			
	(ATE)			
Acrylic acid	LD50	> 2.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
79-10-7				
Hydroxypropyl	LD50	> 5.000 mg/kg	rabbit	not specified
methacrylate				
27813-02-1				
Maleic acid	LD50	1.560 mg/kg	rabbit	not specified
110-16-7				
Cumene hydroperoxide	LD50	1.200 - 1.520		not specified
80-15-9		mg/kg		
2,2'-Ethylenedioxydiethyl	LD50	> 2.000 mg/kg	mouse	not specified
dimethacrylate				
109-16-0				
Methacrylic acid	LD50	500 - 1.000	rabbit	Dermal Toxicity Screening
79-41-4		mg/kg		

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		
Acrylic acid	LC50	> 5,1 mg/l	vapour	4 h	rat	OECD Guideline 403 (Acute
79-10-7						Inhalation Toxicity)
Acrylic acid	Acute	11 mg/l	vapour			Expert judgement
79-10-7	toxicity					
	estimate					
	(ATE)					
Methacrylic acid	LC50	> 3,6 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute
79-41-4						Inhalation Toxicity)

Skin corrosion/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		
Acrylic acid	highly	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
79-10-7	corrosive			
Hydroxypropyl	not irritating	24 h	rabbit	Draize Test
methacrylate				
27813-02-1				
Maleic acid	irritating	24 h	human	Patch Test
110-16-7				
Cumene hydroperoxide	corrosive		rabbit	Draize Test
80-15-9				
2,2'-Ethylenedioxydiethyl	not irritating	24 h	rabbit	Draize Test
dimethacrylate				
109-16-0				
Methacrylic acid	corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
79-41-4				

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		
2-Hydroxyethyl	irritating		rabbit	Draize Test
methacrylate				
868-77-9				
Acrylic acid	corrosive	21 d	rabbit	BASF Test
79-10-7				
Maleic acid	highly		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
110-16-7	irritating			
2,2'-Ethylenedioxydiethyl	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
dimethacrylate				
109-16-0				
Methacrylic acid	corrosive		rabbit	Draize Test
79-41-4				

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.				
Acrylic acid	not sensitising	Skin painting test	guinea pig	not specified
79-10-7				
Maleic acid	sensitising	Mouse local lymphnode	mouse	OECD Guideline 429 (Skin Sensitisation:
110-16-7		assay (LLNA)		Local Lymph Node Assay)
Maleic acid	sensitising	Mouse local lymphnode	guinea pig	OECD Guideline 406 (Skin Sensitisation)
110-16-7		assay (LLNA)		
2,2'-Ethylenedioxydiethyl	sensitising	Mouse local lymphnode	mouse	OECD Guideline 429 (Skin Sensitisation:
dimethacrylate		assay (LLNA)		Local Lymph Node Assay)
109-16-0				
Methacrylic acid	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
79-41-4				

Germ cell mutagenicity:

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

Hazardous substances	Result	Type of study /	Metabolic	Species	Method
CAS-No.		Route of administration	activation / Exposure time		
2-Hydroxyethyl	negative	bacterial reverse	with and without		OECD Guideline 471
methacrylate	negative	mutation assay (e.g	with and without		(Bacterial Reverse Mutation
868-77-9		Ames test)			Assay)
2-Hydroxyethyl	positive	in vitro mammalian	with and without		OECD Guideline 473 (In vitro
methacrylate	F	chromosome			Mammalian Chromosome
868-77-9		aberration test			Aberration Test)
2-Hydroxyethyl	negative	mammalian cell	with and without		OECD Guideline 476 (In vitro
methacrylate		gene mutation assay			Mammalian Cell Gene
868-77-9					Mutation Test)
2-Hydroxyethyl	negative	bacterial reverse	with and without		OECD Guideline 472 (Genetic
methacrylate		mutation assay (e.g			Toxicology: Escherichia coli,
868-77-9		Ames test)			Reverse Mutation Assay)
Acrylic acid	negative	mammalian cell	with and without		OECD Guideline 476 (In vitro
79-10-7		gene mutation assay			Mammalian Cell Gene
					Mutation Test)
Acrylic acid	negative	DNA damage and	without		OECD Guideline 482 (Genetic
79-10-7		repair assay,			Toxicology: DNA Damage
		unscheduled DNA			and Repair, Unscheduled
		synthesis in			DNA Synthesis in Mammalian
		mammalian cells in			Cells In Vitro)
Hydeoxymeonyl	magativa	vitro bacterial reverse	with and without		OECD Guideline 471
Hydroxypropyl methacrylate	negative	mutation assay (e.g	with and without		(Bacterial Reverse Mutation
27813-02-1		Ames test)			Assay)
Hydroxypropyl	negative	mammalian cell	with and without		OECD Guideline 476 (In vitro
methacrylate	negative	gene mutation assay	with and without		Mammalian Cell Gene
27813-02-1		gene mutation assay			Mutation Test)
Maleic acid	negative	bacterial reverse	no data		Ames Test
110-16-7	negative	mutation assay (e.g	no data		Ames Test
110 10 7		Ames test)			
Maleic acid	negative	mammalian cell	with and without		OECD Guideline 476 (In vitro
110-16-7		gene mutation assay			Mammalian Cell Gene
					Mutation Test)
Cumene hydroperoxide	positive	bacterial reverse	without		OECD Guideline 471
80-15-9		mutation assay (e.g			(Bacterial Reverse Mutation
		Ames test)			Assay)
2,2'-Ethylenedioxydiethyl	negative	mammalian cell	with and without		OECD Guideline 476 (In vitro
dimethacrylate		gene mutation assay			Mammalian Cell Gene
109-16-0					Mutation Test)
2,2'-Ethylenedioxydiethyl	negative	bacterial reverse	with and without		OECD Guideline 471
dimethacrylate		mutation assay (e.g			(Bacterial Reverse Mutation
109-16-0		Ames test)	1.1 1 1.1		Assay)
2,2'-Ethylenedioxydiethyl	negative	in vitro mammalian	with and without		OECD Guideline 487 (In vitro
dimethacrylate 109-16-0		cell micronucleus			Mammalian Cell
Methacrylic acid	negative	bacterial reverse	with and without		Micronucleus Test) OECD Guideline 471
79-41-4	negative	mutation assay (e.g	with and without		(Bacterial Reverse Mutation
72-41-4		Ames test)			Assay)
2-Hydroxyethyl	negative	oral: gavage		rat	OECD Guideline 474
methacrylate	110541110	Jul. guruge		144	(Mammalian Erythrocyte
868-77-9					Micronucleus Test)
Acrylic acid	negative	oral: gavage		rat	OECD Guideline 475
79-10-7		5			(Mammalian Bone Marrow
					Chromosome Aberration Test)
Hydroxypropyl	negative	oral: gavage		rat	OECD Guideline 474
methacrylate		2			(Mammalian Erythrocyte
27813-02-1					Micronucleus Test)
Cumene hydroperoxide	negative	dermal		mouse	not specified
80-15-9	-				
Methacrylic acid	negative	inhalation		mouse	OECD Guideline 478 (Genetic
79-41-4					Toxicology: Rodent Dominant
					Lethal Test)

Carcinogenicity

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

Hazardous components	Result	Route of	Exposure	Species	Sex	Method
CAS-No.		application	time /			
			Frequency			
			of treatment			
2-Hydroxyethyl		inhalation	102 weeks	rat	female	OECD Guideline 451
methacrylate			6 hours/day,			(Carcinogenicity
868-77-9			5 days/week			Studies)
Acrylic acid		oral: drinking	26 (males) -	rat	male/female	OECD Guideline 451
79-10-7		water	28 (females)			(Carcinogenicity
			month			Studies)
			continuously			
Hydroxypropyl	not carcinogenic	inhalation	2 years (102	rat	male	OECD Guideline 451
methacrylate			weeks)			(Carcinogenicity
27813-02-1			6 hours/day,			Studies)
			5 days/week			
Maleic acid	not carcinogenic	oral: feed	2 y	rat	male/female	OECD Guideline 451
110-16-7			daily			(Carcinogenicity
						Studies)
Methacrylic acid	not carcinogenic	inhalation	2 y	mouse	male/female	OECD Guideline 451
79-41-4						(Carcinogenicity
						Studies)

Reproductive toxicity:

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

Hazardous substances	Result / Value	Test type	Route of	Species	Method
CAS-No.			application		
2-Hydroxyethyl	NOAEL P \geq = 1.000 mg/kg	screening	oral: gavage	rat	OECD Combined Repeated
methacrylate					Dose and Reproductive /
868-77-9	NOAEL F1 $>= 1.000 \text{ mg/kg}$				Developmental Toxicity
					Screening Test (Precursor
					Protocol of GL 422)
Acrylic acid	NOAEL P 240 mg/kg		oral:	rat	OECD Guideline 416 (Two-
79-10-7	NOAEL F2 53 mg/l		drinking		Generation Reproduction
			water		Toxicity Study)
Hydroxypropyl	NOAEL P 400 mg/kg	two-	oral: gavage	rat	OECD Guideline 416 (Two-
methacrylate		generation			Generation Reproduction
27813-02-1		study			Toxicity Study)
Maleic acid	NOAEL F1 150 mg/kg	Two	oral: gavage	rat	OECD Guideline 416 (Two-
110-16-7		generation			Generation Reproduction
	NOAEL F2 55 mg/kg	study			Toxicity Study)
2,2'-Ethylenedioxydiethyl	NOAEL P 1.000 mg/kg		oral: gavage	rat	OECD Guideline 422
dimethacrylate	TOTALL I 1.000 mg/kg		orar. gavage	Tat	(Combined Repeated Dose
109-16-0	NOAEL F1 1.000 mg/kg				Toxicity Study with the
109 10 0	Trong ing				Reproduction /
					Developmental Toxicity
					Screening Test)
Methacrylic acid	NOAEL P 50 mg/kg	Two	oral: gavage	rat	OECD Guideline 416 (Two-
79-41-4		generation			Generation Reproduction
	NOAEL F1 400 mg/kg	study			Toxicity Study)
	NOAEL F2 400 mg/kg				

STOT-single exposure:

No data available.

STOT-repeated exposure::

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

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	NOAEL 100 mg/kg	oral: gavage	once daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Hydroxypropyl methacrylate 27813-02-1	NOAEL 300 mg/kg	oral: gavage		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Maleic acid 110-16-7	NOAEL >= 40 mg/kg	oral: feed	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Cumene hydroperoxide 80-15-9		inhalation: aerosol	6 h/d 5 d/w	rat	not specified
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)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
2-Hydroxyethyl methacrylate 868-77-9	LC50	> 100 mg/l	96 h	Oryzias latipes	OECD Guideline 203 (Fish,
	T C50	07. //	0.61	G 1 . 1	Acute 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)
Hydroxypropyl methacrylate 27813-02-1	LC50	493 mg/l	48 h	Leuciscus idus melanotus	DIN 38412-15
Maleic acid 110-16-7	LC50	> 245 mg/l	48 h	Leuciscus idus	DIN 38412-15
Cumene hydroperoxide 80-15-9	LC50	3,9 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LC50	16,4 mg/l	96 h	Danio rerio	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)

Toxicity (Daphnia):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Acrylic acid 79-10-7	EC50	95 mg/l	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Hydroxypropyl methacrylate 27813-02-1	EC50	> 143 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Maleic acid 110-16-7	EC50	42,81 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Cumene hydroperoxide 80-15-9	EC50	18 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacrylic acid 79-41-4	EC50	> 130 mg/l	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)

Chronic toxicity to aquatic invertebrates

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
2-Hydroxyethyl methacrylate	NOEC	24,1 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia
868-77-9					magna, Reproduction Test)
Acrylic acid	NOEC	19 mg/l	21 d	Daphnia magna	EPA OTS 797.1330
79-10-7					(Daphnid Chronic Toxicity
					Test)
Hydroxypropyl methacrylate	NOEC	45,2 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia
27813-02-1					magna, Reproduction Test)
2,2'-Ethylenedioxydiethyl	NOEC	32 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia
dimethacrylate					magna, Reproduction Test)
109-16-0					

Toxicity (Algae):

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
2-Hydroxyethyl methacrylate 868-77-9	EC50	836 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	
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)
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)
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)
Maleic acid 110-16-7	EC50	74,35 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	ErC50	3,1 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)
Methacrylic acid 79-41-4	NOEC	8,2 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid 79-41-4	EC50	45 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

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

Hazardous substances	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:
Acrylic acid 79-10-7	EC20	900 mg/l	30 min	activated sludge, domestic	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
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
Methacrylic acid 79-41-4	EC10	100 mg/l	17 h		not specified

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	14 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
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)
Hydroxypropyl methacrylate 27813-02-1	readily biodegradable	aerobic	94,2 %	28 d	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Maleic acid 110-16-7	readily biodegradable	aerobic	97,08 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Cumene hydroperoxide 80-15-9		no data	0 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	readily biodegradable	aerobic	85 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Methacrylic acid 79-41-4	inherently biodegradable	aerobic	100 %	14 d	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
Methacrylic acid 79-41-4	readily biodegradable	aerobic	86 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

12.3. Bioaccumulative potential

Hazardous substances	Bioconcentratio	Exposure time	Temperature	Species	Method
CAS-No.	n factor (BCF)				
Acrylic acid	3,16				QSAR (Quantitative Structure
79-10-7					Activity Relationship)
Cumene hydroperoxide	9,1			calculation	OECD Guideline 305
80-15-9					(Bioconcentration: Flow-through
					Fish Test)

12.4. Mobility in soil

Hazardous substances	LogPow	Temperature	Method
CAS-No. 2-Hydroxyethyl methacrylate 868-77-9	0,42	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acrylic acid 79-10-7	0,46	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Hydroxypropyl methacrylate 27813-02-1	0,97	20 °C	not specified
Maleic acid 110-16-7	-1,3	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Cumene hydroperoxide 80-15-9	2,16		not specified
Acetic acid, 2- phenylhydrazide 114-83-0	0,74		not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	2,3		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)

12.5. Results of PBT and vPvB assessment

Hazardous substances	PBT / vPvB		
CAS-No.			
2-Hydroxyethyl methacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very		
868-77-9	Bioaccumulative (vPvB) criteria.		
Acrylic acid	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very		
79-10-7	Bioaccumulative (vPvB) criteria.		
Hydroxypropyl methacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very		
27813-02-1	Bioaccumulative (vPvB) criteria.		
Maleic acid	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very		
110-16-7	Bioaccumulative (vPvB) criteria.		
Cumene hydroperoxide	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very		
80-15-9	Bioaccumulative (vPvB) criteria.		
2,2'-Ethylenedioxydiethyl dimethacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very		
109-16-0	Bioaccumulative (vPvB) criteria.		
Methacrylic acid	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very		
79-41-4	Bioaccumulative (vPvB) criteria.		

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

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

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

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

Disposal must be made according to official regulations.

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

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

not applicable

SECTION 15: Regulatory information

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

VOC content <3 % (2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

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

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

- H226 Flammable liquid and vapor.
- H242 Heating may cause a fire.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic 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.
- H411 Toxic to aquatic life with long lasting effects.

Further information:

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Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.