

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

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SDS No.: 416828

V006.0 Revision: 11.07.2017

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Replaces version from: 29.07.2016

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

#### 1.1. Product identifier

LOCTITE AA 330 known as Loctite 330

#### **Contains:**

Tetrahydrofurfuryl methacrylate

LOCTITE AA 330 known as Loctite 330

Methacrylic acid

Epoxy resin (number average molecular weight  $\leq$  700)

1-Methyltrimethylene dimethacrylate

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

Intended use:

Acrylic 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 sensitizer Category 1

H317 May cause an allergic skin reaction.

Toxic to reproduction Category 1B

H360 May damage fertility or the unborn child.

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.

Skin irritation Category 2

H315 Causes skin irritation.

Serious eye damage Category 1

H318 Causes serious eye damage.

#### 2.2. Label elements

#### **Label elements (CLP):**



Signal word:	Danger
Hazard statement:	H315 Causes skin irritation.
	H317 May cause an allergic skin reaction.
	H318 Causes serious eye damage.
	H335 May cause respiratory irritation.
	H360 May damage fertility or the unborn child.
	H412 Harmful to aquatic life with long lasting effects.

For use in industrial installations only. Supplemental information Restricted to professional users.

Precautionary statement:	P201 Obtain special instructions before use.
Prevention	P261 Avoid breathing vapours.
	P273 Avoid release to the environment.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement:	P308+P313 IF exposed or concerned: Get medical advice/attention.
Response	P302+P352 IF ON SKIN: Wash with plenty of soap and water.
	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.

## 2.3. Other hazards

Non corrosive to skin in accordance with the in vitro test method, B40 skin corrosion - Human skin model assay, equivalent to test method OECD 431 or based on analogy to similar products tested.

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

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

#### 3.2. Mixtures

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Tetrahydrofurfuryl methacrylate 2455-24-5	219-529-5	25- 50 %	Skin Irrit. 2; Dermal H315 Eye Irrit. 2 H319 STOT SE 3; Inhalation H335 Repr. 1B H360 Aquatic Chronic 3 H412
Methacrylic acid 79-41-4	201-204-4 01-2119463884-26	5-< 10 %	Acute Tox. 4; Oral H302 Acute Tox. 3; Dermal H311 Acute Tox. 4; Inhalation H332 Skin Corr. 1A H314
2-Ethylhexyl methacrylate 688-84-6	211-708-6 01-2119490166-35	5-< 10 %	STOT SE 3 H335 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Aquatic Chronic 3 H412
1-Methyltrimethylene dimethacrylate 1189-08-8	214-711-0 01-2119969461-31	1-< 3 %	Skin Sens. 1B H317
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	500-033-5 500-033-5 01-2119456619-26	0,1-< 1 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411
Butyl hydroxytoluene 128-37-0	204-881-4 01-2119480433-40 01-2119555270-46 01-2119565113-46	0,25-< 2,5 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410
Cumene hydroperoxide 80-15-9	201-254-7	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
1,1,2-Trichloroethane 79-00-5	201-166-9	0,1-< 1 %	Carc. 2 H351 Acute Tox. 4; Dermal H312 Acute Tox. 4; Oral H302 Acute Tox. 4; Inhalation H332

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

## **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

Inhalation:

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

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eve contact

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

Ingestion:

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

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

SKIN: Redness, inflammation.

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

SKIN: Rash, Urticaria.

May impair fertility.

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:

None known

## 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

Ensure adequate ventilation.

Avoid contact with skin and eyes.

Wear protective equipment.

#### 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.

Wash spillage site thoroughly with soap and water or detergent solution.

#### 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.

Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

## Hygiene measures:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

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)

Acrylic Adhesive

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

## 8.1. Control parameters

#### **Occupational Exposure Limits**

Valid for

Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Methacrylic acid 79-41-4	40	143	Short Term Exposure Limit (STEL):		EH40 WEL
[METHACRYLIC ACID]			Ellilit (STEL).		
Methacrylic acid 79-41-4	20	72	Time Weighted Average (TWA):		EH40 WEL
[METHACRYLIC ACID]					
2,6-di-tert-Butyl-p-cresol 128-37-0 [2,6-DI-TERT-BUTYL-P-CRESOL]		10	Time Weighted Average (TWA):		EH40 WEL

## Occupational Exposure Limits

Valid for

Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
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
2,6-di-tert-Butyl-p-cresol 128-37-0 [2,6-DITERTIARY-BUTYL-PARA- CRESOL]		10	Time Weighted Average (TWA):		IR_OEL
1,1,2-Trichloroethane 79-00-5 [1,1,2-TRICHLOROETHANE]	10	45	Time Weighted Average (TWA):		IR_OEL
1,1,2-Trichloroethane 79-00-5 [1,1,2-TRICHLOROETHANE]			Skin designation:	Can be absorbed through the skin.	IR_OEL

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

Name on list	Environmental Compartment	Exposure period	Value		Remarks		
	•	P******	mg/l	ppm	mg/kg	others	
Methacrylic acid 79-41-4	aqua (freshwater)		0,82 mg/l				
Methacrylic acid 79-41-4	aqua (marine water)		0,82 mg/l				
Methacrylic acid 79-41-4	sewage treatment plant (STP)		10 mg/l				
Methacrylic acid 79-41-4	aqua (intermittent releases)		0,82 mg/l				
Methacrylic acid 79-41-4	soil				1,2 mg/kg		
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (freshwater)		0,006 mg/l				
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (marine water)		0,001 mg/l				
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (intermittent releases)		0,018 mg/l				
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sewage treatment plant (STP)		10 mg/l				
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (freshwater)				0,996 mg/kg		
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (marine water)				0,1 mg/kg		
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	soil				0,196 mg/kg		
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	oral				11 mg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	soil				47,69 μg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	sewage treatment plant (STP)		0,17 mg/l				
2,6-Di-tert-butyl-p-cresol 128-37-0	sediment (freshwater)				99,6 μg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	oral				8,33 mg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	aqua (marine water)		0,02 μg/l				
2,6-Di-tert-butyl-p-cresol 128-37-0	aqua (freshwater)		0,199 μg/l				
2,6-Di-tert-butyl-p-cresol 128-37-0	sediment (marine water)				9,96 μg/kg		
2,6-Di-tert-butyl-p-cresol 128-37-0	aqua (intermittent releases)		0,00199 mg/l				
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	aqua (freshwater)		0,0031 mg/l				
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	aqua (marine water)		0,00031 mg/l				
.alpha.,.alphaDimethylbenzyl hydroperoxide	aqua (intermittent		0,031 mg/l				

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80-15-9	releases)			
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	Sewage treatment plant	0,35 mg/l		
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	sediment (freshwater)		0,023 mg/kg	
.alpha.,alphaDimethylbenzyl hydroperoxide 80-15-9	sediment (marine water)		0,0023 mg/kg	
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	soil		0,0029 mg/kg	

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

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
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	
2-Ethylhexyl methacrylate 688-84-6	worker	dermal	Long term exposure - systemic effects		5 mg/kg	
1-Methyltrimethylene dimethacrylate 1189-08-8	Workers	inhalation	Long term exposure - systemic effects		14,5 mg/m3	
1-Methyltrimethylene dimethacrylate 1189-08-8	Workers	dermal	Long term exposure - systemic effects		4,2 mg/kg	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	dermal	Acute/short term exposure - systemic effects		8,33 mg/kg	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Acute/short term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	dermal	Long term exposure - systemic effects		8,33 mg/kg	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Long term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	dermal	Acute/short term exposure - systemic effects		3,571 mg/kg	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	dermal	Long term exposure - systemic effects		3,571 mg/kg	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	Inhalation	Acute/short term exposure - systemic effects		0,75 mg/m3	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	Inhalation	Long term exposure - systemic effects		0,75 mg/m3	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	oral	Acute/short term exposure - systemic effects		0,75 mg/kg	
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	oral	Long term exposure - systemic effects		0,75 mg/kg	
2,6-Di-tert-butyl-p-cresol 128-37-0	Workers	inhalation	Long term exposure - systemic effects		3,5 mg/m3	
2,6-Di-tert-butyl-p-cresol	Workers	dermal	Long term		0,5 mg/kg	

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128-37-0			exposure - systemic effects		
2,6-Di-tert-butyl-p-cresol 128-37-0	General population	inhalation	Long term exposure - systemic effects	0,86 mg/m3	
2,6-Di-tert-butyl-p-cresol 128-37-0	General population	dermal	Long term exposure - systemic effects	0,25 mg/kg	
2,6-Di-tert-butyl-p-cresol 128-37-0	General population	oral	Long term exposure - systemic effects	0,25 mg/kg	
.alpha.,.alphaDimethylbenzyl hydroperoxide 80-15-9	Workers	inhalation	Long term exposure - systemic effects	6 mg/m3	

#### **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

Appearance liquid yellow
Odor Acrylic

Odour threshold No data available / Not applicable

pH 10

Melting point

No data available / Not applicable
Solidification temperature

No data available / Not applicable

Initial boiling point

No data available / Not applicable

Flash point

Evaporation rate

Flammability

No data available / Not applicable

Vapour pressure < 4 mbar Vapour pressure < 700 mbar (50 °C (122 °F))

Relative vapour density: No data available / Not applicable

Density 1,05 g/cm<sup>3</sup>

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Bulk density No data available / Not applicable Solubility No data available / Not applicable

Solubility (qualitative) Slight

(Solvent: Water)

Partition coefficient: n-octanol/water

Auto-ignition temperature

Decomposition temperature

Viscosity

Viscosity

No data available / Not applicable
Explosive properties

No data available / Not applicable
Oxidising properties

No data available / Not applicable
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 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 under normal conditions of storage and use.

#### 10.5. Incompatible materials

See section reactivity.

#### 10.6. Hazardous decomposition products

carbon oxides.

#### **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

#### General toxicological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

#### STOT-single exposure:

May cause respiratory irritation.

#### Oral toxicity:

May cause irritation to the digestive tract.

#### Skin irritation:

Causes skin irritation.

Non corrosive to skin in accordance with the in vitro test method, B40 skin corrosion - Human skin model assay, equivalent to test method OECD 431 or based on analogy to similar products tested.

#### Eye irritation:

Causes serious eye damage.

#### Sensitizing:

May cause an allergic skin reaction.

## Reproductive toxicity:

May damage fertility. May damage the unborn child.

## Acute oral toxicity:

Hazardous components	Value	Value	Route of	Exposure	Species	Method
CAS-No.	type		application	time		
Tetrahydrofurfuryl	LD50	4.000 mg/kg	oral		rat	OECD Guideline 401 (Acute
methacrylate						Oral Toxicity)
2455-24-5						
Methacrylic acid	LD50	1.320 mg/kg	oral		rat	OECD Guideline 401 (Acute
79-41-4						Oral Toxicity)
2-Ethylhexyl methacrylate	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 401 (Acute
688-84-6						Oral Toxicity)
1-Methyltrimethylene	LD50	> 5.000 mg/kg	oral		rat	not specified
dimethacrylate						
1189-08-8						
Epoxy resin (number	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 420 (Acute
average molecular weight						Oral Toxicity)
≤ 700)						
25068-38-6						
Butyl hydroxytoluene	LD50	> 5.000 mg/kg	oral		rat	OECD Guideline 401 (Acute
128-37-0						Oral Toxicity)
Cumene hydroperoxide	LD50	550 mg/kg	oral		rat	not specified
80-15-9						

## Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Methacrylic acid	LC50	> 3,6 mg/l	aerosol	4 h	rat	OECD Guideline 403 (Acute
79-41-4						Inhalation Toxicity)

## Acute dermal toxicity:

Hazardous components	Value	Value	Route of	Exposure	Species	Method
CAS-No.	type		application	time		
Methacrylic acid	Acute	500 mg/kg	dermal			Expert judgement
79-41-4	toxicity					
	estimate					
	(ATE)					
Methacrylic acid	LD50	500 - 1.000			rabbit	Dermal Toxicity Screening
79-41-4		mg/kg				
1-Methyltrimethylene	LD50	> 3.000  mg/kg	dermal		rabbit	not specified
dimethacrylate						
1189-08-8						
Epoxy resin (number	LD50	> 2.000 mg/kg	dermal		rat	not specified
average molecular weight						
≤ 700)						
25068-38-6						
Butyl hydroxytoluene	LD50	> 2.000 mg/kg	dermal		rat	OECD Guideline 402 (Acute
128-37-0						Dermal Toxicity)
Cumene hydroperoxide	LD50	1.200 - 1.520	dermal			not specified
80-15-9		mg/kg				

## Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Methacrylic acid 79-41-4	Category 1A (corrosive)	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	moderately irritating	24 h	rabbit	Draize Test
Butyl hydroxytoluene 128-37-0	slightly irritating	24 h	rabbit	not specified
Cumene hydroperoxide 80-15-9	corrosive		rabbit	Draize Test

## Serious eye damage/irritation:

Hazardous components	Result	Exposure	Species	Method
CAS-No.		time		
Methacrylic acid 79-41-4	Category I		rabbit	Draize Test
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Butyl hydroxytoluene 128-37-0	slightly irritating		rabbit	Draize Test

## Respiratory or skin sensitization:

Hazardous components	Result	Test type	Species	Method
CAS-No.				
Methacrylic acid	not sensitising	Buehler	guinea pig	OECD Guideline 406 (Skin
79-41-4		test		Sensitisation)
1-Methyltrimethylene	sensitising	Mouse	mouse	OECD Guideline 429 (Skin
dimethacrylate		local		Sensitisation: Local Lymph
1189-08-8		lymphnod		Node Assay)
		e assay		
		(LLNA)		
Epoxy resin (number	sensitising	Mouse	mouse	OECD Guideline 429 (Skin
average molecular weight		local		Sensitisation: Local Lymph
≤ 700)		lymphnod		Node Assay)
25068-38-6		e assay		
		(LLNA)		
Butyl hydroxytoluene	not sensitising	Draize	guinea pig	Draize Test
128-37-0		Test		

## Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Methacrylic acid 79-41-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Methacrylic acid 79-41-4	negative	inhalation		mouse	OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
2-Ethylhexyl methacrylate 688-84-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	negative	oral: gavage		mouse	not specified
Butyl hydroxytoluene 128-37-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
	negative	in vitro mammalian chromosome aberration test	with and without		not specified
	negative	mammalian cell gene mutation assay	with and without		not specified
Butyl hydroxytoluene 128-37-0	negative	oral: feed		rat	not specified
Cumene hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Cumene hydroperoxide 80-15-9	negative	dermal		mouse	not specified

## Carcinogenicity:

Hazardous components CAS-No.	Result	Species	Sex	Exposure timeFrequenc y of treatment	Route of application	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not carcinogenic	mouse	male	2 y daily	dermal	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not carcinogenic	rat	male/female	2 y daily	oral: gavage	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Butyl hydroxytoluene 128-37-0		rat	male	2 y daily	oral: feed	

## Reproductive toxicity:

Hazardous substances	Result / Classification	Species	Exposure	Species	Method
CAS-No.			time		
Epoxy resin (number	NOAEL $P =  >= 50 \text{ mg/kg}$	Two	238 d	rat	OECD Guideline 416 (Two-
average molecular weight	NOAEL F1 = $>= 750 \text{ mg/kg}$	generation			Generation Reproduction
≤ 700)	NOAEL $F2 = >= 750 \text{ mg/kg}$	study			Toxicity Study)
25068-38-6		oral: gavage			
Butyl hydroxytoluene	NOAEL $P = 500 \text{ mg/kg}$	Two		rat	not specified
128-37-0		generation			
		study			
		oral: feed			

#### Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	NOAEL=50 mg/kg	oral: gavage	14 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Butyl hydroxytoluene 128-37-0	NOAEL=25 mg/kg	oral: feed	daily	rat	not specified
Cumene hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified

## **SECTION 12: Ecological information**

#### General ecological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

## 12.1. Toxicity

## **Ecotoxicity:**

Do not empty into drains / surface water / ground water. Harmful to aquatic life with long lasting effects.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Tetrahydrofurfuryl methacrylate	LC50	34,7 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute
2455-24-5 Tetrahydrofurfuryl methacrylate	EC50	> 100 mg/l	Algae	72 h	Desmodesmus subspicatus	Toxicity Test) OECD Guideline 201 (Alga, Growth
2455-24-5	NOEC	> 100 mg/l	Algae	72 h	Desmodesmus subspicatus	Inhibition Test) OECD Guideline 201 (Alga, Growth
Tetrahydrofurfuryl methacrylate	NOEC	37,2 mg/l	chronic Daphnia	21 d	Daphnia magna	Inhibition Test) OECD 211 (Daphnia magna,
2455-24-5 Methacrylic acid 79-41-4	LC50	85 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	Reproduction Test) EPA OTS 797.1400 (Fish Acute Toxicity Test)
Methacrylic acid 79-41-4	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater
Methacrylic acid 79-41-4	NOEC	8,2 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	Daphnids) OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	45 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline
Methacrylic acid 79-41-4	EC10	100 mg/l	Bacteria	17 h		not specified
2-Ethylhexyl methacrylate 688-84-6	LC50	2,78 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Ethylhexyl methacrylate 688-84-6	EC50	4,56 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute
2-Ethylhexyl methacrylate 688-84-6	EC50	7,68 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	Immobilisation Test) OECD Guideline 201 (Alga, Growth
	NOEC	0,28 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	Inhibition Test) OECD Guideline 201 (Alga, Growth
2-Ethylhexyl methacrylate 688-84-6	NOEC	0,105 mg/l	chronic Daphnia	21 d	Daphnia magna	Inhibition Test) OECD 211 (Daphnia magna, Reproduction Test)
1-Methyltrimethylene dimethacrylate 1189-08-8	LC50	32,5 mg/l	Fish	48 h		DIN 38412-15
1-Methyltrimethylene dimethacrylate 1189-08-8	EC50	9,79 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
1107-00-0	NOEC	2,11 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
1-Methyltrimethylene dimethacrylate 1189-08-8	NOEC	20 mg/l	Bacteria	28 d	activated sludge, domestic	not specified
1-Methyltrimethylene dimethacrylate 1189-08-8	NOEC	5,09 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	LC50	1,75 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	EC50	1,7 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	EC50	> 11 mg/l	Algae	72 h	Scenedesmus capricornutum	Test) OECD Guideline 201 (Alga, Growth
23000-30-0	NOEC	4,2 mg/l	Algae	72 h	Scenedesmus capricornutum	Inhibition Test) OECD Guideline 201 (Alga, Growth

Epoxy resin (number average	IC50	> 100 mg/l	Bacteria	3 h	activated sludge, industrial	Inhibition Test) other guideline:
molecular weight ≤ 700) 25068-38-6	1000	, 100 mg 1	Bueteriu	<i>3</i> <b></b>	uon vatou staugo, mouseila	outer guidenne.
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	NOEC	0,3 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Butyl hydroxytoluene 128-37-0	NOEC	0,053 mg/l	Fish	42 d	Oryzias latipes	OECD Guideline 210 (fish early lite stage toxicity test)
Butyl hydroxytoluene 128-37-0	EC50	0,48 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute
						Immobilisation Test)
Butyl hydroxytoluene 128-37-0	EC10	0,4 mg/l	Algae	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Butyl hydroxytoluene 128-37-0	NOEC	0,023 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD Guideline 202 (Daphnia sp. Chronic Immobilisation
Cumene hydroperoxide 80-15-9	LC50	3,9 mg/l	Fish	96 h	Oncorhynchus mykiss	Test) OECD Guideline 203 (Fish, Acute Toxicity Test)
Cumene hydroperoxide 80-15-9	EC50	18 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute
						Immobilisation Test)
Cumene hydroperoxide 80-15-9	ErC50	3,1 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min		not specified
1,1,2-Trichloroethane 79-00-5	LC50	136 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,1,2-Trichloroethane 79-00-5	EC50	160 mg/l	Daphnia	48 h	Daphnia magna	other guideline:
1,1,2-Trichloroethane 79-00-5	EC50	213 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

## 12.2. Persistence and degradability

# **Persistence and Biodegradability:** The product is not biodegradable.

Hazardous components	Result	Route of	Degradability	Method
CAS-No.		application		

Tetrahydrofurfuryl methacrylate 2455-24-5	Not readily biodegradable.	aerobic	75 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Methacrylic acid 79-41-4	inherently biodegradable	aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
	readily biodegradable	aerobic	86 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-Ethylhexyl methacrylate 688-84-6	readily biodegradable	aerobic	88 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
1-Methyltrimethylene dimethacrylate 1189-08-8	readily biodegradable	aerobic	84 %	OECD Guideline 310 (Ready BiodegradabilityCO2 in Sealed Vessels (Headspace Test)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6		aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Butyl hydroxytoluene 128-37-0	Not readily biodegradable.	aerobic	4,5 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
	not inherently biodegradable	aerobic	5,2 - 5,6 %	OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II))
Cumene hydroperoxide 80-15-9		no data	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
1,1,2-Trichloroethane 79-00-5	Not readily biodegradable.	aerobic	5 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

## 12.3. Bioaccumulative potential / 12.4. Mobility in soil

## **Mobility:**

Cured adhesives are immobile.

**Bioaccumulative potential:** No data available for the product.

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Tetrahydrofurfuryl methacrylate 2455-24-5	1,76					EU Method A.8 (Partition Coefficient)
Methacrylic acid 79-41-4	0,93				22 °C	OECD Guideline 107 (Partition Coefficient (noctanol / water), Shake Flask Method)
2-Ethylhexyl methacrylate 688-84-6		37	56 h	Danio rerio	24 °C	OECD Guideline 305 (Bioconcentration: Flow- through Fish Test)
2-Ethylhexyl methacrylate 688-84-6	4,95				20 °C	OECD Guideline 107 (Partition Coefficient (noctanol / water), Shake Flask Method)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	3,242				25 °C	EU Method A.8 (Partition Coefficient)
Butyl hydroxytoluene 128-37-0 Butyl hydroxytoluene	5.1	330 - 1.800	56 d	Cyprinus carpio		OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish) other guideline:
128-37-0	- ,					g
Cumene hydroperoxide 80-15-9		9,1		calculation		OECD Guideline 305 (Bioconcentration: Flow- through Fish Test)
Cumene hydroperoxide 80-15-9	2,16					not specified
1,1,2-Trichloroethane 79-00-5		2	14 d	Lepomis macrochirus		other guideline:
1,1,2-Trichloroethane 79-00-5	> 2,05 - < 2,49				20 °C	QSAR (Quantitative Structure Activity Relationship)

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

Hazardous components	PBT/vPvB			
CAS-No.				
Tetrahydrofurfuryl methacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very			
2455-24-5	Bioaccumulative (vPvB) criteria.			
Methacrylic acid	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very			
79-41-4	Bioaccumulative (vPvB) criteria.			
1-Methyltrimethylene dimethacrylate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very			
1189-08-8	Bioaccumulative (vPvB) criteria.			
Epoxy resin (number average molecular weight	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very			
$\leq 700$ )	Bioaccumulative (vPvB) criteria.			
25068-38-6				
Butyl hydroxytoluene	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very			
128-37-0	Bioaccumulative (vPvB) criteria.			
Cumene hydroperoxide	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very			
80-15-9	Bioaccumulative (vPvB) criteria.			

#### 12.6. Other adverse effects

No data available.

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

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

#### Waste code

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

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

## **SECTION 14: Transport information**

## 14.1. UN number

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

< 3 %

VOC content (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:

- 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.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H360 May damage fertility or the unborn child.
- 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.

#### **Further information:**

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

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.

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