



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

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LOCTITE AA 352 LC known as Loctite 352

SDS No. : 153517
V006.0

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

1.1. Product identifier

LOCTITE AA 352 LC known as Loctite 352

Contains:

2-Hydroxyethyl methacrylate
Hydroxypropyl methacrylate
Tert-butyl perbenzoate
Acrylic acid

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

Intended use:
Ultraviolet 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@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 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:



Signal word:

Warning

Hazard statement:

H315 Causes skin irritation.
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:

P261 Avoid breathing vapours.
P273 Avoid release to the environment.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P280 Wear protective gloves.
P302+P352 IF ON SKIN: Wash with plenty of water.

2.3. Other hazards

None if used properly.

Care should be taken during the cure of these products by UV radiation to avoid exposure of the skin and especially of the eyes to direct or reflected UV radiation as long term effects could be harmful.

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:

UV curing acrylic adhesive

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
2-Hydroxyethyl methacrylate 868-77-9	212-782-2 01-2119490169-29	20- 40 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319
Isobornyl methacrylate 7534-94-3	231-403-1 01-2119886505-27	10- 20 %	Aquatic Chronic 2 H411
Hydroxypropyl methacrylate 27813-02-1	248-666-3 01-2119490226-37	1- < 5 %	Skin Sens. 1 H317 Eye Irrit. 2 H319
Tert-butyl perbenzoate 614-45-9	210-382-2 01-2119513317-46	1- < 5 %	Org. Perox. C H242 Skin Irrit. 2; Dermal H315 Acute Tox. 4; Inhalation H332 Skin Sens. 1 H317 Aquatic Acute 1 H400 Aquatic Chronic 3 H412
Acrylic acid 79-10-7	201-177-9 01-2119452449-31	1- < 3 %	Flam. Liq. 3 H226 Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Skin Corr. 1A H314 Acute Tox. 4; Inhalation H332 STOT SE 3 H335 Aquatic Acute 1 H400 Aquatic Chronic 2 H411
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	246-386-6	0,25- < 2,5 %	Aquatic Chronic 1 H410 Aquatic Acute 1 H400
Methacrylic acid 79-41-4	201-204-4 01-2119463884-26	0,1- < 1 %	Acute Tox. 4; Oral H302 Acute Tox. 3; Dermal H311 Acute Tox. 4; Inhalation H332 Skin Corr. 1A H314

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

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

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

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

SKIN: Rash, Urticaria.

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

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

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 (NO_x) can be released.

5.3. Advice for firefighters

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

Additional information:

Collect contaminated fire fighting water separately. It must not enter drains.

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.

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.

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

Ventilation will remove any ozone that may be produced by the ultra violet lamp

Hygiene measures:

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

7.2. Conditions for safe storage, including any incompatibilities

Store in original containers at 8-21°C (46.4-69.8°F) and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.
Keep away from heat and direct sunlight.

7.3. Specific end use(s)

Ultraviolet 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	Value type	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 category / Remarks	Regulatory list
Acrylic acid 79-10-7 [ACRYLIC ACID]	2	6	Time Weighted Average (TWA):		IR_OEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	70	Time Weighted Average (TWA):		IR_OEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	40	140	Short Term Exposure Limit (STEL):		IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			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 (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	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	aqua (freshwater)					4,66 µg/L	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	soil					0,118 mg/kg	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	sewage treatment plant (STP)					2,45 mg/L	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	sediment (freshwater)					0,604 mg/kg	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	aqua (freshwater)					0,904 mg/L	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	aqua (marine water)					0,904 mg/L	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	sewage treatment plant (STP)					10 mg/L	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	aqua (intermittent releases)					0,972 mg/L	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	sediment (freshwater)					6,28 mg/kg	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	sediment (marine water)					6,28 mg/kg	
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	soil					0,727 mg/kg	
Tert-butyl perbenzoate 614-45-9	aqua (freshwater)					0,008 mg/L	
Tert-butyl perbenzoate 614-45-9	aqua (marine water)					0,0008 mg/L	
Tert-butyl perbenzoate 614-45-9	aqua (intermittent releases)					0,008 mg/L	
Tert-butyl perbenzoate 614-45-9	sewage treatment plant (STP)					0,6 mg/L	
Tert-butyl perbenzoate 614-45-9	sediment (freshwater)					0,22 mg/kg	
Tert-butyl perbenzoate 614-45-9	sediment (marine water)					0,022 mg/kg	
Tert-butyl perbenzoate 614-45-9	soil					0,0393 mg/kg	
Tert-butyl perbenzoate 614-45-9	oral					6,67 mg/kg	
Acrylic acid 79-10-7	aqua (freshwater)					0,003 mg/L	

Acrylic acid 79-10-7	aqua (marine water)					0,0003 mg/L	
Acrylic acid 79-10-7	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 79-10-7	sediment (marine water)				0,00236 mg/kg		
Acrylic acid 79-10-7	soil				1 mg/kg		
Acrylic acid 79-10-7	oral				0,0023 mg/kg		
Acrylic acid 79-10-7	Predator				0,03 g/kg		

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 bw/day	
2-Hydroxyethyl methacrylate 868-77-9	Workers	Inhalation	Long term exposure - systemic effects		4,9 mg/m ³	
2-Hydroxyethyl methacrylate 868-77-9	general population	dermal	Long term exposure - systemic effects		0,83 mg/kg bw/day	
2-Hydroxyethyl methacrylate 868-77-9	general population	Inhalation	Long term exposure - systemic effects		2,9 mg/m ³	
2-Hydroxyethyl methacrylate 868-77-9	general population	oral	Long term exposure - systemic effects		0,83 mg/kg bw/day	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Workers	dermal	Long term exposure - systemic effects		4,2 mg/kg bw/day	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Workers	Inhalation	Long term exposure - systemic effects		14,7 mg/m ³	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	general population	dermal	Long term exposure - systemic effects		2,5 mg/kg bw/day	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	general population	Inhalation	Long term exposure - systemic effects		8,8 mg/m ³	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	general population	oral	Long term exposure - systemic effects		2,5 mg/kg bw/day	
Tert-butyl perbenzoate 614-45-9	Workers	Inhalation	Long term exposure - systemic effects		4 mg/m ³	
Tert-butyl perbenzoate 614-45-9	Workers	dermal	Long term exposure - systemic effects		6,25 mg/kg bw/day	
Tert-butyl perbenzoate 614-45-9	general population	Inhalation	Acute/short term exposure - local effects		1 mg/m ³	
Tert-butyl perbenzoate 614-45-9	general population	Inhalation	Acute/short term exposure - systemic effects		1 mg/m ³	
Tert-butyl perbenzoate 614-45-9	general population	dermal	Long term exposure - systemic effects		3,125 mg/kg bw/day	
Tert-butyl perbenzoate 614-45-9	general population	oral	Long term exposure - systemic effects		0,625 mg/kg bw/day	
Acrylic acid 79-10-7	Workers	inhalation	Long term exposure - local effects		30 mg/m ³	
Acrylic acid 79-10-7	Workers	inhalation	Acute/short term exposure - local effects		30 mg/m ³	
Acrylic acid 79-10-7	Workers	dermal	Acute/short term exposure - local effects		1 mg/cm ²	
Acrylic acid 79-10-7	general population	dermal	Acute/short term exposure - local effects		1 mg/cm ²	
Acrylic acid 79-10-7	general population	inhalation	Acute/short term exposure - local effects		3,6 mg/m ³	
Acrylic acid 79-10-7	general population	inhalation	Long term exposure - local effects		3,6 mg/m ³	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

UV lamp should be designed, installed and operated in such a way as to eliminate exposure of the skin and eyes to stray radiation

Respiratory protection:

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)

Ensure adequate ventilation.

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 green
Odor	mild
Odour threshold	No data available / Not applicable
pH	Not determined
Initial boiling point	> 150 °C (> 302 °F)
Flash point	> 93,3 °C (> 199.94 °F); Tagliabue closed cup
Decomposition temperature	No data available / Not applicable
Vapour pressure (20 °C (68 °F))	< 4,67 mbar
Density (ρ)	1,05 g/cm ³
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative)	Slight

(Solvent: Water)	
Solubility (qualitative)	Miscible
(Solvent: Acetone)	
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	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

Polymerises in the presence of sunlight.
Peroxides.
Reducing agents.

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.
Protect from direct sunlight.
Avoid contact with acids and oxidizing agents.

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.

Eye irritation:

Causes serious eye irritation.

Sensitizing:

May cause an allergic skin reaction.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Isobornyl methacrylate 7534-94-3	LD50	3.160 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Hydroxypropyl methacrylate 27813-02-1	LD50	> 2.000 mg/kg	oral		rat	
Tert-butyl perbenzoate 614-45-9	LD50	4.838 mg/kg	oral		rat	
Acrylic acid 79-10-7	LD50	1.500 mg/kg	oral		rat	BASF Test
Ethanone, 2,2-dimethoxy- 1,2-diphenyl- 24650-42-8	LD50	> 2.000 mg/kg	oral		rat	
Methacrylic acid 79-41-4	LD50	1.320 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Tert-butyl perbenzoate 614-45-9	LC50	> 1,01 mg/l	aerosol		Not specified	OECD Guideline 403 (Acute Inhalation Toxicity) Expert judgement
Acrylic acid 79-10-7	LC50	> 5,1 mg/l	Vapor.	4 h	rat	
Acrylic acid 79-10-7	Acute toxicity estimate (ATE)	11 mg/l	vapour			
Methacrylic acid 79-41-4	LC50	> 3,6 mg/l	aerosol	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 3.000 mg/kg	dermal		rabbit	Expert judgement
Isobornyl methacrylate 7534-94-3	LD50	> 3.000 mg/kg	dermal		rabbit	
Hydroxypropyl methacrylate 27813-02-1	LD50	> 5.000 mg/kg	dermal		rabbit	
Tert-butyl perbenzoate 614-45-9	LD50	3.817 mg/kg	dermal		rat	
Acrylic acid 79-10-7	Acute toxicity estimate (ATE)	1.100 mg/kg	dermal			Expert judgement
Acrylic acid 79-10-7	LD50	> 2.000 mg/kg			rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Ethanone, 2,2-dimethoxy- 1,2-diphenyl- 24650-42-8	LD50	> 2.000 mg/kg	dermal			
Methacrylic acid 79-41-4	Acute toxicity estimate (ATE)	500 mg/kg	dermal			Expert judgement
Methacrylic acid 79-41-4	LD50	500 - 1.000 mg/kg			rabbit	Dermal Toxicity Screening

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Isobornyl methacrylate 7534-94-3	mildly irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Acrylic acid 79-10-7	highly corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Methacrylic acid 79-41-4	Category 1A (corrosive)	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	corrosive	21 d	rabbit	BASF Test
Methacrylic acid 79-41-4	Category I		rabbit	Draize Test

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Acrylic acid 79-10-7	not sensitising	Skin painting test	guinea pig	
Methacrylic acid 79-41-4	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
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)
	positive	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Acrylic acid 79-10-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		
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)

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.
Toxic to aquatic life with long lasting effects.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LC50	227 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	345 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	160 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3.000 mg/l	Bacteria	16 h		
2-Hydroxyethyl methacrylate 868-77-9	NOEC	24,1 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Isobornyl methacrylate 7534-94-3	LC50	1,79 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isobornyl methacrylate 7534-94-3	EC50	1,1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Isobornyl methacrylate 7534-94-3	EC50	2,66 mg/l	Algae	96 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	0,254 mg/l	Algae	96 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Isobornyl methacrylate 7534-94-3	NOEC	0,233 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Hydroxypropyl methacrylate 27813-02-1	LC50	493 mg/l	Fish	48 h	Leuciscus idus melanotus	DIN 38412-15
Hydroxypropyl methacrylate 27813-02-1	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroxypropyl methacrylate 27813-02-1	EC10	1.140 mg/l	Bacteria	16 h		
Tert-butyl perbenzoate 614-45-9	LC50	1,6 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Tert-butyl perbenzoate 614-45-9	EC50	11 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Tert-butyl perbenzoate 614-45-9	NOEC	0,72 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	0,8 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tert-butyl perbenzoate 614-45-9	EC10	6 mg/l	Bacteria	30 min	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Tert-butyl perbenzoate 614-45-9	NOEC	0,44 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Acrylic acid 79-10-7	LC50	27 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Acrylic acid 79-10-7	EC10	0,03 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	0,13 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus)	OECD Guideline 201 (Alga, Growth

Acrylic acid 79-10-7	EC10	41 mg/l	Bacteria	16 h	subspicatus)	Inhibition Test)
Acrylic acid 79-10-7	NOEC	19 mg/l	chronic Daphnia	21 d	Daphnia magna	EPA OTS 797.1330 (Daphnid Chronic Toxicity Test)
Ethanone, 2,2-dimethoxy-1,2- diphenyl- 24650-42-8	LC50	7,2 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethanone, 2,2-dimethoxy-1,2- diphenyl- 24650-42-8	EC50	26 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Ethanone, 2,2-dimethoxy-1,2- diphenyl- 24650-42-8	EC50	0,17 mg/l	Algae	72 h	Scenedesmus sp.	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethanone, 2,2-dimethoxy-1,2- diphenyl- 24650-42-8	EC 50	> 100 mg/l	Bacteria	3 h		OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Methacrylic acid 79-41-4	LC50	85 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	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 Daphnids)
Methacrylic acid 79-41-4	NOEC	8,2 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	45 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid 79-41-4	EC10	100 mg/l	Bacteria	17 h		

12.2. Persistence and degradability

Persistence and Biodegradability:

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Isobornyl methacrylate 7534-94-3	readily biodegradable	aerobic	70 %	OECD Guideline 310 (Ready Biodegradability CO2 in Sealed Vessels (Headspace Test))
Hydroxypropyl methacrylate 27813-02-1	readily biodegradable	aerobic	94,2 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Tert-butyl perbenzoate 614-45-9	readily biodegradable	aerobic	70 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Acrylic acid 79-10-7	readily biodegradable	aerobic	81 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
	inherently biodegradable	aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA 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)

12.3. Bioaccumulative potential / 12.4. Mobility in soil**Mobility:**

Cured adhesives are immobile.

Bioaccumulative potential:

No data available.

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Isobornyl methacrylate 7534-94-3	5,09					OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Hydroxypropyl methacrylate 27813-02-1	0,97					
Tert-butyl perbenzoate 614-45-9	3,00				25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Acrylic acid 79-10-7 Acrylic acid 79-10-7	0,46	3,16			25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	3,42					
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 components CAS-No.	PBT/vPvB
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2-Hydroxyethyl methacrylate 868-77-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Isobornyl methacrylate 7534-94-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydroxypropyl methacrylate 27813-02-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Tert-butyl perbenzoate 614-45-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Acrylic acid 79-10-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Methacrylic acid 79-41-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Collection and delivery to recycling enterprise or other registered elimination institution.

Disposal of uncleaned packages:

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

Waste code

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

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

SECTION 14: Transport information**14.1. UN number**

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)
IATA	Environmentally hazardous substance, liquid, n.o.s. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

14.4. Packing group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

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), 197 (IATA), 969 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

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 < 3,00 %
(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.
- 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.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- 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.

Label elements (DPD):

Xi - Irritant

N - Dangerous for the environment



Risk phrases:

- R36/37/38 Irritating to eyes, respiratory system and skin.
- R43 May cause sensitisation by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

- S24 Avoid contact with skin.
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S37 Wear suitable gloves.
- S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

Contains:

- 2-Hydroxyethyl methacrylate,
- Hydroxypropyl methacrylate,
- Tert-butyl perbenzoate

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.