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

1.1. Product identifier
LOCTITE 3526 UNLB 1L BTL

Contains:
2-Hydroxyethyl methacrylate
(1-Methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate
Hydroxypropyl methacrylate
Tert-butyl perbenzoate
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide
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 Limited
2 Bishop Square Business Park
AL109EY Herfordshire Hatfield

Great Britain

Phone: +44 1606 593933
Fax-no.: +44 1606 863762

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.	
Toxic to reproduction	Category 2
H361f Suspected of damaging fertility.	
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.	

Classification (DPD):

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

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.
H361f Suspected of damaging fertility.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement: Prevention
P261 Avoid breathing vapors.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing.

Precautionary statement: Response
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

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:

S23 Do not breathe vapour.
S24/25 Avoid contact with skin and eyes.
S36/37 Wear suitable protective clothing and gloves.
S51 Use only in well-ventilated areas.
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

Contains:

2-Hydroxyethyl methacrylate,
(1-Methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate,
Hydroxypropyl methacrylate,
Tert-butyl perbenzoate,
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide

2.3. Other hazards

None if used properly.

SECTION 3: Composition/information on ingredients

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	>= 10- < 20 %	Skin irritation 2 H315 Skin sensitizer 1 H317 Serious eye irritation 2 H319
Isobornyl methacrylate 7534-94-3	231-403-1	>= 10- < 20 %	Specific target organ toxicity - single exposure 3 H335 Skin irritation 2 H315 Serious eye irritation 2 H319 Chronic hazards to the aquatic environment 2 H411
Isobornyl acrylate 5888-33-5	227-561-6	>= 2,5- < 10 %	Serious eye irritation 2 H319 Skin irritation 2 H315 Chronic hazards to the aquatic environment 2 H411 Specific target organ toxicity - single exposure 3 H335
(1-Methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate 42978-66-5	256-032-2	>= 2,5- < 10 %	Serious eye irritation 2 H319 Specific target organ toxicity - single exposure 3 H335 Skin irritation 2 H315 Skin sensitizer 1 H317 Chronic hazards to the aquatic environment 2 H411
Hydroxypropyl methacrylate 27813-02-1	248-666-3 01-2119490226-37	>= 1- < 10 %	Skin sensitizer 1; Dermal H317 Serious eye irritation 2 H319
Tert-butyl perbenzoate 614-45-9	210-382-2 01-2119513317-46	>= 1- < 10 %	Organic peroxides C H242 Skin irritation 2; Dermal H315 Acute toxicity 4; Inhalation H332 Skin sensitizer 1 H317 Acute hazards to the aquatic environment 1 H400
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8	278-355-8 01-2119972295-29	>= 3- < 5 %	Toxic to reproduction 2 H361f Chronic hazards to the aquatic environment 2 H411 Skin sensitizer 1B H317
Acrylic acid 79-10-7	201-177-9 01-2119452449-31	>= 1- < 5 %	Flammable liquids 3 H226 Acute toxicity 4; Oral H302 Acute toxicity 4; Dermal H312 Skin corrosion 1A H314 Acute toxicity 4; Inhalation H332

			Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
Methacrylic acid 79-41-4	201-204-4 01-2119463884-26	>= 0,1- < 1 %	Acute toxicity 4; Oral H302 Acute toxicity 3; Dermal H311 Acute toxicity 4; Inhalation H332 Skin corrosion/irritation 1A H314
Hydroquinone 123-31-9	204-617-8	>= 0,01- < 0,1 %	Carcinogenicity 2 H351 Germ cell mutagenicity 2 H341 Acute toxicity 4; Oral H302 Serious eye damage 1 H318 Skin sensitizer 1 H317 Acute hazards to the aquatic environment 1 H400 M factor: 10 M factor (Chron Aquat Tox): 10

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.

Declaration of ingredients according to DPD (EC) No 1999/45:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
2-Hydroxyethyl methacrylate 868-77-9	212-782-2 01-2119490169-29	>= 10 - < 20 %	Xi - Irritant; R36/38 R43
Isobornyl methacrylate 7534-94-3	231-403-1	>= 10 - < 20 %	N - Dangerous for the environment; R51/53 Xi - Irritant; R36/37/38
Isobornyl acrylate 5888-33-5	227-561-6	>= 2,5 - < 10 %	Xi - Irritant; R36/37/38 N - Dangerous for the environment; R51/53
(1-Methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate 42978-66-5	256-032-2	>= 2,5 - < 10 %	R43 Xi - Irritant; R36/37/38 N - Dangerous for the environment; R51/53
Hydroxypropyl methacrylate 27813-02-1	248-666-3 01-2119490226-37	>= 1 - < 10 %	Xi - Irritant; R36, R43
Tert-butyl perbenzoate 614-45-9	210-382-2 01-2119513317-46	>= 1 - < 10 %	E - Explosive; R2 O - Oxidizing; R7 Xn - Harmful; R20 Xi - Irritant; R38, R43 N - Dangerous for the environment; R50
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8	278-355-8 01-2119972295-29	>= 3 - < 5 %	N - Dangerous for the environment; R51/53 Toxic for reproduction - category 3.; Xn - Harmful; R62 Xi - Irritant; R43
Acrylic acid 79-10-7	201-177-9 01-2119452449-31	>= 1 - < 5 %	R10 C - Corrosive; R35 N - Dangerous for the environment; R50 Xn - Harmful; R20/21/22
Hydroquinone 123-31-9	204-617-8	>= 0,01 - < 0,1 %	carcinogenic, category 3; R40 Mutagen category 3.; R68 Xn - Harmful; R22 Xi - Irritant; R41 R43 N - Dangerous for the environment; R50

For full text of the R-Phrases indicated by codes 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.
Consideration should be given to the possible effects of a faulty UV source (Stray radiation, ozone).

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
EYE: Irritation, conjunctivitis.

SKIN: Rash, Urticaria.

SKIN: Redness, inflammation.

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
carbon oxides.

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

Additional information:
Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid skin and eye contact.

6.2. Environmental precautions
Do not let product enter drains.

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

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

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.

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	ppm	mg/m^3	Type	Category	Remarks
METHACRYLIC ACID 79-41-4	40	143	Short Term Exposure Limit (STEL):		EH40 WEL
METHACRYLIC ACID 79-41-4	20	72	Time Weighted Average (TWA):		EH40 WEL
HYDROQUINONE 123-31-9		0,5	Time Weighted Average (TWA):		EH40 WEL

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	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		
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	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	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		
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	aqua (freshwater)					0,00353 mg/L	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	aqua (marine water)					0,000353 mg/L	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	aqua (intermittent releases)					0,0353 mg/L	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	sediment (freshwater)				0,29 mg/kg		
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	sediment (marine water)				0,029 mg/kg		
Diphenyl(2,4,6-trimethylbenzoyl)phosphine	soil				0,0557		

oxide 75980-60-8					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	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		

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	worker	Dermal	Long term exposure - systemic effects		1,3 mg/kg bw/day	
2-Hydroxyethyl methacrylate 868-77-9	worker	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 bw/day	
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 bw/day	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	worker	Dermal	Long term exposure - systemic effects		4,2 mg/kg bw/day	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	worker	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 bw/day	
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 bw/day	
Tert-butyl perbenzoate 614-45-9	worker	inhalation	Long term exposure - systemic effects		4 mg/m3	
Tert-butyl perbenzoate 614-45-9	worker	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/m3	
Tert-butyl perbenzoate 614-45-9	general population	inhalation	Acute/short term exposure - systemic effects		1 mg/m3	
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	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	worker	inhalation	Long term exposure - systemic effects		3,5 mg/m3	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	worker	Dermal	Long term exposure - systemic effects		1 mg/kg	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	worker		Long term exposure - systemic effects			
Acrylic acid 79-10-7	worker	inhalation	Long term exposure - local effects		30 mg/m3	
Acrylic acid 79-10-7	worker	inhalation	Acute/short term exposure - local effects		30 mg/m3	
Acrylic acid 79-10-7	worker	Dermal	Acute/short term exposure - local effects		1 mg/cm2	

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:
Use only in well-ventilated areas.
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

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.

Skin protection:
Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid light yellow
Odor	irritating, Sharp
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	> 149,0 °C (> 300.2 °F)
Flash point	> 93,4 °C (> 200.12 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure (24,0 °C (75.2 °F))	< 13,3322400 mbar
Density ()	1,0633 g/cm3
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) (Solvent: Water)	Slight
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
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
Oxides of carbon.

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 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:
May cause irritation to the digestive tract.

Inhalative toxicity:
May cause respiratory irritation.

Skin irritation:
Causes skin irritation.

Eye irritation:
Causes serious eye irritation.

Sensitizing:
May cause an allergic skin reaction.

Reproductive toxicity:
Suspected of damaging fertility.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Isobornyl acrylate 5888-33-5	LD50	2.300 - 4.000 mg/kg	oral		rat	
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8	LD50	> 5.000 mg/kg	oral		rat	
Methacrylic acid 79-41-4	LD50	1.320 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Hydroquinone 123-31-9	LD50	367 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
Methacrylic acid 79-41-4	LC50	4,7 mg/l	inhalation	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
Isobornyl acrylate 5888-33-5	LD50	> 5.000 mg/kg	dermal		rabbit	
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	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Isobornyl acrylate 5888-33-5	irritating		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)
Methacrylic acid 79-41-4	Category 1A (corrosive)	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Methacrylic acid 79-41-4	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Hydroquinone 123-31-9	sensitising	Guinea pig maximisation test	guinea pig	

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		
Hydroquinone 123-31-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Hydroquinone 123-31-9	NOAEL=>= 250 mg/kg	oral: gavage	14 days 5 days/week. 12 doses	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

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 1272/2008/EC. 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	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		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)
Isobornyl acrylate 5888-33-5	EC50	1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Isobornyl acrylate 5888-33-5	IC50	4,2 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	1,87 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
(1-Methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate 42978-66-5	LC50	4,5 - 10 mg/l	Fish	96 h	Leuciscus idus	
(1-Methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate 42978-66-5	EC50	88,7 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
(1-Methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate 42978-66-5	EC50	28 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroxypropyl methacrylate 27813-02-1	LC50	493 mg/l	Fish	48 h	Leuciscus idus melanotus	
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	EC50	0,8 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	0,72 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8	LC50	1 - 10 mg/l	Fish	48 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	EC50	10 - 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute

75980-60-8						Immobilisation Test)
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8	EC50	10 - 100 mg/l	Algae	72 h		OECD Guideline 201 (Alga, Growth Inhibition Test)
Acrylic acid 79-10-7	LC50	27 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Acrylic acid 79-10-7	EC50	47 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Acrylic acid 79-10-7	EC50	0,13 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	0,008 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Acrylic acid 79-10-7	NOEC	19 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Methacrylic acid 79-41-4	LC50	100 - 180 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Methacrylic acid 79-41-4	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacrylic acid 79-41-4	EC10	8,2 mg/l	Algae			OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	> 8,2 mg/l	Algae			OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroquinone 123-31-9	LC50	0,17 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroquinone 123-31-9	EC50	0,29 mg/l	Daphnia	48 h	Daphnia magna	
Hydroquinone 123-31-9	EC50	0,335 mg/l	Algae	3 d	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

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

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			26,8 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Isobornyl acrylate 5888-33-5		no data	72,9 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
(1-Methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate 42978-66-5		aerobic	48 %	EU Method C.4-C (Determination of the "Ready" BiodegradabilityCarbon Dioxide Evolution 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, but failing 10-day window	aerobic	72 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8			< 20 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Acrylic acid 79-10-7	readily biodegradable	aerobic	81 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Methacrylic acid 79-41-4	readily biodegradable	aerobic	86 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Hydroquinone 123-31-9	readily biodegradable	aerobic	75 - 81 %	EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

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)
Isobornyl acrylate 5888-33-5	4,21					OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Hydroxypropyl methacrylate 27813-02-1	0,97					
Acrylic acid 79-10-7	0,46				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Methacrylic acid 79-41-4	0,93					
Hydroquinone 123-31-9	1,03					

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB

2-Hydroxyethyl methacrylate 868-77-9	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.
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8	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.
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.
Contribution of this product to waste is very insignificant in comparison to article in which it is used

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

SECTION 14: Transport information

14.1. UN number

ADR	3082
RID	3082
ADNR	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl methacrylate,Isobornyl acrylate)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl methacrylate,Isobornyl acrylate)
ADNR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl methacrylate,Isobornyl acrylate)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl methacrylate,Isobornyl acrylate)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Isobornyl methacrylate,Isobornyl acrylate)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADNR	9
IMDG	9
IATA	9

14.4. Packaging group

ADR	III
RID	III
ADNR	III
IMDG	III
IATA	III

14.5. Environmental hazards

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

14.6. Special precautions for user

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

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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 %

(1999/13/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:

R10 Flammable.
R2 Risk of explosion by shock, friction, fire or other sources of ignition.
R20 Harmful by inhalation.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R22 Harmful if swallowed.
R35 Causes severe burns.
R36 Irritating to eyes.
R36/37/38 Irritating to eyes, respiratory system and skin.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R40 Limited evidence of a carcinogenic effect.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R50 Very toxic to aquatic organisms.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62 Possible risk of impaired fertility.
R68 Possible risk of irreversible effects.
R7 May cause fire.
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.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H361f Suspected of damaging fertility.
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.

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.