Safety Data Sheet

LOCTITE AA 3494 LC SY25ML SE/FI

SDS No. : 153618
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Section 1. Identification of the substance/preparation and of the company/undertaking

Product name:
LOCTITE AA 3494 LC SY25ML SE/FI

Other means of identification:
LOCTITE AA 3494 LC SY25ML SE/FI

Product code:
IDH2326338

Recommended use of the chemical and restrictions on use

Intended use:
Acrylic Adhesive

Manufacturer/Importer/Distributor Representative Company

Henkel Thailand Ltd. The Offices at Centralworld,
35th Floor, 999/9 Rama 1 Rd.,
Kwang Patumwan, Khet Patumwan,
10330 Bangkok

Thailand

Phone: +66 (2209) 8000
Fax-no.: +66 (2209) 8008

E-mail address of person responsible for Safety Data Sheet:
ap-ua-psra.sea@henkel.com

Emergency Telephone for Chemical Accidents:
FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call: +662 209 8008

Section 2. Hazards identification

GHS Classification:

Hazard Class	Hazard Category	Target organ
Skin corrosion/irritation	Category 2	
Serious eye damage/eye irritation	Category 1	
Skin sensitizer	Category 1	
Toxic to reproduction	Category 1B	
Specific target organ toxicity - single exposure	Category 3	respiratory tract irritation
Acute hazards to the aquatic environment	Category 1	
Chronic hazards to the aquatic environment	Category 1	

GHS label elements:

Hazard pictogram:



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.
H410 Very toxic to aquatic life with long lasting effects.

Precaution:

Prevention:
P201 Obtain special instructions before use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Storage:
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3. Composition / information on ingredients

Substance or Mixture:
Mixture

Declaration of hazardous chemical:

Hazard component CAS-No.	Content	GHS Classification
Isobornyl acrylate 5888-33-5	10- 30 %	Acute toxicity 5; Oral H303 Skin sensitizer 1A H317 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	10- 30 %	Acute toxicity 5; Oral H303 Skin corrosion/irritation 3 H316 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 3 H412
2-Hydroxyethyl methacrylate 868-77-9	10- 30 %	Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317
Acrylic acid 79-10-7	1- 10 %	Flammable liquids 3 H226 Acute toxicity 4; Oral H302 Acute toxicity 4; Inhalation H332 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 1 H314 Serious eye damage/eye irritation 1 H318 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 2 H411
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	1- 10 %	Serious eye damage/eye irritation 2B H320 Skin sensitizer 1 H317
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	1- 10 %	Acute toxicity 5; Dermal H313 Serious eye damage/eye irritation 1 H318 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	0.1- 1 %	Skin sensitizer 1B H317 Toxic to reproduction 1B H360 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Camphene 79-92-5	0.1- 1 %	Flammable solids 2 H228 Serious eye damage/eye irritation 2B H320 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410

methacrylic acid 79-41-4	0.1- 1 %	Flammable liquids 4 H227 Acute toxicity 4; Oral H302 Acute toxicity 4; Inhalation H332 Acute toxicity 3; Dermal H311 Skin corrosion/irritation 1 H314 Serious eye damage/eye irritation 1 H318 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 3 H402
1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane 508-32-7	0.1- 1 %	Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester 2351-43-1	0.1- 1 %	Serious eye damage/eye irritation 2B H320 Skin sensitizer 1 H317

Section 4. 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 if necessary.

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

Section 5. Fire fighting measures

Suitable extinguishing media:
Carbon dioxide, foam, powder

Improper extinguishing media:
High pressure waterjet

Specific hazards arising from the chemical:
In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.

Special protection equipment and precautions for firefighters:
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional fire fighting advice:
In case of fire, keep containers cool with water spray.

Section 6. Accidental release measures

Personal precautions:

Avoid contact with skin and eyes.
Wear protective equipment.
Remove dry, forms a slippery coating with water.
Ensure adequate ventilation.
See advice in section 8

Environmental precautions:
Do not empty into drains / surface water / ground water.

Clean-up methods:
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.

Section 7. Handling and storage

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.
See advice in section 8

Storage:
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.
Refer to Technical Data Sheet.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

ACRYLIC ACID 79-10-7	**Value type**	Time Weighted Average (TWA):
	ppm	2
	Remarks	ACGIH
ACRYLIC ACID 79-10-7	**Value type**	Time Weighted Average (TWA):
	ppm	2
	Remarks	TH OEL
ACRYLIC ACID 79-10-7	**Value type**	Skin designation:
	Remarks	ACGIH Danger of cutaneous absorption
METHACRYLIC ACID 79-41-4	**Value type**	Time Weighted Average (TWA):
	ppm	20
	Remarks	ACGIH

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
Ensure adequate ventilation.
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.

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

Engineering controls:
Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

General protection and hygiene measures:
The workplace should be equipped with an emergency shower and eye-rinsing facility.

Hygienic measures:
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Take off contaminated clothing and wash before reuse.

Section 9. Physical and chemical properties

Appearance:	white liquid
Odor:	irritating
Odor threshold (CA):	No data available.
pH:	Not applicable, Product is non-soluble (in water).
Melting point / freezing point:	Not applicable, Product is a liquid
Specific gravity:	1.024
Boiling point:	> 140 °C (> 284 °F)
Flash point: (Tagliabue closed cup)	87.8 °C (190.04 °F)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure: (; 24 °C (75.2 °F)no method / method unknown; 50 °C (122 °F))	< 10 mm hg < 300 mbar
Vapor density:	1
Density:	1.024 g/cm3
Solubility:	Slightly soluble
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	Not available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content: (2010/75/EC)	< 5.00 %

Section 10. Stability and reactivity

Reactivity/Incompatible materials:
Reaction with reducing agents.
Chemical stability:
Stable under recommended storage conditions.
Conditions to avoid:
Protect from direct sunlight.
Stable under normal conditions of storage and use.
Hazardous decomposition products:
carbon oxides.

Section 11. Toxicological information

Oral toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method
Inhalative toxicity:	Acute toxicity estimate (ATE) : > 20 mg/l Exposure time: 4 h Test atmosphere: Vapor. Method: Calculation method
Dermal toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method
Skin irritation:	Result: Category 2 (irritant)

Health Effects:

Skin: Causes skin irritation.
May cause an allergic skin reaction.
Eyes: Causes serious eye damage.
Inhalation: May cause respiratory tract irritation.
Symptoms of Overexposure**:** None known.

Acute oral toxicity:

Isobornyl acrylate 5888-33-5	Value type	LD50
	Value	4,350 mg/kg
	Species	rat
	Method	not specified
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	LD50
	Value	3,160 mg/kg
	Species	rat
	Method	not specified
2-Hydroxyethyl methacrylate 868-77-9	Value type	LD50
	Value	5,564 mg/kg
	Species	rat
	Method	FDA Guideline
Acrylic acid 79-10-7	Value type	LD50
	Value	1,500 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Value type	LD50
	Value	8,025 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Camphene 79-92-5	Value type	LD50
	Value	>= 5,000 mg/kg
	Species	rat
	Method	Limit Test
methacrylic acid 79-41-4	Value type	LD50
	Value	1,320 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester 2351-43-1	Value type	LD50
	Value	5,564 mg/kg
	Species	rat
	Method	FDA Guideline

Acute inhalative toxicity:

Acrylic acid 79-10-7	Value type	LC0
	Value	5.1 mg/l
	Exposure time	4 h
	Species	rat
	Method	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Acrylic acid 79-10-7	Value type	Acute toxicity estimate (ATE)
	Value	11 mg/l
	Exposure time	
	Species	
	Method	Expert judgement
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Value type	LC50
	Value	> 5.3 mg/l
	Exposure time	4 h
	Species	rat
	Method	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
methacrylic acid 79-41-4	Value type	LC50
	Value	3.19 - 6.5 mg/l
	Exposure time	4 h
	Species	rat
	Method	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
methacrylic acid 79-41-4	Value type	Acute toxicity estimate (ATE)
	Value	3.19 mg/l
	Exposure time	
	Species	
	Method	Expert judgement

Acute dermal toxicity:

Isobornyl acrylate 5888-33-5	Value type	LD50
	Value	> 3,000 mg/kg
	Species	rabbit
	Method	not specified
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	LD50
	Value	> 3,000 mg/kg
	Species	rabbit
	Method	not specified
2-Hydroxyethyl methacrylate 868-77-9	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rabbit
	Method	not specified
Acrylic acid 79-10-7	Value type	Acute toxicity estimate (ATE)
	Value	1,100 mg/kg
	Species	
	Method	Expert judgement
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rabbit
	Method	not specified
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Value type	LD50
	Value	4,250 mg/kg
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
methacrylic acid 79-41-4	Value type	LD50
	Value	500 - 1,000 mg/kg
	Species	rabbit
	Method	Dermal Toxicity Screening
methacrylic acid 79-41-4	Value type	Acute toxicity estimate (ATE)
	Value	500 mg/kg

	Species	
	Method	Expert judgement
2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester 2351-43-1	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rabbit
	Method	not specified

Skin corrosion/irritation:

Isobornyl acrylate 5888-33-5	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	other guideline:
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	mildly irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2-Hydroxyethyl methacrylate 868-77-9	Result	slightly irritating
	Exposure time	24 h
	Species	rabbit
	Method	Draize Test
Acrylic acid 79-10-7	Result	Sub-Category 1A (corrosive)
	Exposure time	3 min
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	Draize Test
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	not specified
Camphene 79-92-5	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
methacrylic acid 79-41-4	Result	corrosive
	Exposure time	3 min
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester 2351-43-1	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	Draize Test

Serious eye damage/irritation:

Isobornyl acrylate 5888-33-5	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	other guideline:
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	FDA Guideline
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	slightly irritating
	Exposure time	
	Species	rabbit
	Method	Draize Test
2-Hydroxyethyl methacrylate 868-77-9	Result	Category 2B (mildly irritating to eyes)
	Exposure time	
	Species	rabbit
	Method	Draize Test
Acrylic acid 79-10-7	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	BASF Test
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	Category 2B (mildly irritating to eyes)
	Exposure time	
	Species	rabbit
	Method	Draize Test
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	not specified
Camphene 79-92-5	Result	irritating
	Exposure time	24 h
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
methacrylic acid 79-41-4	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	Draize Test
2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester 2351-43-1	Result	irritating
	Exposure time	
	Species	rabbit
	Method	Draize Test

Respiratory or skin sensitization:

Isobornyl acrylate 5888-33-5	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
2-Hydroxyethyl methacrylate 868-77-9	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	Buehler test
2-Hydroxyethyl methacrylate 868-77-9	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	Magnusson and Kligman Method
Acrylic acid 79-10-7	Result	not sensitising
	Test type	Freund's complete adjuvant test
	Species	guinea pig
	Method	Klecak Method
Acrylic acid 79-10-7	Result	not sensitising
	Test type	Split adjuvant test
	Species	guinea pig
	Method	Maguire Method
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	not sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	not specified
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
methacrylic acid 79-41-4	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Isobornyl acrylate 5888-33-5	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Isobornyl acrylate 5888-33-5	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Isobornyl acrylate 5888-33-5	Result	negative
	Type of study / Route of administration	in vitro mammalian cell micronucleus test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	negative
	Type of study / Route of administration	
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2-Hydroxyethyl methacrylate 868-77-9	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-Hydroxyethyl methacrylate 868-77-9	Result	positive
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2-Hydroxyethyl methacrylate 868-77-9	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2-Hydroxyethyl methacrylate 868-77-9	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2-Hydroxyethyl methacrylate 868-77-9	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	Drosophila melanogaster
	Method	not specified
Acrylic acid 79-10-7	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Acrylic acid 79-10-7	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Acrylic acid 79-10-7	Result	negative
	Type of study / Route of administration	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro
	Metabolic activation / Exposure time	without
	Method	equivalent or similar to OECD Guideline 482 (Genetic

		Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells
Acrylic acid 79-10-7	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Acrylic acid 79-10-7	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	not specified
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	positive
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	Chromosome Aberration Test
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	Drosophila melanogaster
	Method	not specified
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	A mutagenic potential can not be excluded.
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	A mutagenic potential can not be excluded.
	Type of study / Route of administration	
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Camphene 79-92-5	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
methacrylic acid 79-41-4	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without

	Method	equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
methacrylic acid 79-41-4	Result	negative
	Type of study / Route of administration	inhalation
	Metabolic activation / Exposure time	
	Species	mouse
	Method	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
methacrylic acid 79-41-4	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Repeated dose toxicity:

Isobornyl acrylate 5888-33-5	Result	NOAEL=100 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	once daily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2-Hydroxyethyl methacrylate 868-77-9	Result	NOAEL=100 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	49 ddaily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2-Hydroxyethyl methacrylate 868-77-9	Result	NOAEL=0.352 mg/l
	Route of application	inhalation
	Exposure time / Frequency of treatment	90 d6 h/d, 5 d/w
	Species	rat
	Method	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Acrylic acid 79-10-7	Result	NOAEL=40 mg/kg
	Route of application	oral: drinking water
	Exposure time / Frequency of treatment	12 mdaily
	Species	rat
	Method	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
Acrylic acid 79-10-7	Result	NOAEL=0.015 mg/l
	Route of application	inhalation: vapour
	Exposure time / Frequency of treatment	90 d6 h/d, 5 d/w
	Species	mouse
	Method	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	NOAEL=300 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	49 ddaily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	NOAEL=0.352 mg/l
	Route of application	inhalation
	Exposure time / Frequency of treatment	90 d6 h/d, 5 d/w
	Species	rat
	Method	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	NOAEL=1,000 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	28 d5 d / week
	Species	rat
	Method	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	NOAEL=0.225 mg/l
	Route of application	inhalation: aerosol
	Exposure time / Frequency of treatment	14 d6 h / d, 4/5 exposures/week
	Species	rat
	Method	equivalent or similar to OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Result	NOAEL=100 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	3 m5 d/w
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Camphene 79-92-5	Result	LOAEL=1,000 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	28 daysdaily
	Species	rat
	Method	OECD Guideline 407 (Repeated Dose 28-Day Oral

		Toxicity in Rodents)
methacrylic acid 79-41-4	Result	
	Route of application	inhalation
	Exposure time / Frequency of treatment	90 d6 h/d, 5 d/w
	Species	rat
	Method	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

Section 12. Ecological information

General ecological information: Do not empty into drains / surface water / ground water.

Ecotoxicity: H410 Very toxic to aquatic life with long lasting effects.

Toxicity:

Isobornyl acrylate 5888-33-5	Value type	LC50
	Value	0.704 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Danio rerio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isobornyl acrylate 5888-33-5	Value type	EC50
	Value	1 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Isobornyl acrylate 5888-33-5	Value type	NOEC
	Value	0.405 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC50
	Value	1.98 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	LC50
	Value	1.79 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Danio rerio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	EC50
	Value	> 2.57 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Value type	EC50
	Value	2.66 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	0.254 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)

2-Hydroxyethyl methacrylate 868-77-9	Value type	LC50
	Value	> 100 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oryzias latipes
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	Value type	EC50
	Value	380 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	Value type	EC50
	Value	836 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	400 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	Value type	EC0
	Value	> 3,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	16 h
	Species	Pseudomonas fluorescens
	Method	other guideline:
Acrylic acid 79-10-7	Value type	LC50
	Value	27 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Salmo gairdneri (new name: Oncorhynchus mykiss)
	Method	EPA OTS 797.1400 (Fish Acute Toxicity Test)
	Value type	NOEC
	Value	>= 10.1 mg/l
	Acute Toxicity Study	Fish
	Exposure time	45 d
	Species	Oryzias latipes
	Method	OECD Guideline 210 (fish early lite stage toxicity test)
Acrylic acid 79-10-7	Value type	EC50
	Value	95 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Acrylic acid 79-10-7	Value type	EC10
	Value	0.03 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	EU Method C.3 (Algal Inhibition test)
	Value type	EC50
	Value	0.13 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	Value type	EC20
	Value	900 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	activated sludge, domestic
	Method	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Value type	LC50
	Value	493 mg/l
	Acute Toxicity Study	Fish

	Exposure time	48 h
	Species	Leuciscus idus melanotus
	Method	DIN 38412-15
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Value type	EC50
	Value	> 143 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Value type	EC50
	Value	> 97.2 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	> 97.2 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Value type	EC10
	Value	1,140 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	16 h
	Species	
	Method	not specified
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Value type	LC50
	Value	55 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Cyprinus carpio
	Method	EU Method C.1 (Acute Toxicity for Fish)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Value type	EC50
	Value	324 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Simocephalus vetulus
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Value type	EC50
	Value	350 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	130 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Value type	EC50
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge of a predominantly domestic sewage
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Value type	LC50
	Value	1.4 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Cyprinus carpio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Value type	EC50
	Value	3.53 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Value type	EC50
	Value	> 2.01 mg/l

75980-60-8	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC10
	Value	1.56 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Value type	EC 50
	Value	> 1,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Camphene 79-92-5	Value type	LC50
	Value	0.72 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Camphene 79-92-5	Value type	EC50
	Value	0.72 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Camphene 79-92-5	Value type	EC50
	Value	1.75 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	0.07 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Camphene 79-92-5	Value type	EC10
	Value	490 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
methacrylic acid 79-41-4	Value type	LC50
	Value	85 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Salmo gairdneri (new name: Oncorhynchus mykiss)
	Method	EPA OTS 797.1400 (Fish Acute Toxicity Test)
	Value type	NOEC
	Value	10 mg/l
	Acute Toxicity Study	Fish
	Exposure time	35 d
	Species	Danio rerio
	Method	OECD Guideline 210 (fish early lite stage toxicity test)
methacrylic acid 79-41-4	Value type	EC50
	Value	> 130 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
methacrylic acid 79-41-4	Value type	NOEC
	Value	8.2 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)

	Value type	EC50
	Value	45 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
methacrylic acid 79-41-4	Value type	EC10
	Value	100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	17 h
	Species	Pseudomonas putida
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)

Persistence and degradability:

Isobornyl acrylate 5888-33-5	Result	inherently biodegradable
	Route of application	aerobic
	Degradability	73.9 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	57 %
	Method	OECD Guideline 310 (Ready BiodegradabilityCO2 in Sealed Vessels (Headspace Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Result	readily biodegradable
	Route of application	aerobic
	Degradability	70 %
	Method	OECD Guideline 310 (Ready BiodegradabilityCO2 in Sealed Vessels (Headspace Test)
2-Hydroxyethyl methacrylate 868-77-9	Result	readily biodegradable
	Route of application	aerobic
	Degradability	92 - 100 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Acrylic acid 79-10-7	Result	inherently biodegradable
	Route of application	aerobic
	Degradability	100 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	readily biodegradable
	Route of application	aerobic
	Degradability	81 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	readily biodegradable
	Route of application	aerobic
	Degradability	94.2 %
	Method	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	37 %
	Method	EU Method C.4-A (Determination of the "Ready" BiodegradabilityDissolved Organic Carbon (DOC) Die-Away Test)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 - 10 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Camphene 79-92-5	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	78 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
	Result	inherently biodegradable
	Route of application	aerobic
	Degradability	78 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
methacrylic acid 79-41-4	Result	readily biodegradable
	Route of application	aerobic

	Degradability	86 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
	Result	inherently biodegradable
	Route of application	aerobic
	Degradability	100 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
2-Propenoic acid, 2-methyl-, 2-(2-hydroxyethoxy)ethyl ester 2351-43-1	Result	readily biodegradable
	Route of application	aerobic
	Degradability	92 - 100 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

Bioaccumulative potential / Mobility in soil:

Isobornyl acrylate 5888-33-5	Bioconcentration factor (BCF)	37
	Exposure time	56 h
	Species	Danio rerio
	Temperature	24 °C
	Method	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Isobornyl acrylate 5888-33-5	LogPow	4.52
	Temperature	
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Bioconcentration factor (BCF)	37
	Exposure time	56 day
	Species	Danio rerio
	Temperature	24 °C
	Method	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	LogPow	5.09
	Temperature	
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
2-Hydroxyethyl methacrylate 868-77-9	LogPow	0.42
	Temperature	25 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acrylic acid 79-10-7	Bioconcentration factor (BCF)	3.16
	Exposure time	
	Species	
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
Acrylic acid 79-10-7	LogPow	0.46
	Temperature	25 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	LogPow	0.97
	Temperature	20 °C
	Method	not specified
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	LogPow	0.5
	Temperature	20 °C
	Method	QSAR (Quantitative Structure Activity Relationship)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	LogPow	3.1
	Temperature	23 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Camphene 79-92-5	LogPow	4.35
	Temperature	
	Method	not specified
methacrylic acid 79-41-4	LogPow	0.93
	Temperature	22 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

Section 13. Disposal considerations

Product

Method of disposal:
Dispose of in accordance with local and national regulations.

Packaging

Disposal of uncleaned packages:
Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Section 14. Transport information

Road transport ADR:

Class:	9
Packing group:	III
Classification code:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl acrylate)

Railroad transport RID:

Class:	9
Packing group:	III
Classification code:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl acrylate)

Inland water transport ADN:

Class:	9
Packing group:	III
Classification code:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl acrylate)

Marine transport IMDG:

Class:	9
Packing group:	III
UN no.:	3082
Label:	9
EmS:	F-A ,S-F
Seawater pollutant:	Marine pollutant
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl acrylate)

Air transport IATA:

Class:	9
Packing group:	III
Packaging instructions (passenger):	964
Packaging instructions (cargo):	964
UN no.:	3082
Label:	9
Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (Isobornyl acrylate)

Further information for transport:

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

Section 15. Regulatory information

Regulatory Information:
Ministry of Industry Notice. The system to classify and communicate the hazard of hazardous material, BE. 2555

Global inventory status:

Regulatory list	Notification
TSCA	yes
ENCS (JP)	yes
ISHL (JP)	yes

Section 16. Other information

Disclaimer:
This Safety Data Sheet has been generated based on Ministry of Industry Notice. The system to classify and communicate the hazard of hazardous material, BE. 2555 only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.
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