Section 1. Identification of the substance/preparation and of the company/undertaking

Product name:
LOCTITE AA 350 BULK

Other means of identification:
LOCTITE AA 350 BULK

Product code:
IDH299360

Recommended use of the chemical and restrictions on use

Intended use:
Ultraviolet 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 1A	
Serious eye damage/eye irritation	Category 1	
Skin sensitizer	Category 1	
Specific target organ toxicity - single exposure	Category 3	respiratory tract irritation
Chronic hazards to the aquatic environment	Category 3	

GHS label elements:

Hazard pictogram:



Signal word:
Danger

Hazard statement:
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precaution:

Prevention:
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:
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340+P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
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
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	10- 30 %	Serious eye damage/eye irritation 2B H320 Skin sensitizer 1 H317
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
dodecyl methacrylate 142-90-5	1- 10 %	Acute toxicity 5; Dermal H313 Specific target organ toxicity - single exposure 3 H335
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
Tetradecyl methacrylate 2549-53-3	1- 10 %	Acute toxicity 5; Dermal H313 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Specific target organ toxicity - single exposure 3 H335
Hexadecyl methacrylate 2495-27-4	1- 10 %	Acute toxicity 5; Dermal H313 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Specific target organ toxicity - single exposure 3 H335
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	1- 10 %	Acute toxicity 4; Oral H302 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412
[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
methacrylic acid	0.1- 1 %	Flammable liquids 4

79-41-4		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
methyl methacrylate 80-62-6	0.1- 1 %	Flammable liquids 2 H225 Acute toxicity 5; Inhalation H333 Skin corrosion/irritation 2 H315 Skin sensitizer 1B H317 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 3 H402

Section 4. First aid measures

Inhalation:
Move to fresh air.
If breathing is difficult, give oxygen.
If not breathing, give artificial respiration.
If symptoms develop and persist, get medical attention.

Skin contact:
Wash with soap and water.
Remove contaminated clothing and footwear.
Wash clothing before reuse.
If symptoms develop and persist, get medical attention.

Eye contact:
Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time.
Get medical attention.

Ingestion:
Do not induce vomiting.
Keep individual calm.
Never give anything by mouth to an unconscious person.
Get medical attention.

Symptoms/effects, acute and delayed:
Eye, skin, and respiratory disorders.
Acrylic acid: Respiratory disorders. Lung disease.

Section 5. Fire fighting measures

Suitable extinguishing media:

Foam, dry chemical or carbon dioxide.

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

Hazardous combustion products:
Oxides of carbon.
Irritating organic vapours.
Oxides of nitrogen.
Isocyanates.
Hydrogen cyanide.
Amines.

Section 6. Accidental release measures

Personal precautions:
Avoid skin and eye contact.
Wear protective equipment.
Ensure adequate ventilation.
See advice in section 8

Environmental precautions:
Do not allow product to enter sewer or waterways.
Do not empty into drains / surface water / ground water.

Clean-up methods:
Ensure adequate ventilation.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Store in a partly filled, closed container until disposal.
Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Handling:
Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.
Do not taste or swallow.
Use only with adequate ventilation.

Storage:
Store below 100°F (38°C).
Store in tightly closed containers. In a cool/well-ventilated area.
Keep away from sources of ignition.

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
METHYL METHACRYLATE 80-62-6	**Value type**	Time Weighted Average (TWA):
	ppm	50
	Remarks	ACGIH
METHYL METHACRYLATE 80-62-6	**Value type**	Time Weighted Average (TWA):
	ppm	100
	Remarks	TH OEL
METHYL METHACRYLATE 80-62-6	**Value type**	Short Term Exposure Limit (STEL):
	ppm	100
	Remarks	ACGIH

Respiratory protection:
Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye protection:
Safety goggles or safety glasses with side shields.
Protective eye equipment should conform to EN166.

Body protection:
Use impermeable gloves and protective clothing as necessary to prevent skin contact.
Neoprene gloves.
Butyl rubber gloves.
Natural rubber gloves.
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: Clear, Light yellow
Liquid

Odor: Pungent

Odor threshold (CA):	No data available.
pH:	Not applicable
Melting point / freezing point:	No data available.
Specific gravity:	1.1
Boiling point:	> 149 °C (> 300.2 °F)
Flash point: (Tagliabue closed cup)	> 93.4 °C (> 200.12 °F)
Evaporation rate:	Not available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure: (; 27 °C (80.6 °F))	< 10 mm hg
Vapor density:	Not available.
Density:	No data available.
Solubility:	Slight
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	Not available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content:	< 4 % < 44 g/l

Section 10. Stability and reactivity

Reactivity/Incompatible materials:
Strong oxidizing agents.
Reducing agents.
Strong acids and strong bases.
Metal oxides.
Peroxides.
Free radical initiators.
Chemical stability:
Stable under recommended storage conditions.
Possibility of hazardous reactions:
Will not occur.
Conditions to avoid:
Keep away from heat, spark and flame.
Store away from incompatible materials.
Hazardous decomposition products:
Oxides of carbon.
Irritating organic vapours.
Oxides of nitrogen.
Isocyanates.
Hydrogen cyanide.
Amines.

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: vapour Method: Calculation method
Dermal toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method

Health Effects:

Ingestion:	May be harmful if swallowed. May cause gastrointestinal tract irritation if swallowed.
Skin:	Causes skin irritation. May cause allergic skin reaction.
Eyes:	Vapors may irritate eyes. Contact with eyes will cause irritation.
Inhalation:	May cause respiratory tract irritation. May cause irritation to nose and throat.
Symptoms of Overexposure**:**	None known.

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)
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
dodecyl methacrylate 142-90-5	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
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)
Tetradecyl methacrylate 2549-53-3	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	not specified
Hexadecyl methacrylate 2495-27-4	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	not specified
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	Value type	LD50
	Value	1,470 mg/kg
	Species	rat
	Method	QSAR (Quantitative Structure Activity Relationship)
[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)
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)
methyl methacrylate 80-62-6	Value type	LD50
	Value	9,400 mg/kg
	Species	rat
	Method	not specified

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
methyl methacrylate 80-62-6	Value type	LC50
	Value	29.8 mg/l
	Exposure time	4 h
	Species	rat
	Method	not specified

Acute dermal toxicity:

Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Value type	LD50
	Value	> 5,000 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
dodecyl methacrylate 142-90-5	Value type	LD50
	Value	> 3,000 mg/kg
	Species	rabbit
	Method	other guideline:
dodecyl methacrylate 142-90-5	Value type	Acute toxicity estimate (ATE)
	Value	3,001 mg/kg
	Species	
	Method	Expert judgement
Acrylic acid 79-10-7	Value type	Acute toxicity estimate (ATE)
	Value	1,100 mg/kg
	Species	
	Method	Expert judgement
Tetradecyl methacrylate 2549-53-3	Value type	LD50
	Value	> 3,000 mg/kg
	Species	rabbit
	Method	other guideline:
Tetradecyl methacrylate 2549-53-3	Value type	Acute toxicity estimate (ATE)
	Value	3,001 mg/kg
	Species	
	Method	Expert judgement
Hexadecyl methacrylate	Value type	LD50

2495-27-4	Value	> 3,000 mg/kg
	Species	rabbit
	Method	other guideline:
Hexadecyl methacrylate 2495-27-4	Value type	Acute toxicity estimate (ATE)
	Value	3,001 mg/kg
	Species	
	Method	Expert judgement
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	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)
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
methyl methacrylate 80-62-6	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	Draize Test
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)
Acrylic acid 79-10-7	Result	Sub-Category 1A (corrosive)
	Exposure time	3 min
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
[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)
methacrylic acid 79-41-4	Result	corrosive
	Exposure time	3 min
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

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
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
Acrylic acid 79-10-7	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	BASF Test
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
methacrylic acid 79-41-4	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	Draize Test

Respiratory or skin sensitization:

Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	sensitising
	Test type	
	Species	human
	Method	not specified
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
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)
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
[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)
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)
methyl methacrylate 80-62-6	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity:

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
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)
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
[3-(2,3-	Result	A mutagenic potential can not be excluded.

Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	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	positive
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	OECD Guideline 489 (In Vivo Mammalian Alkaline Comet Assay)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	OECD Guideline 488 (In Vivo Transgenic Cell Gene Mutation Assays)
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)
methyl methacrylate 80-62-6	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	not specified

Repeated dose toxicity:

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)
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)
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	Result	NOAEL=42.8 mg/kg
	Route of application	oral: unspecified
	Exposure time / Frequency of treatment	45 d
	Species	rat
	Method	QSAR (Quantitative Structure Activity Relationship)
[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)
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)
methyl methacrylate 80-62-6	Result	LOAEL=2000 ppm
	Route of application	inhalation
	Exposure time / Frequency of treatment	14 weeks6 hrs/day, 5 days/wk
	Species	mouse
	Method	Dose Range Finding Study
methyl methacrylate 80-62-6	Result	NOAEL=1000 ppm
	Route of application	inhalation
	Exposure time / Frequency of treatment	14 weeks6 hrs/day, 5 days/wk
	Species	mouse
	Method	Dose Range Finding Study

Section 12. Ecological information

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

Ecotoxicity: H412 Harmful to aquatic life with long lasting effects.

Toxicity:

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
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)
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 life 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)
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	Value type	LC50
	Value	29.67 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	QSAR
	Method	QSAR (Quantitative Structure Activity Relationship)
	Value type	NOEC
	Value	3.215 mg/l
	Acute Toxicity Study	Fish
	Exposure time	30 d
	Species	QSAR
	Method	QSAR (Quantitative Structure Activity Relationship)
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	Value type	EC50
	Value	18.387 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	QSAR
	Method	QSAR (Quantitative Structure Activity Relationship)
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	Value type	EC50
	Value	19.66 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	other:
	Method	QSAR (Quantitative Structure Activity Relationship)
[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]trimethoxysi	Value type	EC50
	Value	350 mg/l

lane 2530-83-8	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)
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 life 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)
methyl methacrylate 80-62-6	Value type	LC50
	Value	350 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Leuciscus idus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
methyl methacrylate 80-62-6	Value type	EC50
	Value	69 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)
methyl methacrylate 80-62-6	Value type	EC50
	Value	170 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h

	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	100 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
methyl methacrylate 80-62-6	Value type	EC20
	Value	> 150 - 200 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)

Persistence and degradability:

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)
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)
dodecyl methacrylate 142-90-5	Result	readily biodegradable
	Route of application	aerobic
	Degradability	88.5 %
	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)
Tetradecyl methacrylate 2549-53-3	Result	readily biodegradable
	Route of application	aerobic
	Degradability	76.6 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Hexadecyl methacrylate 2495-27-4	Result	readily biodegradable
	Route of application	aerobic
	Degradability	76.6 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	3 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution 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)
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)
methyl methacrylate 80-62-6	Result	readily biodegradable
	Route of application	aerobic

	Degradability	94 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

Bioaccumulative potential / Mobility in soil:

Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	LogPow	0.97
	Temperature	20 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask 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)
dodecyl methacrylate 142-90-5	Bioconcentration factor (BCF)	37
	Exposure time	56 h
	Species	Danio rerio
	Temperature	
	Method	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
dodecyl methacrylate 142-90-5	LogPow	6.68
	Temperature	20 °C
	Method	QSAR (Quantitative Structure Activity Relationship)
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)
Tetradecyl methacrylate 2549-53-3	Bioconcentration factor (BCF)	37
	Exposure time	56 h
	Species	Danio rerio
	Temperature	24 °C
	Method	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Tetradecyl methacrylate 2549-53-3	LogPow	7.66
	Temperature	20 °C
	Method	QSAR (Quantitative Structure Activity Relationship)
Hexadecyl methacrylate 2495-27-4	Bioconcentration factor (BCF)	37
	Exposure time	56 h
	Species	Danio rerio
	Temperature	24 °C
	Method	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Hexadecyl methacrylate 2495-27-4	LogPow	8.64
	Temperature	20 °C
	Method	QSAR (Quantitative Structure Activity Relationship)
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	LogPow	2.95
	Temperature	25 °C
	Method	QSAR (Quantitative Structure Activity Relationship)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	LogPow	0.5
	Temperature	20 °C
	Method	QSAR (Quantitative Structure Activity Relationship)
methacrylic acid 79-41-4	LogPow	0.93
	Temperature	22 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
methyl methacrylate 80-62-6	LogPow	1.38
	Temperature	20 °C
	Method	other guideline:

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:	8
Packing group:	II
Classification code:	C9
Hazard ident. number:	80
UN no.:	1760
Label:	8
Technical name:	CORROSIVE LIQUID, N.O.S. (Acrylic acid)

Railroad transport RID:

Class:	8
Packing group:	II
Classification code:	C9
Hazard ident. number:	80
UN no.:	1760
Label:	8
Technical name:	CORROSIVE LIQUID, N.O.S. (Acrylic acid)

Inland water transport ADN:

Class:	8
Packing group:	II
Classification code:	C9
Hazard ident. number:	80
UN no.:	1760
Label:	8
Technical name:	CORROSIVE LIQUID, N.O.S. (Acrylic acid)

Marine transport IMDG:

Class:	8
Packing group:	II
UN no.:	1760
Label:	8
EmS:	F-A ,S-B
Seawater pollutant:	-
Proper shipping name:	CORROSIVE LIQUID, N.O.S. (Acrylic acid)

Air transport IATA:

Class:	8
Packing group:	II
Packaging instructions (passenger):	851
Packaging instructions (cargo):	855
UN no.:	1760
Label:	8
Proper shipping name:	Corrosive liquid, n.o.s. (Acrylic acid)

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

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.
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.
Dear Customer,
Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your_company.com).