Safety Data Sheet

LOCTITE 272 HIGH TEMPERATURE THREADLOCKER known as 272 Threadlocker 50ML EN/CH/JP

SDS No. : 153465
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Section 1. Identification of the substance/preparation and of the company/undertaking

Product name:
LOCTITE 272 HIGH TEMPERATURE THREADLOCKER known as 272 Threadlocker 50ML EN/CH/JP

Other means of identification:
LOCTITE 272 BO50ML EN/CH/JP/KR
Product code:
IDH335304
Recommended use of the chemical and restrictions on use

Intended use:
Anaerobic Adhesive

Identification of manufacturer, importer or distributor
Manufacturer: Henkel Loctite (China) Co. Ltd, No. 90 Zhu Jiang Road, Yantai Economic, Technological Development Zone, 264006 Shangdong Province, China Tel: +86-535-6399803 Fax: +86-535-6371999

Importer: Henkel Thailand Ltd The Offices at Centralworld, 35th Floor, 999/9 Rama 1 Rd, Kwang Patumwan, Khet Patumwan, Bangkok 10330, Thailand. Phone : + 6622098000 Fax : +6622098008

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

Emergency information:
FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call CHEMTREC: +1 703-741-5970

Section 2. Hazards identification

GHS Classification:

Hazard Class	Hazard Category	Route of Exposure
Acute toxicity	Category 2	Inhalation
Serious eye damage/eye irritation	Category 2	
Skin sensitizer	Category 1	
Chronic hazards to the aquatic environment	Category 3	

GHS label elements:

Hazard pictogram:

Signal word:
Danger

Hazard statement:
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
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.
P284 [In case of inadequate ventilation] wear respiratory protection.

Response:
P302+P352 IF ON SKIN: Wash with plenty of water.
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.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it 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
Bisphenol A, 2-EO dimethacrylate 41637-38-1	60- 100 %	Chronic hazards to the aquatic environment 4 H413
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	10- 30 %	Acute toxicity 4; Oral H302 Acute toxicity 2; Inhalation H330 Skin sensitizer 1A H317 Acute hazards to the aquatic environment 3 H402 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
Silica, amorphous, fumed, crystal-free 112945-52-5	1- 10 %	
α, α-dimethylbenzyl hydroperoxide 80-15-9	1- 10 %	Flammable liquids 4 H227 Organic peroxides E H242 Acute toxicity 4; Oral H302 Acute toxicity 2; Inhalation H330 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 1 H314 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
N,N-Diethyl-p-toluidine 613-48-9	0.1- 1 %	Acute toxicity 3; Oral H301 Acute toxicity 3; Inhalation H331 Acute toxicity 3; Dermal H311 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412
maleic acid 110-16-7	0.1- 1 %	Acute toxicity 4; Oral H302 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 3 H402
N,N-dimethyl-o-toluidine	0.1- 1 %	Flammable liquids 4

609-72-3		H227 Acute toxicity 3; Oral H301 Acute toxicity 3; Inhalation H331 Acute toxicity 3; Dermal H311 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412
Acetic acid, 2-phenylhydrazide 114-83-0	0.1- 1 %	Acute toxicity 3; Oral H301 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Carcinogenicity 2 H351
1,4-Naphthalenedione 130-15-4	< 0.1 %	Acute toxicity 3; Oral H301 Acute toxicity 1; Inhalation H330 Skin corrosion/irritation 2; Dermal H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410

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 from a specialist.

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

Indication of immediate medical attention and special treatment needed:
See section: Description of first aid measures

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.
In case of fire, keep containers cool with water spray.

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

Hazardous combustion products:
Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

Section 6. Accidental release measures

Personal precautions:
Avoid contact with skin and eyes.
Ensure adequate ventilation.
Wear protective equipment.
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.
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:

Silica, amorphous, fumed, crystal-free 112945-52-5	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
	Remarks	ACGIH
Silica, amorphous, fumed, crystal-free 112945-52-5	**Value type**	Time Weighted Average (TWA):
	mg/m³	3
	Remarks	ACGIH

Respiratory protection:
Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
Filter type: A (EN 14387)

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Wear protective glasses.
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.

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

Section 9. Physical and chemical properties

Appearance:	Orange-red liquid
Odor:	characteristic
Odor threshold (CA):	No data available.
pH:	3 - 6
Melting point / freezing point:	No data available.
Specific gravity:	1.11
Boiling point:	No data available.
Flash point: (Tagliabue closed cup)	> 93.3 °C (> 199.94 °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: (; 25 °C (77 °F))	< 0.13 mbar
Vapor density:	No data available.
Density:	No data available.
Solubility:	Slight
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content: (2010/75/EC)	< 3 %

Section 10. Stability and reactivity

Reactivity/Incompatible materials:
Reducing agents.
Strong oxidizing agents.
Chemical stability:
Stable under recommended storage conditions.
Conditions to avoid:
No decomposition if stored and applied as directed.
Hazardous decomposition products:
None if used for intended purpose.

Section 11. Toxicological information

General toxicological information:	Prolonged or repeated contact may cause skin irritation.
Oral toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method
Inhalative toxicity:	Acute toxicity estimate (ATE) : 0.36 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Dermal toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method

Symptoms of Overexposure**:** EYE: Irritation, conjunctivitis.
SKIN: Rash, Urticaria.
RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

Acute oral toxicity:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 423 (Acute Oral toxicity)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	Acute toxicity estimate (ATE)
	Value	500 mg/kg
	Species	
	Method	Expert judgement
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	LD50
	Value	> 300 - 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 423 (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)
Silica, amorphous, fumed, crystal-free 112945-52-5	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	LD50
	Value	382 mg/kg
	Species	rat
	Method	other guideline:
maleic acid 110-16-7	Value type	LD50
	Value	708 mg/kg
	Species	rat
	Method	not specified
Acetic acid, 2-phenylhydrazide 114-83-0	Value type	LD50
	Value	270 mg/kg
	Species	rat
	Method	not specified
1,4-Naphthalenedione 130-15-4	Value type	LD50
	Value	190 mg/kg
	Species	rat
	Method	not specified

Acute inhalative toxicity:

1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	LC50
	Value	0.055 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
Silica, amorphous, fumed, crystal-free 112945-52-5	Value type	LC50
	Value	> 58.8 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	LC50
	Value	1.370 mg/l
	Exposure time	4 h
	Species	rat
	Method	not specified

Acute dermal toxicity:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (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
Silica, amorphous, fumed, crystal-free 112945-52-5	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rabbit
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	LD50
	Value	530 - 1,060 mg/kg
	Species	rat
	Method	other guideline:
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	Acute toxicity estimate (ATE)
	Value	1,100 mg/kg
	Species	
	Method	Expert judgement
maleic acid 110-16-7	Value type	LD50
	Value	1,560 mg/kg
	Species	rabbit
	Method	not specified

Skin corrosion/irritation:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not corrosive
	Exposure time	60 min
	Species	Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not irritating
	Exposure time	60 min
	Species	Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	Draize Test

Silica, amorphous, fumed, crystal-free 112945-52-5	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	Draize Test
maleic acid 110-16-7	Result	irritating
	Exposure time	24 h
	Species	human
	Method	Patch Test

Serious eye damage/irritation:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not irritating
	Exposure time	
	Species	Bovine, cornea, in vitro test
	Method	OECD Guideline 437 (BCOP)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Result	irritating
	Exposure time	
	Species	rabbit
	Method	Draize Test
Silica, amorphous, fumed, crystal-free 112945-52-5	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
maleic acid 110-16-7	Result	highly irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	Result	not sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	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
maleic acid 110-16-7	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	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)
Bisphenol A, 2-EO dimethacrylate 41637-38-1	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)
Bisphenol A, 2-EO dimethacrylate 41637-38-1	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)
Bisphenol A, 2-EO dimethacrylate 41637-38-1	Result	positive
	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)
Bisphenol A, 2-EO dimethacrylate 41637-38-1	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)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	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)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	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	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	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	rat
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	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)
Silica, amorphous, fumed, crystal-free 112945-52-5	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)
Silica, amorphous, fumed, crystal-free 112945-52-5	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)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	positive
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	negative
	Type of study / Route of administration	dermal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	not specified
maleic acid 110-16-7	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	no data
	Method	Ames Test
maleic acid 110-16-7	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)

Repeated dose toxicity:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	Result	NOAEL=300 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	4 weeksdaily
	Species	rat
	Method	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	NOAEL=15 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	42-52 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=300 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	Result	NOAEL=< 0.046 mg/l
	Route of application	inhalation
	Exposure time / Frequency of treatment	14 days6 hours/day, 5 days/week
	Species	rat
	Method	not specified
Silica, amorphous, fumed, crystal-free 112945-52-5	Result	NOAEL=> 4,500 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	13 weeksdaily, continous
	Species	rat
	Method	
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	
	Route of application	inhalation: aerosol
	Exposure time / Frequency of treatment	6 h/d5 d/w
	Species	rat
	Method	not specified
maleic acid 110-16-7	Result	NOAEL=>= 40 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	90 ddaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Section 12. Ecological information

General ecological information: Biodegradable product of low ecotoxicity., Cured Loctite products are typical polymers and do not pose any immediate environmental hazards., Biological and Chemical Oxygen Demands (BOD and COD) are insignificant., Do not empty into drains / surface water / ground water.

Ecotoxicity: Harmful to aquatic life with long lasting effects.

Toxicity:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	Value type	LL50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Bisphenol A, 2-EO dimethacrylate 41637-38-1	Value type	EL50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bisphenol A, 2-EO dimethacrylate 41637-38-1	Value type	EL50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EL10
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bisphenol A, 2-EO dimethacrylate 41637-38-1	Value type	EC50
	Value	Toxicity > Water solubility
	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)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	EC50
	Value	31.6 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	ErC50
	Value	67.898 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC10
	Value	0.308 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
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
Silica, amorphous, fumed, crystal-free 112945-52-5	Value type	LC50
	Value	> 10,000 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)
Silica, amorphous, fumed, crystal-free 112945-52-5	Value type	EL50
	Value	> 1,000 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	24 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	Value type	NOELR
	Value	10,000 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EL50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	Value type	EC0
	Value	10,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	Pseudomonas putida
	Method	DIN 38412, part 27 (Bacterial oxygen consumption test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	LC50
	Value	3.9 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	EC50
	Value	18.84 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	EC50
	Value	3.1 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	1 mg/l
	Acute Toxicity Study	Algae

	Exposure time	72 h
	Species	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	EC10
	Value	70 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	
	Method	not specified
maleic acid 110-16-7	Value type	LC50
	Value	> 245 mg/l
	Acute Toxicity Study	Fish
	Exposure time	48 h
	Species	Leuciscus idus
	Method	DIN 38412-15
maleic acid 110-16-7	Value type	EC50
	Value	42.81 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
maleic acid 110-16-7	Value type	EC50
	Value	74.35 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC10
	Value	11.8 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	Value type	EC10
	Value	44.6 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	18 h
	Species	Pseudomonas putida
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
N,N-dimethyl-o-toluidine 609-72-3	Value type	LC 50
	Value	46 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Fathead minnow (Pimephales promelas)
	Method	
1,4-Naphthalenedione 130-15-4	Value type	EC50
	Value	0.011 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Dunaliella bioculata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)

Persistence and degradability:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	24 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not readily biodegradable.
	Route of application	not specified
	Degradability	0 - < 60 %
	Method	OECD Guideline 303 A (Simulation TestAerobic Sewage Treatment. A: Activated Sludge Units)
	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	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)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	3 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
maleic acid 110-16-7	Result	readily biodegradable
	Route of application	aerobic
	Degradability	97.08 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
1,4-Naphthalenedione 130-15-4	Result	not readily biodegradable.
	Route of application	no data
	Degradability	0 - 60 %
	Method	OECD 301 A - F

Bioaccumulative potential / Mobility in soil:

Bisphenol A, 2-EO dimethacrylate 41637-38-1	LogPow	5.3 - 5.62
	Temperature	
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	LogPow	0.67
	Temperature	24 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	LogPow	0.97
	Temperature	20 °C
	Method	not specified
Silica, amorphous, fumed, crystal-free 112945-52-5	LogPow	0.53
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Bioconcentration factor (BCF)	9.1
	Exposure time	
	Species	calculation
	Temperature	
	Method	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	LogPow	1.6
	Temperature	25 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
maleic acid 110-16-7	LogPow	-1.3
	Temperature	20 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acetic acid, 2-phenylhydrazide 114-83-0	LogPow	0.74
	Temperature	
	Method	not specified
1,4-Naphthalenedione 130-15-4	LogPow	1.71
	Temperature	
	Method	not specified

Section 13. Disposal considerations

Product

Method of disposal:
Dispose of in accordance with local and national regulations.
Collection and delivery to recycling enterprise or other registered elimination institution.

Packaging

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

Section 14. Transport information

Road transport ADR:
Not dangerous goods

Railroad transport RID:
Not dangerous goods

Inland water transport ADN:
Not dangerous goods

Marine transport IMDG:
Not dangerous goods

Air transport IATA:
Not dangerous 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
DSL	yes
KECI (KR)	yes
ENCS (JP)	yes
ISHL (JP)	yes
IECSC	yes
AICS	yes
TCSI	yes
CH INV	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.
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