



Safety Data Sheet according to GB/T 16483 and GB/T 17519

LOCTITE 577 TB50ML CH

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

Product name: LOCTITE 577 TB50ML CH

Intended use: Adhesive

Manufacturer/Importer/Distributor Representative Company

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2. Hazards identification

EMERGENCY OVERVIEW:

yellow, Mild, liquid, May cause an allergic skin reaction. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Classification of the substance or mixture according to GB 30000.1 (Specification for classification and labelling of chemicals—Part 1 : General rules):

<u>Hazard Class</u>	<u>Hazard Category</u>
Skin sensitizer	Category 1
Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 3

Label elements according to GB 15258 (General rules for preparation of precautionary label for chemicals):

Hazard pictogram:



Signal word: Warning

Hazard statement:	H317 May cause an allergic skin reaction. H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.
Prevention:	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves.
Response:	P302+P352 IF ON SKIN: Wash with plenty of water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse.
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.

Physical and chemical hazards:

Based on current information, there are no physical or chemical hazards.

Health hazards:

May cause an allergic skin reaction.

Environmental hazards:

Toxic to aquatic life.Harmful to aquatic life with long lasting effects.

3. Composition / information on ingredients
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Substance or Mixture:

Mixture

Declaration of the ingredients according to GB 30000.1:

Hazard component CAS-No.	Content	GHS Classification
Tetramethylene dimethacrylate 2082-81-7	10- < 20 %	Skin sensitizer 1B H317 Acute hazards to the aquatic environment 2 H401
Oleic acid, ethoxylated 9004-96-0	10- < 20 %	Acute hazards to the aquatic environment 2 H401
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	2.5- < 10 %	Skin sensitizer 1B H317 Acute hazards to the aquatic environment 3 H402
Ethene, tetrafluoro-, homopolymer 9002-84-0	1- < 10 %	Acute toxicity 5; Oral H303
Acetic acid, 2-phenylhydrazide 114-83-0	0.25- < 1 %	Acute toxicity 4; Oral H302 Skin sensitizer 1 H317 Carcinogenicity 2 H351 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
maleic acid 110-16-7	0.25- < 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
Reaction mass of N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy-N-[2-[(1-oxooctadecyl)amino]ethyl] 123-26-2	0.1- < 1 %	Skin sensitizer 1 H317
Menadione 58-27-5	0.0025- < 0.025 %	Acute toxicity 4; Oral H302 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 1 H400 Chronic hazards to the aquatic environment 1 H410

Only hazardous ingredients for which a classification according to GB 30000.1 is already available are displayed in this table. For full text of the Hazard statements see section 16 "Other information".

4. First aid measures

Description of necessary first-aid measures:

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.
Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
Ingestion:	Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.
Most important symptoms/effects, acute and delayed:	The most important known symptoms and effects are described in chapters 2 and/or 11.
Indication of any immediate medical attention and special treatment needed, if necessary:	Post-exposure treatment should focus on controlling the patient's clinical symptoms and signs.

5. Fire fighting measures

Suitable extinguishing media:	Carbon dioxide, foam, powder
Fire-fighting method:	In case of fire, keep containers cool with water spray.
Special hazards arising from the substance or mixture:	Oxides of carbon, oxides of nitrogen, irritating organic vapors.
Special protective actions for fire-fighters:	In the event of a fire, carbon monoxide (CO), carbon dioxide (CO ₂) and nitrogen oxides (NO _x) can be released. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Avoid skin and eye contact. Ensure adequate ventilation.
Environmental precautions:	Do not let product enter drains.
Methods and materials for containment and cleaning up:	For small spills wipe up with paper towel and place in container for disposal. For large spills absorb onto inert absorbent material and place in sealed container for disposal.

7. Handling and storage

Precautions for safe handling:	Use only in well-ventilated areas. Avoid skin and eye contact.
Hygiene measures:	Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation. Do not eat, drink, smoke or take snuff while working. Wash thoroughly after handling. Keep absolute tidiness at the working place. Avoid contact with skin and eyes. Remove soiled or soaked clothing immediately. Wash off any contamination that gets onto the skin with plenty of water and soap, skin care.
Conditions for safe storage, including any incompatibilities:	Store in original containers at 8-21°C (46.4-69.8°F) and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.

8. Exposure controls / personal protection

Controls parameters:

Occupational Exposure Limits:

Hazardous components CAS-No.	GBZ 2.1-2019	ACGIH	NIOSH	OSHA
Ethene, homopolymer 9002-88-4	5 mg/m ³ PC-TWA Total dust.	10 mg/m ³ TWA Inhalable particles. 3 mg/m ³ TWA Respirable particles.	none	none
Silica, amorphous, fumed, cryst.-free 112945-52-5	8 mg/m ³ PC-TWA Total dust.	3 mg/m ³ TWA Respirable particles. 10 mg/m ³ TWA Inhalable particles.	none	none

Biological Exposure Indices:	no data available
Engineering controls:	Ensure good ventilation/extraction.
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
Eye protection:	Wear protective glasses.
Body protection:	Wear suitable protective clothing.
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.

9. Physical and chemical properties

Physical state:	liquid	Appearance:	yellow
Evaporation rate:	Not available.	Odor:	Mild
pH:	Not applicable, Product is non-polar/aprotic.	Melting point:	Not applicable, Product is a liquid
Boiling point:	> 150 °C (> 302 °F)	Density:	1.15 - 1.2 g/cm ³
Vapor density:	> 1	Vapor pressure:	Not available.
Flash point:	> 100 °C (> 212 °F), no method / method unknown	Ignition temperature:	Not available.
Lower explosive limit:	Not available.	Upper explosive limit:	Not available.
Solubility in water	Not available.	Viscosity:	70,000.00 - 130,000.00 mPa.s > 20.5 mm ² /s
Auto-ignition temperature:	Not available.	Flammability:	Not available.
Octanol / water distribution coefficient:	Not applicable, Mixture	Decomposition temperature:	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
VOC:	Bulk adhesive Acrylate Assembly Industry < 80 g/kg, GB 33372-2020 Limit of volatile organic compounds content in adhesive		

10. Stability and reactivity

Reactivity:	Reaction with strong acids. Reacts with strong oxidants.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	See section reactivity.
Conditions to avoid:	No decomposition if used according to specifications.
Incompatible materials:	See section reactivity.
Hazardous decomposition products:	carbon oxides. nitrogen oxides Irritating organic vapours.

11. Toxicological information

General toxicological information:

No laboratory animal data available.

Acute oral toxicity:

Tetramethylene dimethacrylate 2082-81-7	Value type	LD50
	Value	10,066 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Oleic acid, ethoxylated 9004-96-0	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Value type	LD50
	Value	10,837 mg/kg
	Species	rat
	Method	not specified
Ethene, tetrafluoro-, homopolymer 9002-84-0	Value type	LD50
	Value	4,230 mg/kg
	Species	rat
	Method	not specified
Acetic acid, 2-phenylhydrazide 114-83-0	Value type	LD 50
	Value	270 mg/kg
	Species	Mouse
	Method	
Acetic acid, 2-phenylhydrazide 114-83-0	Value type	LD50
	Value	310 mg/kg
	Species	rat
	Method	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
maleic acid 110-16-7	Value type	LD 50
	Value	2,400 mg/kg
	Species	Mouse
	Method	
maleic acid 110-16-7	Value type	LD 50
	Value	708 mg/kg
	Species	Rat
	Method	
maleic acid 110-16-7	Value type	LD50
	Value	708 mg/kg
	Species	rat
	Method	not specified
Reaction mass of N,N'-ethane-1,2- diylbis(12-hydroxyoctadecan-1- amide), Octadecanamide, 12- hydroxy-N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 423 (Acute Oral toxicity)
Menadione 58-27-5	Value type	LD 50
	Value	500 mg/kg
	Species	Mouse
	Method	
Menadione 58-27-5	Value type	LD50
	Value	500 mg/kg
	Species	rat
	Method	not specified

Acute dermal toxicity:

Tetramethylene dimethacrylate 2082-81-7	Value type	LD50
	Value	> 3,000 mg/kg
	Species	rabbit
	Method	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate	Value type	Acute toxicity estimate (ATE)
	Value	> 5,000 mg/kg

109-16-0	Species	
	Method	Expert judgement
Ethene, tetrafluoro-, homopolymer 9002-84-0	Value type	Acute toxicity estimate (ATE)
	Value	> 5,000 mg/kg
	Species	
	Method	Expert judgement
maleic acid 110-16-7	Value type	LD 50
	Value	1,560 mg/kg
	Species	Rabbit
	Method	
maleic acid 110-16-7	Value type	LD50
	Value	1,560 mg/kg
	Species	rabbit
	Method	not specified

Acute inhalative toxicity:

2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Value type	Acute toxicity estimate (ATE)
	Value	28.17 mg/l
	Exposure time	
	Species	
	Method	Expert judgement
Ethene, tetrafluoro-, homopolymer 9002-84-0	Value type	Acute toxicity estimate (ATE)
	Value	> 5 mg/l
	Exposure time	
	Species	
	Method	Expert judgement
maleic acid 110-16-7	Value type	LC 50
	Value	> 0.72 mg/l
	Exposure time	1 h
	Species	Rat
	Method	
Reaction mass of N,N'-ethane-1,2- diylbis(12-hydroxyoctadecan-1- amide), Octadecanamide, 12- hydroxy-N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	Value type	LC50
	Value	> 5.05 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method)
Reaction mass of N,N'-ethane-1,2- diylbis(12-hydroxyoctadecan-1- amide), Octadecanamide, 12- hydroxy-N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	Value type	LC 50
	Value	> 5.05 mg/l
	Exposure time	4 h
	Species	Rat
	Method	

Skin corrosion/irritation:

Tetramethylene dimethacrylate 2082-81-7	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	FDA Guideline
Oleic acid, ethoxylated 9004-96-0	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	Draize Test
Acetic acid, 2-phenylhydrazide 114-83-0	Result	not corrosive
	Exposure time	
	Species	Human, EpiSkin™ (SM), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	not irritating
	Exposure time	
	Species	Human, EpiSkin™ (SM), Reconstructed Human Epidermis (RHE)

	Method	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
maleic acid 110-16-7	Result	irritating
	Exposure time	24 h
	Species	human
	Method	Patch Test
Menadione 58-27-5	Result	not corrosive
	Exposure time	
	Species	Human, EpiDerm™ SIT (EPI-200), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Menadione 58-27-5	Result	irritating or corrosive
	Exposure time	
	Species	Human, EpiSkin™ (SM), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)

Serious eye damage/irritation:

Tetramethylene dimethacrylate 2082-81-7	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Oleic acid, ethoxylated 9004-96-0	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	not irritating
	Exposure time	
	Species	Chicken, eye, isolated
	Method	OECD Guideline 438 (Isolated Chicken Eye Test Method)
maleic acid 110-16-7	Result	highly irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Menadione 58-27-5	Result	no prediction can be made
	Exposure time	
	Species	Bovine, cornea, in vitro test
	Method	OECD Guideline 437 (BCOP)
Menadione 58-27-5	Result	no prediction can be made
	Exposure time	
	Species	Reconstructed three dimensional human cornea model (EpiOcular™)
	Method	OECD Guideline 492 (Reconstructed Human Cornea-like Epithelium (RhCE) Test Method)

Respiratory or skin sensitization:

Tetramethylene dimethacrylate 2082-81-7	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	positive
	Test type	Direct peptide reactivity assay (DPRA)
	Species	cysteine and lysine, in chemico test
	Method	OECD Guideline 442C (Direct Peptide Reactivity Assay (DPRA))
Acetic acid, 2-phenylhydrazide 114-83-0	Result	positive
	Test type	Activation of keratinocytes
	Species	human keratinocytes, in vitro test
	Method	OECD Guideline 442D (ARE-Nrf2 Luciferase Test Method)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	positive
	Test type	activation of dendritic cells
	Species	human monocytes, in vitro test
	Method	OECD Guideline 442E (H-CLAT: Human Cell Line Activation Test)
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)
Reaction mass of N,N'-ethane-1,2- diylbis(12-hydroxyoctadecan-1- amide), Octadecanamide, 12- hydroxy-N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Menadione 58-27-5	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	not specified

Germ cell mutagenicity:

Tetramethylene dimethacrylate 2082-81-7	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)
Tetramethylene dimethacrylate 2082-81-7	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)
Tetramethylene dimethacrylate 2082-81-7	Result	positive without metabolic activation
	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)
Tetramethylene dimethacrylate 2082-81-7	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Tetramethylene dimethacrylate 2082-81-7	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	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)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	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)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	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)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	positive
	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)
Acetic acid, 2-phenylhydrazide 114-83-0	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)
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)
Menadione 58-27-5	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)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Acetic acid, 2- phenylhydrazide 114-83-0	carcinogenic	oral: drinking water	continuous	mouse	male/female	not specified
maleic acid 110-16-7	not carcinogenic	oral: feed	2 y daily	rat	male/female	OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	NOAEL 1,000 mg/kg	oral: gavage	daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
maleic acid 110-16-7	NOAEL $\geq$ 40 mg/kg	oral: feed	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard:

No data available.

12. Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

Toxicity:

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Value type	Value	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	LC50	32.5 mg/l	48 h		DIN 38412-15
Oleic acid, ethoxylated 9004-96-0	LC50	> 1 - 10 mg/l	96 h	fish	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LC50	16.4 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethene, tetrafluoro-, homopolymer 9002-84-0	LC50	Toxicity > Water solubility	96 h		Weight of evidence
maleic acid 110-16-7	LC50	> 245 mg/l	48 h	Leuciscus idus	DIN 38412-15
Reaction mass of N,N'- ethane-1,2-diylbis(12- hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy- N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	LL50	Toxicity > Water solubility	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction mass of N,N'- ethane-1,2-diylbis(12- hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy- N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	NOELR	Toxicity > Water solubility	32 d	Pimephales promelas	OECD Guideline 210 (fish early lite stage toxicity test)

Toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Value type	Value	Exposure time	Species	Method
Oleic acid, ethoxylated 9004-96-0	EC50	> 1 - 10 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Ethene, tetrafluoro-, homopolymer 9002-84-0	EC50	Toxicity > Water solubility	48 h		Weight of evidence
Acetic acid, 2- phenylhydrazide 114-83-0	EC50	1.1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
maleic acid 110-16-7	EC50	42.81 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Reaction mass of N,N'- ethane-1,2-diylbis(12- hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy-	EL50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

N-[2-[(1-oxooctadecyl)amino]ethyl] 123-26-2					
Menadione 58-27-5	EC50	0.31 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Value type	Value	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	NOEC	5.09 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	NOEC	32 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
maleic acid 110-16-7	NOEC	10 mg/l	21 d	Daphnia magna	other guideline:
Reaction mass of N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy-N-[2-[(1-oxooctadecyl)amino]ethyl] 123-26-2	NOEC	Toxicity > Water solubility	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Value type	Value	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	EC50	9.79 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tetramethylene dimethacrylate 2082-81-7	NOEC	2.11 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	EC50	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	NOEC	18.6 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethene, tetrafluoro-, homopolymer 9002-84-0	EC50	Toxicity > Water solubility	72 h		Weight of evidence
Acetic acid, 2- phenylhydrazide 114-83-0	EC50	0.258 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Acetic acid, 2- phenylhydrazide 114-83-0	NOEC	0.012 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC50	74.35 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC10	11.8 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction mass of N,N'- ethane-1,2-diylbis(12- hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy- N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	EC50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction mass of N,N'- ethane-1,2-diylbis(12- hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy- N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	EC10	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Menadione 58-27-5	EC50	0.064 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Menadione 58-27-5	NOEC	0.009 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity (microorganisms):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Value type	Value	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	NOEC	20 mg/l	28 d	activated sludge, domestic	not specified
maleic acid 110-16-7	EC10	44.6 mg/l	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-

					(Test)
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Persistence and degradability

Hazardous components CAS-No.	Result	Test type	Degradability	Exposure time	Method
Tetramethylene dimethacrylate 2082-81-7	readily biodegradable	aerobic	84 %	28 d	OECD Guideline 310 (Ready Biodegradability CO ₂ in Sealed Vessels (Headspace Test))
Oleic acid, ethoxylated 9004-96-0	readily biodegradable	not specified	> 60 %	28 day	OECD 301 A - F
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	readily biodegradable	aerobic	85 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test)
Acetic acid, 2-phenylhydrazide 114-83-0	not readily biodegradable.	aerobic	39 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
maleic acid 110-16-7	readily biodegradable	aerobic	97.08 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test)
Reaction mass of N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy-N-[2-[(1-oxooctadecyl)amino]ethyl] 123-26-2	not readily biodegradable.	aerobic	22 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Reaction mass of N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy-N-[2-[(1-oxooctadecyl)amino]ethyl] 123-26-2	not inherently biodegradable	aerobic	37 %	60 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Menadione 58-27-5	not inherently biodegradable	aerobic	0.000000 %	28 d	OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II))

Bioaccumulative potential

Mobility in soil:

Hazardous components CAS-No.	LogPow	Temperature	Method
Tetramethylene dimethacrylate 2082-81-7	3.1		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	2.3		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Acetic acid, 2- phenylhydrazide 114-83-0	0.74		QSAR (Quantitative Structure Activity Relationship)
maleic acid 110-16-7	-1.3	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Reaction mass of N,N'- ethane-1,2-diylbis(12- hydroxyoctadecan-1-amide), Octadecanamide, 12-hydroxy- N-[2-[(1- oxooctadecyl)amino]ethyl] 123-26-2	5.86		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Menadione 58-27-5	2.43	30 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

Endocrine disrupting properties

No data available.

Other adverse effects

No data available.

13. Disposal considerations

Product disposal:

Dispose of in accordance with local and national regulations.

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.

14. Transport information

Road transport CN_DG:

Not dangerous goods

Marine transport IMDG:

Not dangerous goods

Air transport IATA:
Not dangerous goods

Notice For Transportation:

Transport according to local and national regulations. Ensure containers will not leak, collapse, or being damaged when transported. DO NOT transport with incompatible materials. Transportation vehicle should be equipped with right fire-fighting equipment in case of emergency. Avoid solarization, drenched and high temperature when transported.

15. Regulatory information

The following laws and regulations lay down provisions in terms of chemicals safety use, storage, transportation, loading/unloading, classification as well as symbol.

“Law of the People's Republic of China on Work Safety”.

Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases”.

“Law of the People's Republic of China on environmental protection”.

“Regulation on the Safety Management of Hazardous Chemicals”.

“Regulations on License to Work Safety”.

China Inventory of Existing Chemicals:

All components are listed or are exempt from Inventory of Existing Chemical Substances in China.

16. Other information

Issue date:

18.08.2025

Issue department:

Product Safety & Regulatory Affairs for China

RSN No.:

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Disclaimer:

This Safety Data Sheet has been generated in accordance with Chinese law only. It provides information on the chemical product in the aspects of safety, health, environment, etc, recommending preventive and protective measures and countermeasures in case of emergency. The information contained herein does not constitute a guarantee concerning the properties of the material. 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. The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

Others:

The full text of all abbreviations indicated by codes in this safety data sheet section 3 are as follows:

H302 Harmful if swallowed.
H303 May be harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H401 Toxic to aquatic life.
H402 Harmful to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.