



Safety Data Sheet

LOCTITE 577 50ML AU UPGRADE

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SDS No. : 541371

V001.2

Date of issue: 14.01.2022

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

Product name: LOCTITE 577 50ML AU UPGRADE

Intended use: Adhesive

Supplier:

Henkel Australia Pty Ltd
135-141 Canterbury Road
Kilsyth, Victoria, 3137
Australia

Phone: +61 (3) 9724 6444

Emergency information: 24 HOUR EMERGENCY CONTACT NUMBER: 1800 032 379

Section 2. Hazards identification

Classification of the substance or mixture

Hazardous according to the criteria of Safe Work Australia.

GHS Classification:

Hazard Class

Skin irritation
Serious eye irritation
Skin sensitizer
Target Organ Systemic Toxicant -
Single exposure

Hazard Category

Category 2
Category 2A
Category 1
Category 3

Target organ

respiratory tract irritation

Hazard pictogram:



Signal word:

Warning

Hazard statement(s):	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
Precautionary Statement(s):	
Prevention:	P261 Avoid breathing mist/vapours. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, eye protection, and face protection.
Response:	P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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. P405 Store locked up.
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations.

Dangerous Goods information:

Not classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

Section 3. Composition / information on ingredients

General chemical description: Mixture
Type of preparation: Anaerobic Sealant

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Tetramethylene dimethacrylate	2082-81-7	10- < 20 %
2,2'-Ethylenedioxydiethyl dimethacrylate	109-16-0	1- < 10 %
Ethene, homopolymer	9002-88-4	< 10 %
Silica, amorphous, fumed, cryst.-free	112945-52-5	< 10 %
Acetic acid, 2-phenylhydrazide	114-83-0	< 1 %
α , α -dimethylbenzyl hydroperoxide	80-15-9	< 1 %
maleic acid	110-16-7	0.1- < 1 %
non hazardous ingredients~		60- <= 100 %

Section 4. First aid measures

Ingestion:	Do not induce vomiting. Have victim rinse mouth thoroughly with water. Seek medical advice, symptomatic treatment.
Skin:	Rinse with running water and soap. Remove contaminated clothing and footwear. If skin irritation persists, call a physician.
Eyes:	Wash with plenty of water immediately and continue for several minutes, holding eyelid open. Consult a doctor.
Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
First Aid facilities:	Eye wash Normal washroom facilities
Medical attention and special treatment:	Treat symptomatically.

Section 5. Fire fighting measures

Suitable extinguishing media:	Carbon dioxide, foam, powder
Improper extinguishing media:	Water spray jet
Decomposition products in case of fire:	Thermal decomposition may release toxic and/or hazardous gases. Carbon dioxide. carbon monoxide Irritating fumes.
Particular danger in case of fire:	In case of fire, keep containers cool with water spray.
Special protective equipment for fire-fighters:	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA). Wear full protective clothing.

Section 6. Accidental release measures

Personal precautions:	Avoid skin and eye contact. Ensure adequate ventilation. Wear adequate personal protective clothing and equipment. Keep unnecessary personnel away.
Environmental precautions:	Do not allow spill to enter sewage systems or open bodies of 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.

Section 7. Handling and storage

Precautions for safe handling:	Use only in well-ventilated areas. Avoid breathing vapors or mists of this product. Avoid skin and eye contact. Wear suitable protective clothing, safety glasses and gloves.
Conditions for safe 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.

Section 8. Exposure controls / personal protection**National exposure standards:**

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Peak Limit. (ppm)	Peak Limit. (mg/m3)	STEL (ppm)	STEL (mg/m3)
NUISANCE DUSTS, INHALABLE DUST 9002-88-4	Inhalable dust.		10				
SILICA, AMORPHOUS; FUMED SILICA (RESPIRABLE DUST) 112945-52-5	Respirable dust.		2				
FUMED SILICA (RESPIRABLE DUST) 112945-52-5	Respirable dust.		2				
Nuisance dusts, inhalable dust 112945-52-5	Inhalable dust.		10				

Engineering controls:

Ensure good ventilation/extraction.

Eye protection:

Safety goggles or safety glasses with side shields.

Skin protection:

Use impermeable gloves and protective clothing as necessary to prevent skin contact.

Neoprene gloves.

Butyl rubber gloves.

Natural rubber gloves.

Respiratory protection:

If inhalation risk exists, wear a respirator or air supplied mask complying with the requirements of AS/NZS 1715 and AS/NZS 1716.

Section 9. Physical and chemical properties

Appearance:	yellow high viscosity
Odor:	Mild
pH:	Not applicable, Mixture reacts with water.
Flash point: (no method)	> 93 °C (> 199.4 °F)
Density:	1.15 - 1.2 g/cm3
Solubility in water:	Not miscible
VOC content (2004/42/EC)	0.0 % (VOCV 814.018 VOC regulation CH)

Section 10. Stability and reactivity**Conditions to avoid:**

Extremes of temperature.

Incompatible materials:	Reacts with strong oxidants. Will attack some forms of plastic, rubber, and coatings.
Hazardous decomposition products:	Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. carbon monoxide carbon dioxide
Hazardous polymerization:	Will not occur.

Section 11. Toxicological information**Health Effects:****Ingestion:** Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.**Skin:** May cause allergic skin reaction.

Causes skin irritation.

Eyes: Causes eye irritation.**Inhalation:** Inhalation of product mist may cause irritation of the nose, throat, and respiratory tract.**Acute toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	LD50 LD50	10,066 mg/kg > 3,000 mg/kg	oral dermal		rat rabbit	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LD50 Acute toxicity estimate (ATE) Acute toxicity estimate (ATE)	10,837 mg/kg 28.17 mg/l > 5,000 mg/kg	oral inhalation dermal		rat	not specified Expert judgement Expert judgement
Ethene, homopolymer 9002-88-4	Acute toxicity estimate (ATE) Acute toxicity estimate (ATE) Acute toxicity estimate (ATE)	> 5,000 mg/kg > 5 mg/l > 5,000 mg/kg	oral inhalation dermal			Expert judgement Expert judgement Expert judgement
Silica, amorphous, fumed, cryst.-free 112945-52-5	LD50 LC0 LD50	> 5,000 mg/kg 0.139 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) not specified OECD Guideline 402 (Acute Dermal Toxicity)
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified
α , α -dimethylbenzyl hydroperoxide 80-15-9	LD50 LC50 Acute toxicity estimate (ATE)	382 mg/kg 1.370 mg/l 1,100 mg/kg	oral inhalation dermal	4 h	rat rat	other guideline: not specified Expert judgement
maleic acid 110-16-7	LD50 LD50	708 mg/kg 1,560 mg/kg	oral dermal		rat rabbit	not specified not specified

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	not irritating	24 h	rabbit	Draize Test
Silica, amorphous, fumed, cryst.-free 112945-52-5	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
α , α -dimethylbenzyl hydroperoxide 80-15-9	corrosive		rabbit	Draize Test
maleic acid 110-16-7	irritating	24 h	human	Patch Test

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Ethene, homopolymer 9002-88-4	not irritating	24 h	rabbit	FDA Guideline
Silica, amorphous, fumed, cryst.-free 112945-52-5	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
maleic acid 110-16-7	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Tetramethylene dimethacrylate 2082-81-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Ethene, homopolymer 9002-88-4	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study/ Route of administration	Metabolic activation / Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	negative negative positive	in vitro mammalian chromosome aberration test bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test	with and without with and without with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	negative negative negative	mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test) in vitro mammalian cell micronucleus test	with and without with and without with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Ethene, homopolymer 9002-88-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		Ames Test
Silica, amorphous, fumed, cryst.-free 112945-52-5	negative negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro			not specified not specified not specified
α , α -dimethylbenzyl hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
α , α -dimethylbenzyl hydroperoxide 80-15-9	negative	dermal		mouse	not specified
maleic acid 110-16-7	negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay	no data with and without		Ames Test OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	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)
α , α -dimethylbenzyl hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified
maleic acid 110-16-7	NOAEL= \geq 40 mg/kg	oral: feed	90 ddaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Section 12. Ecological information

General ecological information:

Do not empty into drains / surface water / ground water., Cured Loctite products are typical polymers and do not pose any immediate environmental hazards.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	LC50	32.5 mg/l	Fish	48 h		DIN 38412-15
Tetramethylene dimethacrylate 2082-81-7	EC50	9.79 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tetramethylene dimethacrylate 2082-81-7	NOEC	2.11 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tetramethylene dimethacrylate 2082-81-7	NOEC	20 mg/l	Bacteria	28 d	activated sludge, domestic	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LC50	16.4 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	EC50	> 100 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	NOEC	18.6 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethene, homopolymer 9002-88-4	LC50	> 100 mg/l	Fish	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethene, homopolymer 9002-88-4	EC0	> 1,000 mg/l	Bacteria	3 h	not specified	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Silica, amorphous, fumed, cryst.-free 112945-52-5	LC50	> 10,000 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
α , α -dimethylbenzyl hydroperoxide 80-15-9	LC50	3.9 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
α , α -dimethylbenzyl hydroperoxide 80-15-9	EC50	18.84 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
α , α -dimethylbenzyl hydroperoxide 80-15-9	EC50	3.1 mg/l	Algae	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
α , α -dimethylbenzyl hydroperoxide 80-15-9	NOEC	1 mg/l	Algae	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
α , α -dimethylbenzyl hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min		not specified
maleic acid 110-16-7	LC50	> 245 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
maleic acid 110-16-7	EC50	42.81 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
maleic acid 110-16-7	EC50	74.35 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC10	11.8 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC10	44.6 mg/l	Bacteria	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshe- mm-Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Tetramethylene dimethacrylate 2082-81-7	readily biodegradable	aerobic	84 %	OECD Guideline 310 (Ready Biodegradability CO ₂ in Sealed Vessels (Headspace Test))
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	readily biodegradable	aerobic	85 %	OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test)
Ethene, homopolymer 9002-88-4	not readily biodegradable.	aerobic	1 %	ISO 10708 (BODIS-Test)
α , α -dimethylbenzyl hydroperoxide 80-15-9	not readily biodegradable.	aerobic	3 %	OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test)
maleic acid 110-16-7	readily biodegradable	aerobic	97.08 %	OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	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					not specified
α , α -dimethylbenzyl hydroperoxide 80-15-9		9.1		calculation		OECD Guideline 305 (Bioconcentration: Flow- through Fish Test)
α , α -dimethylbenzyl hydroperoxide 80-15-9	1.6				25 °C	OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
maleic acid 110-16-7	-1.3				20 °C	OECD Guideline 107 (Partition Coefficient (n- octanol / water), Shake Flask Method)

Section 13. Disposal considerations

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

Disposal for uncleaned package: After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.
Disposal must be made according to official regulations.

Section 14. Transport information**Road and Rail Transport:**

Dangerous Goods information:

Not classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

Marine transport IMDG:

Not dangerous goods

Air transport IATA:
Not dangerous goods

Section 15. Regulatory information

SUSMP Poisons Schedule None

Section 16. Other information

Abbreviations/acronyms:
 STEL - Short term exposure limit
 TWA - Time weighted average
 IMDG: International Maritime Dangerous Goods code
 IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
 AIIC - Australian Inventory of Industrial Chemicals (AIIC)
 AICIS - Australian Industrial Chemicals Introduction Scheme

Reason for issue: Reviewed SDS. Reissued with new date. involved chapters: 1-16

Date of previous issue: 19.10.2021

Disclaimer:

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