



Safety Data Sheet

LOCTITE 248 THREADLOCKER known as Sticks Assortment
MEDIUM STR

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

Product name: LOCTITE 248 THREADLOCKER known as Sticks Assortment MEDIUM STR

Intended use: Anaerobic Sealant

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:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Serious eye irritation	Category 2A	
Skin sensitizer	Category 1	
Target Organ Systemic Toxicant - Single exposure	Category 3	respiratory tract irritation
Skin irritation	Category 2A	

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 dust. 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

Type of preparation: Methacrylate resin based threadlocker

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Thixatrol plus		10- < 30 %
Silica, amorphous, fumed, cryst.-free	112945-52-5	< 10 %
Ethane-1,2-diol	107-21-1	< 10 %
Ethene, homopolymer	9002-88-4	< 10 %
α , α -dimethylbenzyl hydroperoxide	80-15-9	1- < 3 %
N,N-Diethyl-p-toluidine	613-48-9	< 10 %
N-methyl-2-pyrrolidone	872-50-4	< 0.3 %
non hazardous ingredients~		60- <= 90 %

Section 4. First aid measures

Ingestion:	Do not induce vomiting. Have victim rinse mouth thoroughly with water. Seek medical advice.
Skin:	In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Seek medical advice.
Eyes:	Wash with plenty of water immediately and continue for several minutes, holding eyelid open. Consult a doctor.
Inhalation:	Move to fresh air in case of accidental inhalation of vapours. Seek medical advice.
First Aid facilities:	Normal washroom facilities Eye wash
Medical attention and special treatment:	Treat symptomatically and supportively.

Section 5. Fire fighting measures

Suitable extinguishing media:	Carbon dioxide, foam, powder
Decomposition products in case of fire:	Thermal decomposition can lead to release of irritating gases and vapors. carbon monoxide Carbon dioxide. Oxides of nitrogen. Oxides of sulfur.
Particular danger in case of fire:	In case of fire, keep containers cool with water spray.
Special protective equipment for fire-fighters:	Wear full protective clothing. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

Section 6. Accidental release measures

Personal precautions:	Avoid skin and eye contact. Wear protective equipment.
Environmental precautions:	Waste disposal with the approval of the responsible local authority. Do not discharge into surface water/ground water.
Clean-up methods:	Scrape up spilled material and place in a closed container for disposal.

Section 7. Handling and storage

Precautions for safe handling:	Use only in well-ventilated areas. 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.
Unsuitable materials with product:	plastic

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)
ETHYLENE GLYCOL (VAPOUR) 107-21-1	Vapor.	20	52				
ETHYLENE GLYCOL (VAPOUR) 107-21-1	Vapor.					40	104
Ethylene glycol (particulate) 107-21-1	Particulate.		10				
1-METHYL-2-PYRROLIDONE 872-50-4						75	309
1-METHYL-2-PYRROLIDONE 872-50-4		25	103				
CUMENE 98-82-8						75	375
CUMENE 98-82-8		25	125				
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				
ETHYLENE GLYCOL (VAPOUR) 107-21-1	Vapor.	20	52				
ETHYLENE GLYCOL (VAPOUR) 107-21-1	Vapor.					40	104
Ethylene glycol (particulate) 107-21-1	Particulate.		10				
NUISANCE DUSTS, INHALABLE DUST 9002-88-4	Inhalable dust.		10				
1-METHYL-2-PYRROLIDONE 872-50-4						75	309
1-METHYL-2-PYRROLIDONE 872-50-4		25	103				

Engineering controls:	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Eye protection:	Wear protective glasses.
Skin protection:	Wear suitable protective clothing. Butyl 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:	blue solid
Odor:	characteristic
pH:	Not applicable, Mixture is non-polar/aprotic.
Specific gravity:	1.1097
Boiling point:	> 149 °C (> 300.2 °F)
Flash point:	> 100 °C (> 212 °F)
Vapor pressure: (; 27 °C (80.6 °F))	< 5 mm hg
Density:	1.1000 g/cm ³
VOC content: (2010/75/EC)	< 3 %

Section 10. Stability and reactivity

Stability:	Stable under normal conditions of temperature and pressure.
Conditions to avoid:	Avoid excessive heat and ignition sources. Extremes of temperature.
Incompatible materials:	Strong oxidizing agents. Free radical initiators.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors. carbon monoxide Carbon dioxide. Oxides of nitrogen.
Hazardous polymerization:	Will not occur.

Section 11. Toxicological information

Health Effects:

Ingestion: May cause mild gastrointestinal irritation with nausea, vomiting, diarrhea and abdominal pain.

Skin: May cause an allergic skin reaction.
Can cause skin irritation with prolonged contact.

Eyes: Causes serious eye irritation.
Symptoms may include severe irritation, pain, tearing, blurred vision.

Inhalation: Causes respiratory tract irritation.

Vapors may cause irritation of the nose, throat, and respiratory tract.

Chronic effects:

N-methyl-2-pyrrolidone 872-50-4: Damage to the skin, irritation to the mucous membranes.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Thixatrol plus	LD50	> 2,000 mg/kg	oral		rat	not specified
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)
Ethane-1,2-diol 107-21-1	Acute toxicity estimate (ATE) LD50 LD50	500 mg/kg 7,712 mg/kg 10,600 mg/kg	oral oral dermal		rat rabbit	Expert judgement not specified not specified
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
α , α -dimethylbenzyl hydroperoxide 80-15-9	LD50 LC50 LC50 LD50 Acute toxicity estimate (ATE)	382 mg/kg 1.370 mg/l 1.245 mg/l 530 - 1,060 mg/kg 1,100 mg/kg	oral inhalation inhalation dermal dermal	4 h 4 h	rat rat rat rat	other guideline: not specified Calculation method other guideline: Expert judgement
N-methyl-2-pyrrolidone 872-50-4	LD50 LC50 LD50	4,150 mg/kg > 5.1 mg/l > 5,000 mg/kg	oral inhalation dermal	4 h	rat rat rat	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Silica, amorphous, fumed, cryst.-free 112945-52-5	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Ethane-1,2-diol 107-21-1	not irritating	20 h	rabbit	BASF Test
α , α -dimethylbenzyl hydroperoxide 80-15-9	corrosive		rabbit	Draize Test
N-methyl-2-pyrrolidone 872-50-4	irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
N-methyl-2-pyrrolidone 872-50-4	moderately irritating		human	not specified

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Silica, amorphous, fumed, cryst.-free 112945-52-5	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Ethane-1,2-diol 107-21-1	not irritating		rabbit	BASF Test
Ethene, homopolymer 9002-88-4	not irritating	24 h	rabbit	FDA Guideline
N-methyl-2-pyrrolidone 872-50-4	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Ethane-1,2-diol 107-21-1	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Ethene, homopolymer 9002-88-4	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
N-methyl-2-pyrrolidone 872-50-4	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study/ Route of administration	Metabolic activation/ Exposure time	Species	Method
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
Ethane-1,2-diol 107-21-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Ethane-1,2-diol 107-21-1	negative	oral: feed		rat	Chromosome Aberration Test
Ethene, homopolymer 9002-88-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		Ames Test
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
N-methyl-2-pyrrolidone 872-50-4	negative negative negative	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay	without with and without with and without		OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro) OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
N-methyl-2-pyrrolidone 872-50-4	negative negative	oral: gavage oral: gavage		mouse hamster, Chinese	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Ethane-1,2-diol 107-21-1	NOAEL=150 mg/kg	oral: feed	16 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
α , α -dimethylbenzyl hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified
N-methyl-2-pyrrolidone 872-50-4	NOAEL=0.5 mg/l	inhalation	90 days6 hrs/day, 5 days/wk	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

Section 12. Ecological information

General ecological information:

Harmful to aquatic organisms., May cause long-term adverse effects in the aquatic environment., Do not empty into drains / surface water / ground water., In the cured state contribution of this product to Environmental Hazards is insignificant in comparison to articles in which it is used.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Thixatrol plus	LC50	> 0.2 mg/l	Fish	96 h	carp	not specified
Thixatrol plus	EL50	15.63 - 250 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Thixatrol plus	EC50	0.005 mg/l	Algae	72 h	Skeletonema costatum	ISO 10253:2006 (Marine algal growth inhibition test)
Thixatrol plus	NOEC	0.003 mg/l	Algae	72 h	Skeletonema costatum	ISO 10253:2006 (Marine algal growth 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)
Ethane-1,2-diol 107-21-1	LC50	72,860 mg/l	Fish	96 h	Pimephales promelas	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians) other guideline:
Ethane-1,2-diol 107-21-1	NOEC	15,380 mg/l	Fish	7 d	Pimephales promelas	
Ethane-1,2-diol 107-21-1	EC50	> 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Ethane-1,2-diol 107-21-1	EC50	> 6,500 - 13,000 mg/l	Algae	96 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethane-1,2-diol 107-21-1	NOEC	> 100 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethane-1,2-diol 107-21-1	EC20	> 1,995 mg/l	Bacteria	30 min	activated sludge, domestic	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
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)
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
N-methyl-2-pyrrolidone 872-50-4	LC50	4,000 mg/l	Fish	96 h	Leuciscus idus	DIN 38412-15
N-methyl-2-pyrrolidone 872-50-4	EC50	4,897 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
N-methyl-2-pyrrolidone 872-50-4	EC50	> 500 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Thixatrol plus	not readily biodegradable.	aerobic	69.3 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Ethane-1,2-diol 107-21-1	readily biodegradable	aerobic	90 - 100 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away 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: CO2 Evolution Test)
N-methyl-2-pyrrolidone 872-50-4	inherently biodegradable	aerobic	> 90 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
N-methyl-2-pyrrolidone 872-50-4	readily biodegradable	aerobic	92 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Thixatrol plus	5.4 - 6.6				25 °C	EU Method A.8 (Partition Coefficient)
Ethane-1,2-diol 107-21-1	-1.36					QSAR (Quantitative Structure Activity Relationship)
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)
N-methyl-2-pyrrolidone 872-50-4	-0.46				25 °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.
Contribution of this product to waste is very insignificant in comparison to article in which it is used

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:

ADGC - Australian Dangerous Goods Code
ASCC - Australian Safety and Compensation Council
STEL - Short term exposure limit
TWA - Time weighted average
AIIC - Australian Inventory of Industrial Chemicals (AIIC)
AICIS - Australian Industrial Chemicals Introduction Scheme

Disclaimer:

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