Safety Data Sheet

272 Threadlocker High Strength

SDS No. : 153465
V001.4
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Section 1. Identification of the substance/preparation and of the company/undertaking

Product name: 272 Threadlocker High Strength

Intended use: Anaerobic 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	Hazard Category	Route of Exposure	Target organ
Acute toxicity	Category 3	Inhalation	
Serious eye irritation	Category 2A		
Skin sensitizer	Category 1		
Target Organ Systemic Toxicant - Single exposure	Category 3		respiratory tract irritation
Acute hazards to the aquatic environment	Category 3		
Chronic hazards to the aquatic environment	Category 3		

Hazard pictogram:

Signal word: Danger

Hazard statement(s):
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statement(s):

Prevention:
P261 Avoid breathing dust/fume/gas/mist/spray
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.
P273 Avoid release to the environment.
P280 Wear protective gloves, eye protection, and face 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.
P363 Wash contaminated clothing 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: Methacrylate resin based threadlocker

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione	3006-93-7	10- < 30 %
α, α-dimethylbenzyl hydroperoxide	80-15-9	1- < 3 %
maleic acid	110-16-7	< 1 %
non hazardous ingredients~		60- < 100 %

Section 4. First aid measures

Ingestion:
Get medical attention.
Keep individual calm.
Do not induce vomiting.

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

Eyes:	Get medical attention. Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time.
Inhalation:	Move to fresh air. If symptoms develop and persist, get medical attention.
First Aid facilities:	Eye wash and safety shower Normal washroom facilities
Medical attention and special treatment:	Treat symptomatically and supportively.

Section 5. Fire fighting measures

Suitable extinguishing media:	If product is involved in fire extinguish with dry powder, foam or carbon dioxide.
Decomposition products in case of fire:	Oxides of nitrogen. Oxides of carbon. Thermal decomposition can lead to release of irritating gases and vapors.
Special protective equipment for fire-fighters:	Wear self contained breathing apparatus. Wear full protective clothing.
Additional fire fighting advice:	In case of fire, keep containers cool with water spray.

Section 6. Accidental release measures

Personal precautions:	Avoid skin and eye contact.
Environmental precautions:	Do not let product enter drains.
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 skin and eye contact. Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.
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:

None

Engineering controls:	Ensure good ventilation/extraction.
Eye protection:	Wear protective glasses.
Skin protection:	Wear suitable protective clothing. The use of chemical resistant gloves such as Nitrile is recommended. Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.
Respiratory protection:	Use only in well-ventilated areas. 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:	Orange-red liquid
Odor:	characteristic
pH:	3 - 6
Specific gravity:	1.11
Boiling point:	> 149 °C (> 300.2 °F)
Flash point: (Tagliabue closed cup)	> 93.3 °C (> 199.94 °F)
Vapor pressure: (; 80 °F (26.7 °C))	< 5 mm hg
Solubility in water:	Slight
Viscosity (dynamic): (Brookfield; Instrument: RVT; 25 °C (77 °F); speed of rotation: 20 min-1; Spindle No: 4; Method: ;; LCT STM 10; Viscosity Brookfield)	5,000 - 11,000 mPa.s
VOC content: (2010/75/EC)	< 3 %

Section 10. Stability and reactivity

Conditions to avoid:	See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10). High temperatures.
Incompatible materials:	Reducing agents. Strong alkalis. Strong acids and oxidizing agents. Other polymerization initiators.
Incompatible materials:	No data available.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Irritating organic vapours.
Hazardous polymerization:	Hazardous polymerization may occur in the presence of excess peroxides and metals contamination.

Section 11. Toxicological information

Health Effects:

Ingestion: May be harmful if swallowed.
Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Skin: Irritating to skin.
Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Eyes: Causes serious eye damage.
Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Inhalation: May cause respiratory tract irritation.

Chronic effects: Repeated excessive dermal exposure may cause marked skin irritation and may increase the possibility of allergic reactions.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Acute toxicity estimate (ATE) LD50 LC50	500 mg/kg > 300 - 2,000 mg/kg 0.055 mg/l	oral oral inhalation	 4 h	 rat rat	Expert judgement OECD Guideline 423 (Acute Oral toxicity) OECD Guideline 403 (Acute Inhalation Toxicity)
α, α-dimethylbenzyl hydroperoxide 80-15-9	LD50 LD50 Acute toxicity estimate (ATE)	382 mg/kg 530 - 1,060 mg/kg 1,100 mg/kg	oral dermal dermal		rat rat	other guideline: other guideline: 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
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	not corrosive	60 min	Human, EpiDerm™ SIT (EPI-200), Reconstructed Human Epidermis (RHE)	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	not irritating	60 min	Human, EpiDerm™ SIT (EPI-200), Reconstructed Human Epidermis (RHE)	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
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
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	not irritating		Bovine, cornea, in vitro test	OECD Guideline 437 (BCOP)
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
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	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
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	negative negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay	with and without with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation 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
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
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	NOAEL=15 mg/kg	oral: gavage	42-52 ddaily	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=>= 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., 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.

Ecotoxicity: Harmful to aquatic life with long lasting effects.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	EC50	31.6 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	ErC50	67.898 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	EC10	0.308 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth 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 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	ErC50	3.1 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	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 Zellvermehrungshemm-Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method

1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	not readily biodegradable.	not specified	0 - < 60 %	OECD Guideline 303 A (Simulation TestAerobic Sewage Treatment. A: Activated Sludge Units)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	not readily biodegradable.	aerobic	0 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9		no data	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
maleic acid 110-16-7	readily biodegradable	aerobic	97.08 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	0.67				24 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
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	2.16					not specified
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.
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
GHS: Globally Harmonized System
CAS: Chemical Abstracts Service
OECD: Organization for Economic Cooperation and Development
LD 50: Lethal Dose 50%
LC 50: Lethal Concentration 50%
IMDG: International Maritime Dangerous Goods code
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
STEL - Short term exposure limit
TWA - Time weighted average

Reason for issue: Reviewed SDS. Reissued with new date. involved chapters: 2,3,9,12,16

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Disclaimer:

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