



Safety Data Sheet

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LOCTITE 243

SDS No. : 316211

V000.0

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SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name: LOCTITE 243

Intended use: Threadlocker

Supplier:

Henkel New Zealand Ltd.
2 Allens Road
Auckland, 2014
New Zealand

Phone: +64 (9) 272 6710

Emergency information: 24 HOUR EMERGENCY CONTACT NUMBER 0800 243 622

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HSNO Classification:

6.4A Class 6 - Toxicity, Subclass 6.4 - Eye irritant, Hazard Classification A
Class 6 - Toxicity, Subclass 6.5 - Sensitisation, Hazard Classification B
Class 9 - Ecotoxicity, Subclass 9.1 - Aquatic, Hazard Classification B

GHS Classification:

<u>Hazard Class</u>	<u>Hazard Category</u>
Serious eye irritation	Category 2A
Skin sensitizer	Category 1
Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 2

Hazard pictogram:



Signal word:

Warning

Hazard statement(s):	H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H411 Toxic to aquatic life with long lasting effects.
Precautionary Statement(s):	
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.
Response:	P302+P352 IF ON SKIN: Wash with plenty of water. 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. P391 Collect spillage.
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations.

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
Tetramethylene dimethacrylate	2082-81-7	10- < 30 %
2,4,6-Triallyloxy-1,3,5-triazine	101-37-1	1- < 10 %
Propane-1,2-diol	57-55-6	< 2 %
Maleic acid	110-16-7	< 1 %
Acetic acid, 2-phenylhydrazide	114-83-0	< 1 %
non hazardous ingredients~		60 %

SECTION 4 FIRST AID MEASURES

Ingestion:	Rinse mouth, do not induce vomiting, consult a doctor.
Skin:	Rinse with running water and soap. Seek medical advice.
Eyes:	Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.
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:** If product is involved in fire extinguish with dry powder, foam or carbon dioxide.
- Decomposition products in case of fire::** In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.
Irritating organic vapours.
- Particular danger in case of fire::** None
- Special protective equipment for fire-fighters:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Avoid skin and eye contact.
Ensure adequate ventilation.
- 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.
- Conditions for safe storage:** Ensure good ventilation/extraction.
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

Workplace exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Ceiling	STEL (ppm)	STEL (mg/m3)
PARTICULATES NOT OTHERWISE CLASSIFIED, RESPIRABLE DUST 9002-88-4	Respirable dust.		3	-	-	-
PARTICULATES NOT OTHERWISE CLASSIFIED, INHALABLE DUST	Inhalable dust.		10	-	-	-
PROPANE-1,2-DIOL, PARTICULATES ONLY 57-55-6	Particulate.		10	-	-	-
PROPANE-1,2-DIOL, VAPOUR & PARTICULATES	Vapor and particulates.	150	474	-	-	-
CUMENE 98-82-8		-	-	-	75	375
CUMENE		25	125	-	-	-

Engineering controls:	Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.
Eye protection:	Wear protective glasses.
Skin protection:	<p>Wear suitable protective clothing. The use of chemical resistant gloves such as Nitrile is recommended.</p> <p>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.</p> <p>The use of chemical resistant gloves such as Neoprene or Natural Rubber is recommended</p>
Respiratory protection:	<p>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.</p>

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Blue Liquid
Odor:	Characteristic
pH:	Not available.
Specific gravity:	1.09
Boiling point:	> 149 °C (> 300.2 °F)
Flash point:	> 93 °C (> 199.4 °F)
Vapor pressure:	< 300 mbar
	(no method; 50 °C (122 °F))
Density:	1.09 g/cm ³
Solubility in water:	Slightly soluble
Viscosity (dynamic):	1,700 - 2,400 mPa.s
	(Brookfield; Instrument: RVT; speed of rotation: 20 min ⁻¹ ; Spindle No: 3; Method: ;; LCT STM 10; Viscosity Brookfield)
VOC content:	1.09 % 11.88 g/l

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid:	Keep away from heat, spark and flame.
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Incompatible materials:	Strong acids and oxidizing agents. Oxygen scavengers. Strong alkalis. Reducing agents. Other polymerization initiators.
Hazardous decomposition products:	In case of fire toxic gases can be released. Irritating vapors. Oxides of carbon.

SECTION 11 TOXICOLOGICAL INFORMATION

Health Effects:	
Ingestion:	May be harmful if swallowed.
Skin:	May cause skin irritation. May cause skin sensitization.
Eyes:	This product is irritating to the eyes.
Inhalation:	May cause respiratory tract irritation.
Aggravated med. condition:	Eye, skin, and respiratory disorders.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Tetramethylene dimethacrylate 2082-81-7	LD50	10,120 mg/kg	oral		rat	not specified
2,4,6-Triallyloxy-1,3,5-triazine 101-37-1	LD50 LD50	753 mg/kg > 2,000 mg/kg	oral dermal		rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
Propane-1,2-diol 57-55-6	LD50 LC0 LD50	22,000 mg/kg 317.042 mg/l > 2,000 mg/kg	oral inhalation dermal	2 h	rat rabbit rabbit	not specified not specified not specified
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
Propane-1,2-diol 57-55-6	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Maleic acid 110-16-7	irritating	24 h	human	Patch Test

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Propane-1,2-diol 57-55-6	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)
Propane-1,2-diol 57-55-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
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)
Propane-1,2-diol 57-55-6	negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test	without with and without		Ames Test OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Propane-1,2-diol 57-55-6	negative negative negative	oral: gavage intraperitoneal oral: gavage		rat mouse rat	not specified not specified 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
Propane-1,2-diol 57-55-6	NOAEL=1,700 mg/kg	oral: feed	2 yearsdaily	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.

Ecotoxicity: Toxic to aquatic life with long lasting effects.

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
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1	LC50	4.36 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1	EC50	19.4 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2,4,6-Triallyloxy-1,3,5- triazine 101-37-1	EC0	5 mg/l	Bacteria	3 h		OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Propane-1,2-diol 57-55-6	LC50	> 10,000 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
Propane-1,2-diol 57-55-6	EC50	34,400 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Propane-1,2-diol 57-55-6	EC50	19,000 mg/l	Algae	14 d	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Propane-1,2-diol 57-55-6	NOEC	15,000 mg/l	Algae	14 d	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Propane-1,2-diol 57-55-6	EC50	> 1,000 mg/l	Bacteria	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
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	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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Tetramethylene dimethacrylate 2082-81-7	readily biodegradable	aerobic	84 %	OECD Guideline 310 (Ready Biodegradability CO ₂ in Sealed Vessels (Headspace Test))
2,4,6-Triallyloxy-1,3,5-triazine 101-37-1		aerobic	7 - 9 %	OECD Guideline 301 B (Ready Biodegradability: CO ₂ Evolution Test)
Propane-1,2-diol 57-55-6	not inherently biodegradable	aerobic	60 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Propane-1,2-diol 57-55-6	readily biodegradable	aerobic	> 70 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away 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)
2,4,6-Triallyloxy-1,3,5-triazine 101-37-1	2.8				20 °C	not specified
Propane-1,2-diol 57-55-6	-1.07				20.5 °C	EU Method A.8 (Partition Coefficient)
Maleic acid 110-16-7	-1.3				20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acetic acid, 2-phenylhydrazide 114-83-0	0.74					not specified

SECTION 13. DISPOSAL CONSIDERATIONS

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

Disposal for uncleaned package: Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

SECTION 14. TRANSPORT INFORMATION

Land Transport:

UN no.: 3082
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fatty acid amide)
 Class or division: 9
 Packing group: III

Marine transport IMDG:

UN no.: 3082
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fatty acid amide)
 Class or division: 9
 Packing group: III
 EmS: F-A ,S-F

Seawater pollutant: Marine pollutant

Air transport IATA:

UN no.: 3082
 Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Fatty acid amide)
 Class or division: 9
 Packing group: III
 Packing instructions (passenger): 964
 Packing instructions (cargo): 964

Further information for transport:

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), 197 (IATA), 969 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

SECTION 15. REGULATORY INFORMATION

HSNO Approval Number: HSR002670

Site and Storage: Refer to the site and storage requirements for this Group Standard.
Refer to the HSNO controls for approved hazardous substances.

NZIoC: Compliant for NZIOC

SECTION 16. OTHER INFORMATION

Abbreviations/acronyms: STEL - Short term exposure limit
 TWA - Time weighted average
 HSNO - Hazardous Substances and New Organisms
 GHS: Globally Harmonized System
 CAS: Chemical Abstracts Service
 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

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

Date of previous issue: 29.01.2014

Disclaimer:

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