



Safety Data Sheet

LOCTITE 243

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SDS No. : 316211

V001.6

Date of issue: 19.04.2022

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

Product name: LOCTITE 243

Intended use: Threadlocker

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>
Skin irritation	Category 2	
Serious eye irritation	Category 2A	
Skin sensitizer	Category 1	
Target Organ Systemic Toxicant - Single exposure	Category 3	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: Methacrylate resin based threadlocker

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Tetramethylene dimethacrylate	2082-81-7	20- < 30 %
2,4,6-Triallyloxy-1,3,5-triazine	101-37-1	< 10 %
Silane, dichlorodimethyl-, reaction products with silica	68611-44-9	< 10 %
Ethene, homopolymer	9002-88-4	< 10 %
Propane-1,2-diol	57-55-6	< 10 %
α , α -dimethylbenzyl hydroperoxide	80-15-9	< 1 %
maleic acid	110-16-7	0.1- < 1 %
Acetic acid, 2-phenylhydrazide	114-83-0	< 1 %
non hazardous ingredients~		30- <= 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 (NO_x) 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: Store in a cool, well-ventilated place.
Do not expose to direct heat.
Store in sealed original container.

Section 8. Exposure controls / personal protection

National exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m ³)	Peak Limit. (ppm)	Peak Limit. (mg/m ³)	STEL (ppm)	STEL (mg/m ³)
Nuisance dusts, inhalable dust 68611-44-9	Inhalable dust.		10				
Fumed silica (respirable dust) 68611-44-9	Respirable dust.		2				
Silica, Amorphous: Fumed silica (respirable dust) 68611-44-9	Respirable dust.		2				

NUISANCE DUSTS, INHALABLE DUST 9002-88-4	Inhalable dust.		10				
PROPANE-1,2-DIOL TOTAL: (VAPOUR & PARTICULATES) 57-55-6	Total vapour and particulates.	150	474				
PROPANE-1,2-DIOL: PARTICULATES ONLY 57-55-6	Particulate.		10				

Engineering controls:	Ensure good ventilation/suction at the workplace.
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. The use of chemical resistant gloves such as Neoprene or Natural Rubber is recommended
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:	Blue Liquid Liquid
Odor:	Characteristic
pH:	Not applicable, Product reacts with water.
Flash point:	> 93 °C (> 199.4 °F)
Density:	1.09 g/cm ³
VOC content (2004/42/EC)	0.0 % (VOCV 814.018 VOC regulation CH)

Section 10. Stability and reactivity

Conditions to avoid:	Keep away from heat, spark and flame.
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.
Hazardous polymerization:	Will not occur.

Section 11. Toxicological information

Health Effects:

Ingestion: May be harmful if swallowed.
Skin: Causes skin irritation.
 May cause skin sensitization.
Eyes: Causes serious eye irritation.
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 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
2,4,6-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)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	LD50 LD50	> 5,000 mg/kg > 2,000 mg/kg	oral dermal		rat rat	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
Propane-1,2-diol 57-55-6	LD50 LC50 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
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
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	not irritating	4 h	rabbit	not specified
Propane-1,2-diol 57-55-6	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
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	not irritating		rabbit	not specified
Ethene, homopolymer 9002-88-4	not irritating	24 h	rabbit	FDA Guideline
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)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	not sensitising	Patch-Test	human	human repeat insult patch test
Ethene, homopolymer 9002-88-4	not 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	equivalent or similar to 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)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test	with and without with and without		Ames Test Chromosome Aberration Test
Ethene, homopolymer 9002-88-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		Ames 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
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
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	NOAEL=500 mg/kg	oral: feed	5-8 wdaily	rat	not specified
Propane-1,2-diol 57-55-6	NOAEL=1,700 mg/kg	oral: feed	2 yearsdaily	rat	not specified
Propane-1,2-diol 57-55-6	NOAEL=1000 mg/m3	inhalation	90 d6 h/d, 5 d/w	rat	not specified
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, soil or bodies of water.

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)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	LC50	> 10,000 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	EC50	> 10,000 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	EC50	> 10,000 mg/l	Algae			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)
Propane-1,2-diol 57-55-6	LC50	51,600 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Propane-1,2-diol 57-55-6	EC50	18,340 mg/l	Daphnia	48 h	Ceriodaphnia dubia	other guideline:
Propane-1,2-diol 57-55-6	EC50	24,200 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Propane-1,2-diol 57-55-6	NOEC	15,000 mg/l	Algae	14 d	Pseudokirchneriella 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)
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	EC50	3.1 mg/l	Algae	72 h	Desmodesmus subspicatus (reported as Scenedesmus	OECD Guideline 201 (Alga, Growth

80-15-9 α, α-dimethylbenzyl hydroperoxide	NOEC	1 mg/l	Algae	72 h	subspicatus) Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	Inhibition Test) OECD Guideline 201 (Alga, Growth Inhibition Test) not specified
80-15-9 α, α-dimethylbenzyl hydroperoxide	EC10	70 mg/l	Bacteria	30 min		
80-15-9 maleic acid	LC50	> 245 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
110-16-7 maleic acid	EC50	42.81 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia.sp. Acute Immobilisation Test)
110-16-7 maleic acid	EC50	74.35 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
110-16-7 maleic acid	EC10	11.8 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
110-16-7 maleic acid	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 CO2 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: CO2 Evolution Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	not readily biodegradable.	not specified	> 0 - < 60 %	OECD 301 A - F
Ethene, homopolymer 9002-88-4	not readily biodegradable.	aerobic	1 %	ISO 10708 (BODIS-Test)
Propane-1,2-diol 57-55-6	readily biodegradable	aerobic	> 81.7 - 100 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	not readily biodegradable.	aerobic	3 %	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
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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)
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)
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: 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.

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: ASCC - Australian Safety and Compensation Council
SUSMP - Standard for the Uniform Medicines of Medicines and Poisons
GHS: Globally Harmonized System
CAS: Chemical Abstracts Service
TWA - Time weighted average
LD 50: Lethal Dose 50%
OECD: Organization for Economic Cooperation and Development
NOAEL: No Observed Adverse Effect Level
LC 50: Lethal Concentration 50%
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: 15.05.2020

Disclaimer:

The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel Australia Pty. Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel Australia Pty. Limited concerning the properties of the material.

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Safety Data Sheet

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LOCTITE 268 19G STIK WIP EN/FR

SDS No. : 153641

V001.4

Date of issue: 09.12.2021

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

Product name: LOCTITE 268 19G STIK WIP EN/FR

Intended use: Anaerobic thread 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:

Hazard Class

Skin sensitizer

Hazard Category

Category 1

Hazard pictogram:



Signal word:

Warning

Hazard statement(s):

H317 May cause an allergic skin reaction.

Precautionary Statement(s):

Prevention:

P261 Avoid breathing dust.
P272 Contaminated work clothing should not be allowed out of the workplace.
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.

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

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Thixatrol plus		10- < 30 %
Silica, amorphous, fumed, crystal-free	112945-52-5	< 10 %
Ethene, homopolymer	9002-88-4	< 10 %
α , α -dimethylbenzyl hydroperoxide	80-15-9	< 1 %
N,N-Diethyl-p-toluidine	613-48-9	< 10 %
N-methyl-2-pyrrolidone	872-50-4	< 0.3 %
N,N-dimethyl-o-toluidine	609-72-3	< 10 %

Section 4. First aid measures

Ingestion:	Do not induce vomiting. Have victim rinse mouth thoroughly with water. Seek medical advice.
Skin:	Rinse with running water and soap. 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. If symptoms persist, 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 Fine water spray
Improper extinguishing media:	None known

Decomposition products in case of fire: Thermal decomposition may release toxic and/or hazardous gases.
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.
Ensure adequate ventilation.
Wear protective equipment.

Environmental precautions: Waste disposal with the approval of the responsible local authority.

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.
Gloves and safety glasses should be worn
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

Conditions for safe storage: Ensure good ventilation/extraction.
Store in a cool, well-ventilated place.
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/m ³)	Peak Limit. (ppm)	Peak Limit. (mg/m ³)	STEL (ppm)	STEL (mg/m ³)
CUMENE 98-82-8						75	375
CUMENE 98-82-8		25	125				
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:	No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.
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:	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:	red wax
Odor:	mild
Specific gravity:	1.0687
Boiling point:	> 149 °C (> 300.2 °F)
Vapor pressure: (; 20 °C (68 °F))	< 6.67 mbar
Density:	1.07 g/cm ³
Solubility in water:	Insoluble
VOC content: (2010/75/EC)	< 3 %

Section 10. Stability and reactivity

Stability:	Stable under normal conditions of temperature and pressure.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors. carbon monoxide Carbon dioxide. Oxides of sulfur. Oxides of nitrogen.
Hazardous polymerization:	None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.
Hazardous polymerization:	Will not occur.

Section 11. Toxicological information

Health Effects:

Ingestion: May cause gastrointestinal disturbances such as headache nausea, vomiting, abdominal pain, and diarrhea, with delayed effects of skin redness and peeling.

Skin: May cause an allergic skin reaction.
May cause mild skin irritation.

Eyes: Can cause moderate eye irritation.

Inhalation: May cause respiratory tract irritation.
Inhalation of product mist may cause mucous membrane irritation.

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, crystal-free 112945-52-5	LD50 LC50 LD50	> 5,000 mg/kg > 58.8 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
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 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
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, crystal-free 112945-52-5	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
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, crystal-free 112945-52-5	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation/ Corrosion)
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
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, crystal-free 112945-52-5	negative negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay in vitro mammalian chromosome aberration test	with and without with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 473 (In vitro Mammalian 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
Silica, amorphous, fumed, crystal-free 112945-52-5	NOAEL=< 0.046 mg/l	inhalation	14 days 6 hours/day, 5 days/week	rat	not specified
Silica, amorphous, fumed, crystal-free 112945-52-5	NOAEL=> 4,500 mg/kg	oral: feed	13 weeks daily, continuous	rat	
α , α -dimethylbenzyl hydroperoxide 80-15-9		inhalation: aerosol	6 h/d 5 d/w	rat	not specified
N-methyl-2-pyrrolidone 872-50-4	NOAEL=0.5 mg/l	inhalation	90 days 6 hrs/day, 5 days/wk	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

Section 12. Ecological information

General ecological information:

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, crystal-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)
Silica, amorphous, fumed, crystal-free 112945-52-5	EL50	> 1,000 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	NOELR	10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	EL50	> 10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	EC0	10,000 mg/l	Bacteria	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption 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)
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	EC50	> 500 mg/l	Algae	72 h	Scenedesmus subspicatus (new	DIN 38412-09

872-50-4					name: Desmodemus subspicatus
N,N-dimethyl-o-toluidine 609-72-3	LC 50	46 mg/l	Fish	96 h	Fathead minnow (Pimephales promelas)

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)
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)
Silica, amorphous, fumed, crystal-free 112945-52-5	0.53					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.

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:

The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel Australia Pty. Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel Australia Pty. Limited concerning the properties of the material.

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Safety Data Sheet

LOCTITE 438 BK INSTANT ADHESIVE known as Loctite 438
25ml AU

Page 1 of 8

SDS No. : 204085
V001.4
Date of issue: 14.04.2020

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

Product name: LOCTITE 438 BK INSTANT ADHESIVE known as Loctite 438 25ml AU

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:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Flammable liquids	Category 4	
Skin irritation	Category 2	
Serious eye irritation	Category 2A	
Target Organ Systemic Toxicant - Single exposure	Category 3	respiratory tract irritation

Hazard pictogram:



Signal word:

Warning

Hazard statement(s):	H227 Combustible liquid. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
Precautionary Statement(s):	
Prevention:	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/eye 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. P332+P313 If skin irritation occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P362 Take off contaminated clothing. P370+P378 In case of fire: Use water spray (fog), foam, dry chemical or carbon dioxide to extinguish.
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, and product characteristics at time of disposal.

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).

Signal word:

HAZARDOUS

Section 3. Composition / information on ingredients

General chemical description: Mixture
Type of preparation: Cyanoacrylate Adhesive

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Ethyl 2-cyanoacrylate	7085-85-0	60- <= 100 %
phthalic anhydride	85-44-9	< 1 %
Carbon black	1333-86-4	< 1 %
non hazardous ingredients~		< 10 %

Section 4. First aid measures

Ingestion:	Ensure that breathing passages are not obstructed. The product will polymerise immediately in the mouth making it almost impossible to swallow. Saliva will slowly separate the solidified product from the mouth (several hours).
Skin:	Do not pull bonded skin apart. It may be gently peeled apart using a blunt object such as a spoon, preferably after soaking in warm soapy water. Cyanoacrylates give off heat on solidification. In rare cases a large drop will generate enough heat to cause a burn. Burns should be treated normally after the adhesive has been removed from the skin. If lips are accidentally stuck together apply warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips apart with direct opposing action.
Eyes:	If the eye is bonded closed, release eyelashes with warm water by covering with wet pad. Cyanoacrylate will bond to eye protein and will cause periods of weeping which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Do not force eye open. Medical advice should be sought in case solid particles of cyanoacrylate trapped behind the eyelid cause any abrasive damage.
Inhalation:	Move to fresh air, consult doctor if complaint persists.
First Aid facilities:	Eye wash and safety shower Normal washroom facilities
Medical attention and special treatment:	Treat symptomatically and supportively. Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

Section 5. Fire fighting measures

Suitable extinguishing media:	Foam, extinguishing powder, carbon dioxide. Fine water spray
Improper extinguishing media:	High pressure waterjet.
Decomposition products in case of fire:	Oxides of carbon, oxides of nitrogen, irritating organic vapors. Cyanides.
Special protective equipment for fire-fighters:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Additional fire fighting advice:	In case of fire, keep containers cool with water spray. Do not store or use near heat, spark, open flame or other sources of ignition.

Section 6. Accidental release measures

Personal precautions:	Ensure adequate ventilation. Avoid skin and eye contact. Wear protective equipment.
Environmental precautions:	Do not let product enter drains.
Clean-up methods:	Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

Section 7. Handling and storage

Precautions for safe handling:	Ventilation (low level) is recommended when using large volumes Use of dispensing equipment is recommended to minimise the risk of skin or eye contact Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.
Conditions for safe storage:	For optimum shelf life store in original containers under refrigerated conditions at 2 - 8°C (35.6 - 46.4 °F)

Section 8. Exposure controls / personal protection

National exposure standards:

Engineering controls:	Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
Eye protection:	Wear protective glasses.
Skin protection:	Protective clothing that covers arms and legs. The use of chemical resistant gloves such as Nitrile is recommended. Polyethylene or polypropylene gloves are recommended when using large volumes. Do not use PVC, rubber or nylon gloves. 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:	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:	black Liquid
Odor:	irritating
Specific gravity:	1.1
Boiling point:	> 149 °C (> 300.2 °F)
Flash point: (Tagliabue closed cup)	80 - 93 °C (176 - 199.4 °F)
Vapor pressure:	< 0.3000000 mbar
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.

Incompatible materials:	Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
Hazardous decomposition products:	May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes. Cyanides.

Section 11. Toxicological information

Health Effects:	
Ingestion:	Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.
Skin:	Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.
Eyes:	Irritating to eyes. Causes excessive tearing. Eyelids may bond.
Inhalation:	Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest.
Chronic effects:	No chronic health effects are expected from the intended use of these products or from foreseeable handling of them in the workplace.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	LD50 LD50	> 5,000 mg/kg > 2,000 mg/kg	oral dermal		rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
phthalic anhydride 85-44-9	LD50 LC50 LD50	1,530 mg/kg > 2.14 mg/l > 10,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	not specified OECD Guideline 403 (Acute Inhalation Toxicity) not specified
Carbon black 1333-86-4	LD50	> 8,000 mg/kg	oral		rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	slightly irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Carbon black 1333-86-4	not irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	irritating	72 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
phthalic anhydride 85-44-9	highly irritating		rabbit	not specified
Carbon black 1333-86-4	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	not sensitising		guinea pig	not specified
phthalic anhydride 85-44-9	sensitising	in vivo	guinea pig	not specified
phthalic anhydride 85-44-9	sensitising	Mouse local lymphnode assay (LLNA)	mouse	Mouse local lymphnode assay (LLNA)
Carbon black 1333-86-4	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Carbon black 1333-86-4	not sensitising	Respirator y sensitisation	mouse	not specified

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study/ Route of administration	Metabolic activation/ Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	negative negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay in vitro mammalian chromosome aberration test	with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
phthalic anhydride 85-44-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
Carbon black 1333-86-4	negative negative negative	bacterial reverse mutation assay (e.g Ames test) sister chromatid exchange assay in mammalian cells mammalian cell gene mutation assay	with and without with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Carbon black 1333-86-4	negative	oral: feed		Drosophila melanogaster	OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time/ Frequency of treatment	Species	Method
Carbon black 1333-86-4	NOAEL=>= 52 mg/kg	oral: feed	2 ydaily	rat	not specified

Section 12. Ecological information

General ecological information: Biological and Chemical Oxygen Demands (BOD and COD) are insignificant., Do not empty into drains / surface water / ground water.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
phthalic anhydride 85-44-9	LC50	313 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
phthalic anhydride 85-44-9	EC50	68 mg/l	Algae	72 h	Selenastrum sp.	OECD Guideline 201 (Alga, Growth Inhibition Test)
phthalic anhydride 85-44-9	EC 50	> 1,000 mg/l	Bacteria	3 h		ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Ethyl 2-cyanoacrylate 7085-85-0	not readily biodegradable.	aerobic	57 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
phthalic anhydride 85-44-9		aerobic	90 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Ethyl 2-cyanoacrylate 7085-85-0	0.776				22 °C	EU Method A.8 (Partition Coefficient)
phthalic anhydride 85-44-9	1.6					not specified

Section 13. Disposal considerations

Waste disposal of product: Cured adhesive: Dispose of as water insoluble non-toxic solid chemical in authorised landfill or incinerate under controlled conditions.
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:

UN no.:	3334
Proper shipping name:	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
Class or division:	9
Packing group:	III
Packing instructions (passenger)	964
Packing instructions (cargo)	964
Additional Information IATA:	Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.

Section 15. Regulatory information**SUSMP Poisons Schedule**

None

AICS:

All components are listed or are exempt from listing on the Australian Inventory of Chemical Substances (AICS).

Section 16. Other information**Abbreviations/acronyms:**

GHS: Globally Harmonized System
CAS: Chemical Abstracts Service
ADGC - Australian Dangerous Goods Code
OECD: Organization for Economic Cooperation and Development
LD 50: Lethal Dose 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: 1,2,4,5,6,7,16

Date of previous issue:

10.04.2015

Disclaimer:

The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel Australia Pty. Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel Australia Pty. Limited concerning the properties of the material.

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Safety Data Sheet

LOCTITE 515 FLANGE SEALANT known as Loctite 515 Gsk
Eliminator 50ml

Page 1 of 10

SDS No. : 153466
V001.4

Date of issue: 25.08.2020

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

Product name: LOCTITE 515 FLANGE SEALANT known as Loctite 515 Gsk Eliminator 50ml

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:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Skin corrosion	Category 1B	
Serious eye damage/eye irritation	Category 1	
Target Organ Systemic Toxicant - Single exposure	Category 3	respiratory tract irritation
Acute hazards to the aquatic environment	Category 2	
Chronic hazards to the aquatic environment	Category 3	

Hazard pictogram:



Signal word: Danger

Hazard statement(s):	H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H401 Toxic to aquatic life. H412 Harmful 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. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. 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+P315 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate 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: Anaerobic Sealant

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Acrylic acid	79-10-7	3- < 5 %
α , α -dimethylbenzyl hydroperoxide	80-15-9	1- < 3 %
2-Hydroxyethyl methacrylate	868-77-9	< 1 %
Acetic acid, 2-phenylhydrazide	114-83-0	< 1 %
non hazardous ingredients~		80- < 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. Wash clothing before reuse.
Eyes:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate medical attention.
Inhalation:	Move to fresh air in case of accidental inhalation of vapours. Seek medical advice.
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:	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.
Special protective equipment for fire-fighters:	Wear full protective clothing. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).
Additional fire fighting advice:	In case of fire, keep containers cool with water spray. Collect contaminated fire fighting water separately. It must not enter drains.

Section 6. Accidental release measures

Personal precautions:	Avoid skin and eye contact. Wear protective equipment. Ensure adequate ventilation. Danger of slipping on spilled product. Keep unprotected persons away.
Environmental precautions:	Waste disposal with the approval of the responsible local authority. Do not discharge into surface water/ground water.
Clean-up methods:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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)
SILICA, AMORPHOUS: FUMED SILICA (RESPIRABLE DUST) 112945-52-5	Respirable dust.		2				
FUMED SILICA (RESPIRABLE DUST) 112945-52-5	Respirable dust.		2				
ACRYLIC ACID 79-10-7		2	5.9				

- Engineering controls:** Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
- Eye protection:** For eye protection, use tightly fitted safety goggles and a face-shield
- Skin protection:** Wear suitable protective clothing.
Recommended gloves include butyl rubber and neoprene.
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:** 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:** purple, opaque liquid
- Odor:** Sharp
- Specific gravity:** 1.1
- Boiling point:** 150 °C (302 °F)
- Flash point:** > 93.3 °C (> 199.94 °F)
- Vapor pressure:** < 10 mm hg
(; 27 °C (80.6 °F))
- Density:** 1.1 g/cm3
- Solubility in water:** Slightly soluble (20 °C)
- Viscosity (dynamic):** 150,000 - 300,000 mPa.s
(BROOKFIELD WITH HELIPATH; Method: ; LCT STM 10; Viscosity Brookfield)
- VOC content:** < 10 %

(2010/75/EC)

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. Acids and bases. Reducing agents.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors. carbon monoxide Carbon dioxide. Oxides of sulfur. 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:	Causes skin irritation. 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:	Causes respiratory tract irritation. Vapors 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
Acrylic acid 79-10-7	LD50 LC50 Acute toxicity estimate (ATE) Acute toxicity estimate (ATE)	1,500 mg/kg > 5.1 mg/l 11 mg/l 1,100 mg/kg	oral inhalation inhalation dermal	4 h	rat rat	BASF Test OECD Guideline 403 (Acute Inhalation Toxicity) Expert judgement Expert judgement
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
2-Hydroxyethyl methacrylate 868-77-9	LD50 LD50	> 5,000 mg/kg > 5,000 mg/kg	oral dermal		rat rabbit	not specified not specified
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	highly corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
α , α -dimethylbenzyl hydroperoxide 80-15-9	corrosive		rabbit	Draize Test

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	corrosive	21 d	rabbit	BASF Test
2-Hydroxyethyl methacrylate 868-77-9	irritating		rabbit	Draize Test

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Acrylic acid 79-10-7	not sensitising	Skin painting test	guinea pig	not specified

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Acrylic acid 79-10-7	negative negative	mammalian cell gene mutation assay DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro	with and without without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
Acrylic acid 79-10-7	negative	oral: gavage		rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration 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
2-Hydroxyethyl methacrylate 868-77-9	negative positive negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	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) OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
2-Hydroxyethyl methacrylate 868-77-9	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
α , α -dimethylbenzyl hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified
2-Hydroxyethyl methacrylate 868-77-9	NOAEL=100 mg/kg	oral: gavage	once daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

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
Acrylic acid 79-10-7	LC50	27 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Acrylic acid 79-10-7	EC50	95 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Acrylic acid 79-10-7	EC10	0.03 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC50	0.13 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC20	900 mg/l	Bacteria	30 min	activated sludge, domestic	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
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) not specified
α , α -dimethylbenzyl hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min		
2-Hydroxyethyl methacrylate 868-77-9	LC50	> 100 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	836 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	NOEC	400 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3,000 mg/l	Bacteria	16 h	Pseudomonas fluorescens	other guideline:

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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Acrylic acid 79-10-7	inherently biodegradable	aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Acrylic acid 79-10-7	readily biodegradable	aerobic	81 %	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)
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	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
Acrylic acid 79-10-7		3.16				QSAR (Quantitative Structure Activity Relationship)
Acrylic acid 79-10-7	0.46				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask 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
2-Hydroxyethyl methacrylate 868-77-9	0.42				25 °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: 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: 2,3,4,6,9,12,15,16

Date of previous issue: 21.09.2015

Disclaimer:

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Safety Data Sheet

LOCTITE 567

Page 1 of 9

SDS No. : 153487

V001.4

Date of issue: 08.05.2020

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

Product name: LOCTITE 567

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 sensitizer
Eye irritation
Acute hazards to the aquatic
environment

Hazard Category

Category 1
Category 2
Category 3

Hazard pictogram:



Signal word:

None

Hazard statement(s):	H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H402 Harmful to aquatic life.
Precautionary Statement(s):	
Prevention:	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P272 Contaminated work clothing should not be allowed out of the workplace. P264 Wash affected area thoroughly after handling. P280 Wear protective gloves, eye protection, and face protection. P273 Avoid release to the environment.
Response:	P302+P352 IF ON SKIN: Wash with plenty of soap and water. P363 Wash contaminated clothing before reuse. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.
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).

Signal word:

HAZARDOUS

Section 3. Composition / information on ingredients

General chemical description: Mixture
Type of preparation: Anaerobic Sealant

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Titanium dioxide	13463-67-7	< 10 %
Silica, amorphous, fumed, crystal-free	112945-52-5	< 10 %
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	< 1 %
non hazardous ingredients~		<= 70 %

Section 4. First aid measures

Ingestion:	Do not induce vomiting. Have victim rinse mouth thoroughly with water. Seek medical advice.
Skin:	Rinse with running water and soap. Remove contaminated clothing and footwear. 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 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.

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.
Wear appropriate personal protective equipment.

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.
Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.

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)
TITANIUM DIOXIDE 13463-67-7	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				

Engineering controls:	Ensure good ventilation/suction at the workplace.
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

Specific gravity:	1.14
Boiling point:	> 149 °C (> 300.2 °F)
Flash point:	> 93.3 °C (> 199.94 °F)
Vapor pressure:	< 27 mbar
	(; 27 °C (80.6 °F))
Density:	1.14 g/cm ³
VOC content:	0.13 % 1.38 g/l

Section 10. Stability and reactivity

Stability:	Stable under recommended storage conditions.
Conditions to avoid:	Excessive heat.
Incompatible materials:	Reacts with strong oxidants.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide. Carbon dioxide.

Section 11. Toxicological information

Health Effects:**Ingestion:**

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Skin:

May cause skin irritation.

Symptoms may include redness, edema, drying, defatting and cracking of the skin.

May cause skin sensitization.

Eyes:

May cause mild irritation

Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation:

Inhalation of mists/vapors of this product may cause dizziness, nausea, and respiratory tract congestion.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Titanium dioxide 13463-67-7	LD50 LC50 LD50	> 5,000 mg/kg > 6.82 mg/l >= 10,000 mg/kg	oral inhalation dermal	4 h	rat rat hamster	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure) not specified not specified
Silica, amorphous, fumed, crystal-free 112945-52-5	LD50 LC50 LD50	> 5,000 mg/kg > 58.8 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	LD50 LD50	> 2,000 mg/kg > 2,000 mg/kg	oral dermal		rat rat	OECD Guideline 420 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Titanium dioxide 13463-67-7	not irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Silica, amorphous, fumed, crystal-free 112945-52-5	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	moderately irritating	24 h	rabbit	Draize Test

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Titanium dioxide 13463-67-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Silica, amorphous, fumed, crystal-free 112945-52-5	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Titanium dioxide 13463-67-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	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
Titanium dioxide 13463-67-7	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)
Titanium dioxide 13463-67-7	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	negative negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay in vitro mammalian chromosome aberration test	with and without with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	negative	oral: gavage		mouse	not specified

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Titanium dioxide 13463-67-7	NOAEL=1,000 mg/kg	oral: gavage	90 ddaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Silica, amorphous, fumed, crystal-free 112945-52-5	NOAEL=< 0.046 mg/l	inhalation	14 days6 hours/day, 5 days/week	rat	not specified
Silica, amorphous, fumed, crystal-free 112945-52-5	NOAEL=> 4,500 mg/kg	oral: feed	13 weeksdaily, continuous	rat	
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	NOAEL=50 mg/kg	oral: gavage	14 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

General ecological information:

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

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Silica, amorphous, fumed, crystal-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)
Silica, amorphous, fumed, crystal-free 112945-52-5	EL50	> 1,000 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	NOELR	10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	EL50	> 10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	EC0	10,000 mg/l	Bacteria	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
reaction product: bisphenol-A-(epichlorhydrin) 25068-38-6	LC50	1.75 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
reaction product: bisphenol-A-(epichlorhydrin) 25068-38-6	EC50	1.7 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
reaction product: bisphenol-A-(epichlorhydrin) 25068-38-6	EC50	> 11 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
reaction product: bisphenol-A-(epichlorhydrin) 25068-38-6	NOEC	4.2 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
reaction product: bisphenol-A-(epichlorhydrin) 25068-38-6	IC50	> 100 mg/l	Bacteria	3 h	activated sludge, industrial	other guideline:

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
reaction product: bisphenol-A-(epichlorhydrin) 25068-38-6	not readily biodegradable.	aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Silica, amorphous, fumed, crystal-free 112945-52-5	0.53					QSAR (Quantitative Structure Activity Relationship)
reaction product: bisphenol-A-(epichlorhydrin) 25068-38-6	3.242				25 °C	EU Method A.8 (Partition Coefficient)

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: ADGC - Australian Dangerous Goods Code
GHS: Globally Harmonized System
CAS: Chemical Abstracts Service
TWA - Time weighted average
STEL - Short term exposure limit
LD 50: Lethal Dose 50%
OECD: Organization for Economic Cooperation and Development
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: 1,2,3,8,15,16

Date of previous issue: 11.05.2015

Disclaimer:

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Safety Data Sheet

LOCTITE 515 FLANGE SEALANT known as Loctite 515 Gsk
Eliminator 50ml

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SDS No. : 153466

V001.4

Date of issue: 25.08.2020

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

Product name: LOCTITE 515 FLANGE SEALANT known as Loctite 515 Gsk Eliminator 50ml

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:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Skin corrosion	Category 1B	
Serious eye damage/eye irritation	Category 1	
Target Organ Systemic Toxicant - Single exposure	Category 3	respiratory tract irritation
Acute hazards to the aquatic environment	Category 2	
Chronic hazards to the aquatic environment	Category 3	

Hazard pictogram:



Signal word: Danger

Hazard statement(s):	H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H401 Toxic to aquatic life. H412 Harmful 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. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. 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+P315 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate 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: Anaerobic Sealant

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Acrylic acid	79-10-7	3- < 5 %
α , α -dimethylbenzyl hydroperoxide	80-15-9	1- < 3 %
2-Hydroxyethyl methacrylate	868-77-9	< 1 %
Acetic acid, 2-phenylhydrazide	114-83-0	< 1 %
non hazardous ingredients~		80- < 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. Wash clothing before reuse.
Eyes:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate medical attention.
Inhalation:	Move to fresh air in case of accidental inhalation of vapours. Seek medical advice.
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:	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.
Special protective equipment for fire-fighters:	Wear full protective clothing. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).
Additional fire fighting advice:	In case of fire, keep containers cool with water spray. Collect contaminated fire fighting water separately. It must not enter drains.

Section 6. Accidental release measures

Personal precautions:	Avoid skin and eye contact. Wear protective equipment. Ensure adequate ventilation. Danger of slipping on spilled product. Keep unprotected persons away.
Environmental precautions:	Waste disposal with the approval of the responsible local authority. Do not discharge into surface water/ground water.
Clean-up methods:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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)
SILICA, AMORPHOUS: FUMED SILICA (RESPIRABLE DUST) 112945-52-5	Respirable dust.		2				
FUMED SILICA (RESPIRABLE DUST) 112945-52-5	Respirable dust.		2				
ACRYLIC ACID 79-10-7		2	5.9				

- Engineering controls:** Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
- Eye protection:** For eye protection, use tightly fitted safety goggles and a face-shield
- Skin protection:** Wear suitable protective clothing.
Recommended gloves include butyl rubber and neoprene.
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:** 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:** purple, opaque liquid
- Odor:** Sharp
- Specific gravity:** 1.1
- Boiling point:** 150 °C (302 °F)
- Flash point:** > 93.3 °C (> 199.94 °F)
- Vapor pressure:** < 10 mm hg
(; 27 °C (80.6 °F))
- Density:** 1.1 g/cm3
- Solubility in water:** Slightly soluble (20 °C)
- Viscosity (dynamic):** 150,000 - 300,000 mPa.s
(BROOKFIELD WITH HELIPATH; Method: ; LCT STM 10; Viscosity Brookfield)
- VOC content:** < 10 %

(2010/75/EC)

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. Acids and bases. Reducing agents.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors. carbon monoxide Carbon dioxide. Oxides of sulfur. 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:	Causes skin irritation. 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:	Causes respiratory tract irritation. Vapors 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
Acrylic acid 79-10-7	LD50 LC50 Acute toxicity estimate (ATE) Acute toxicity estimate (ATE)	1,500 mg/kg > 5.1 mg/l 11 mg/l 1,100 mg/kg	oral inhalation inhalation dermal	4 h	rat rat	BASF Test OECD Guideline 403 (Acute Inhalation Toxicity) Expert judgement Expert judgement
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
2-Hydroxyethyl methacrylate 868-77-9	LD50 LD50	> 5,000 mg/kg > 5,000 mg/kg	oral dermal		rat rabbit	not specified not specified
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	highly corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
α , α -dimethylbenzyl hydroperoxide 80-15-9	corrosive		rabbit	Draize Test

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	corrosive	21 d	rabbit	BASF Test
2-Hydroxyethyl methacrylate 868-77-9	irritating		rabbit	Draize Test

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Acrylic acid 79-10-7	not sensitising	Skin painting test	guinea pig	not specified

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Acrylic acid 79-10-7	negative negative	mammalian cell gene mutation assay DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro	with and without without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
Acrylic acid 79-10-7	negative	oral: gavage		rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration 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
2-Hydroxyethyl methacrylate 868-77-9	negative positive negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	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) OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
2-Hydroxyethyl methacrylate 868-77-9	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
α , α -dimethylbenzyl hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified
2-Hydroxyethyl methacrylate 868-77-9	NOAEL=100 mg/kg	oral: gavage	once daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

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
Acrylic acid 79-10-7	LC50	27 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Acrylic acid 79-10-7	EC50	95 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Acrylic acid 79-10-7	EC10	0.03 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC50	0.13 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC20	900 mg/l	Bacteria	30 min	activated sludge, domestic	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
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) not specified
α , α -dimethylbenzyl hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min		
2-Hydroxyethyl methacrylate 868-77-9	LC50	> 100 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	836 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	NOEC	400 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3,000 mg/l	Bacteria	16 h	Pseudomonas fluorescens	other guideline:

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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Acrylic acid 79-10-7	inherently biodegradable	aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Acrylic acid 79-10-7	readily biodegradable	aerobic	81 %	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)
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	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
Acrylic acid 79-10-7		3.16				QSAR (Quantitative Structure Activity Relationship)
Acrylic acid 79-10-7	0.46				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask 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
2-Hydroxyethyl methacrylate 868-77-9	0.42				25 °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: 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: 2,3,4,6,9,12,15,16

Date of previous issue: 21.09.2015

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Safety Data Sheet

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LOCTITE 609 RETAINER known as Loctite 609 Retaining - 50ml

SDS No. : 153471

V001.4

Date of issue: 27.04.2020

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

Product name: LOCTITE 609 RETAINER known as Loctite 609 Retaining - 50ml

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:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Skin irritation	Category 2	
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:

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. H412 Harmful 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. 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, clothing, eye 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 Take off contaminated clothing.
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, and product characteristics at time of disposal.

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).

Signal word:

HAZARDOUS

Section 3. Composition / information on ingredients

General chemical description: Mixture
Type of preparation: Anaerobic Sealant

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
2-Hydroxyethyl methacrylate	868-77-9	10- 30 %
α , α -dimethylbenzyl hydroperoxide	80-15-9	< 3 %
methacrylic acid	79-41-4	< 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.

Skin: Immediately flush skin with plenty of water (using soap, if available).
Seek medical advice.

Eyes:	Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.
Inhalation:	Move to fresh air. Keep warm and in a quiet place. 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
Decomposition products in case of fire:	Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide. Carbon dioxide. Oxides of nitrogen.
Special protective equipment for fire-fighters:	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA). 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:	Ensure adequate ventilation. Avoid skin and eye contact. Wear appropriate personal protective equipment.
Environmental precautions:	Do not empty into drains / surface water / ground 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 skin and eye contact. Wear suitable protective clothing, safety glasses and gloves. Prolonged or repeated skin contact should be avoided
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:

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. Avoid skin-contact. Recommended gloves include butyl rubber and neoprene. 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:	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

Specific gravity:	1.1
Boiling point:	> 150 °C (> 302 °F)
Flash point: (Tagliabue closed cup)	> 93.3 °C (> 199.94 °F)
Vapor pressure: (; 26 °C (78.8 °F))	< 6 mbar
Density:	1.1 g/cm ³
VOC content: (2010/75/EC)	< 3.00 %

Section 10. Stability and reactivity

Stability:	Stable under recommended storage conditions.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.
Incompatible materials:	Reacts with strong oxidants.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide. Carbon dioxide. Oxides of nitrogen.

Section 11. Toxicological information

Health Effects:**Ingestion:**

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Skin:

Causes skin irritation.

Symptoms may include redness, edema, drying, defatting and cracking of the skin.

May cause skin sensitization.

Eyes:

Causes serious eye irritation.

Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation:

This product is irritating to the respiratory system.

Vapors are irritating to the nose, throat and respiratory tract resulting in dryness of throat and tightness in chest. Other symptoms of overexposure include headache, nausea, narcosis, fatigue and loss of appetite.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 5,000 mg/kg	oral		rat	not specified
	LD50	> 5,000 mg/kg	dermal		rabbit	not specified
α , α -dimethylbenzyl hydroperoxide 80-15-9	LD50	382 mg/kg	oral		rat	other guideline:
	LD50	530 - 1,060 mg/kg	dermal		rat	other guideline:
	Acute toxicity estimate (ATE)	1,100 mg/kg	dermal			Expert judgement
methacrylic acid 79-41-4	LD50	1,320 mg/kg	oral	4 h	rat	OECD Guideline 401 (Acute Oral Toxicity)
	LC50	> 3.6 mg/l	inhalation		rat	
	LD50	500 - 1,000 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
α , α -dimethylbenzyl hydroperoxide 80-15-9	corrosive		rabbit	Draize Test
methacrylic acid 79-41-4	corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	irritating		rabbit	Draize Test
methacrylic acid 79-41-4	corrosive		rabbit	Draize Test

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
methacrylic acid 79-41-4	not sensitising	Buehler test	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
2-Hydroxyethyl methacrylate 868-77-9	negative positive negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	with and without 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) OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
2-Hydroxyethyl methacrylate 868-77-9	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus 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
methacrylic acid 79-41-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
methacrylic acid 79-41-4	negative	inhalation		mouse	OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time/ Frequency of treatment	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	NOAEL=100 mg/kg	oral: gavage	once 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

Section 12. Ecological information

General ecological information: Do not empty into drains / surface water / ground water.

Ecotoxicity: Harmful to aquatic life with long lasting effects.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LC50	> 100 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	836 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	NOEC	400 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3,000 mg/l	Bacteria	16 h	Pseudomonas fluorescens	other guideline:
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
methacrylic acid 79-41-4	LC50	85 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
methacrylic acid 79-41-4	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
methacrylic acid 79-41-4	NOEC	8.2 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
methacrylic acid 79-41-4	EC50	45 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
methacrylic acid 79-41-4	EC10	100 mg/l	Bacteria	17 h		not specified

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
α , α -dimethylbenzyl hydroperoxide 80-15-9		no data	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
methacrylic acid 79-41-4	inherently biodegradable	aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
methacrylic acid 79-41-4	readily biodegradable	aerobic	86 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
2-Hydroxyethyl methacrylate 868-77-9	0.42				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask 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
methacrylic acid 79-41-4	0.93				22 °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: ADGC - Australian Dangerous Goods Code
GHS: Globally Harmonized System
CAS: Chemical Abstracts Service
LD 50: Lethal Dose 50%
OECD: Organization for Economic Cooperation and Development
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: 1,2,6,15,16

Date of previous issue: 08.05.2015

Disclaimer:

The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel Australia Pty. Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel Australia Pty. Limited concerning the properties of the material.

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Safety Data Sheet

Page 1 of 12

LOCTITE 680 RC known as Loctite 680 RC 50ml AU

SDS No. : 450729

V001.2

Date of issue: 21.05.2020

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

Product name: LOCTITE 680 RC known as Loctite 680 RC 50ml AU

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>
Skin irritation	Category 2	
Serious eye damage/eye irritation	Category 1	
Skin sensitizer	Category 1	
Target Organ Systemic Toxicant - Single exposure	Category 3	respiratory tract irritation
Acute hazards to the aquatic environment	Category 2	
Chronic hazards to the aquatic environment	Category 3	

Hazard pictogram:



Signal word: Danger

- Hazard statement(s):** H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H401 Toxic to aquatic life.
H412 Harmful 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.
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+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+P315 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 Take off contaminated clothing.
- 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

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
3,3,5 Trimethylcyclohexyl methacrylate	7779-31-9	10- < 20 %
2-Hydroxyethyl methacrylate	868-77-9	10- < 30 %
Acrylic acid	79-10-7	3- < 5 %
Methacrylic acid, monoester with propane-1,2-diol	27813-02-1	1- < 10 %
2,2'-Ethylenedioxydiethyl dimethacrylate	109-16-0	< 1 %
Acetic acid, 2-phenylhydrazide	114-83-0	< 1 %
maleic acid	110-16-7	< 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.
Skin:	In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Seek medical advice.
Eyes:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical advice.
Inhalation:	Move to fresh air. Keep warm and in a quiet place. Seek medical advice.
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:	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.
Special protective equipment for fire-fighters:	Wear full protective clothing. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).
Additional fire fighting advice:	In case of fire, keep containers cool with water spray. Collect contaminated fire fighting water separately. It must not enter drains.

Section 6. Accidental release measures

Personal precautions:	Wear protective equipment. Ensure adequate ventilation. Avoid skin and eye contact.
Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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 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 a cool, well-ventilated place. Store protected from heat influence. cool and dry, in tightly closed containers

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)
ACRYLIC ACID 79-10-7		2	5.9				
ACRYLIC ACID 79-10-7		2	5.9				

- Engineering controls:** Ensure good ventilation/extraction.
- Eye protection:** Wear chemical goggles and face shield.
- Skin protection:** Protective clothing that covers arms and legs.
Recommended gloves include butyl rubber and neoprene.
- 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:** green
liquid
- Odor:** characteristic
- Specific gravity:** 1.1
- Flash point:** 93.3 °C (199.94 °F)
- Density:** 1.1 g/cm³

Section 10. Stability and reactivity

- Stability:** Stable under normal conditions of temperature and pressure.
- Conditions to avoid:** Elevated temperatures.
Heat, flames, sparks and other sources of ignition.
Store away from incompatible materials.
- Incompatible materials:** Reducing agents.
Strong acids and oxidizing agents.
Oxygen scavengers.
Strong alkalis.
- Hazardous decomposition products:** Thermal decomposition can lead to release of irritating gases and vapors.
Carbon monoxide.
Carbon dioxide.
Oxides of nitrogen.

Section 11. Toxicological information

Health Effects:**Ingestion:**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Skin:

Causes skin irritation.

Symptoms may include redness, edema, drying, defatting and cracking of the skin.

May cause skin sensitization.

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:

Causes respiratory tract irritation.

Inhalation of vapor or aerosol may cause severe irritation to nose, throat and lungs.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LD0	> 5,000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 402 (Acute Dermal Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
	LD50	> 5,000 mg/kg	oral		rat	
	LD0	> 2,000 mg/kg	dermal		rat	
	LD50	> 2,000 mg/kg	dermal		rat	
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 5,000 mg/kg	oral		rat	not specified not specified
	LD50	> 5,000 mg/kg	dermal		rabbit	
Acrylic acid 79-10-7	LD50	1,500 mg/kg	oral	4 h	rat	BASF Test OECD Guideline 403 (Acute Inhalation Toxicity) Expert judgement Expert judgement
	LC50	> 5.1 mg/l	inhalation		rat	
	Acute toxicity estimate (ATE)	11 mg/l	inhalation			
	Acute toxicity estimate (ATE)	1,100 mg/kg	dermal			
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	LD50	> 2,000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity) not specified
	LD50	> 5,000 mg/kg	dermal		rabbit	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LD50	10,837 mg/kg	oral		rat	not specified not specified
	LD50	> 2,000 mg/kg	dermal		mouse	
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified
maleic acid 110-16-7	LD50	708 mg/kg	oral		rat	not specified not specified
	LD50	1,560 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Acrylic acid 79-10-7	highly corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	not irritating	24 h	rabbit	Draize Test
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	not irritating	24 h	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-Hydroxyethyl methacrylate 868-77-9	irritating		rabbit	Draize Test
Acrylic acid 79-10-7	corrosive	21 d	rabbit	BASF Test
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	irritating		rabbit	Draize Test
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	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
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Acrylic acid 79-10-7	not sensitising	Skin painting test	guinea pig	not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	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
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-Hydroxyethyl methacrylate 868-77-9	negative positive negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test)	with and without 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) OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
2-Hydroxyethyl methacrylate 868-77-9	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Acrylic acid 79-10-7	negative negative	mammalian cell gene mutation assay DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro	with and without without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
Acrylic acid 79-10-7	negative	oral: gavage		rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay	with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2,2'-Ethyleneoxydiethyl 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)
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
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	NOAEL=1,000 mg/kg	oral: gavage	28 ddaily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test)
2-Hydroxyethyl methacrylate 868-77-9	NOAEL=100 mg/kg	oral: gavage	once daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test)
Methacrylic acid, monoester with propane- 1,2-diol 27813-02-1	NOAEL=300 mg/kg	oral: gavage		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test)
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=>= 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: Harmful to aquatic life with long lasting effects.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LC50	1.9 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	EC50	14.43 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	EC10	0.43 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	LC50	> 100 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	836 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	NOEC	400 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3,000 mg/l	Bacteria	16 h	Pseudomonas fluorescens	other guideline:
Acrylic acid 79-10-7	LC50	27 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Acrylic acid 79-10-7	EC50	95 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Acrylic acid 79-10-7	EC10	0.03 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC50	0.13 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Acrylic acid 79-10-7	EC20	900 mg/l	Bacteria	30 min	activated sludge, domestic	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge) DIN 38412-15
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	LC50	493 mg/l	Fish	48 h	Leuciscus idus melanotus	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	EC50	> 143 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	EC50	> 97.2 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	NOEC	> 97.2 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	EC10	1,140 mg/l	Bacteria	16 h		not specified
2,2'-Ethyleneoxydiethyl dimethacrylate	LC50	16.4 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute

109-16-0 2,2'-Ethylenedioxydiethyl dimethacrylate	EC50	> 100 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	Toxicity Test) OECD Guideline 201 (Alga. Growth Inhibition Test)
109-16-0 2,2'-Ethylenedioxydiethyl dimethacrylate	NOEC	18.6 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga. Growth Inhibition Test)
109-16-0 maleic acid	LC50	> 245 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
110-16-7 maleic acid	EC50	42.81 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
110-16-7 maleic acid	EC50	74.35 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga. Growth Inhibition Test)
110-16-7 maleic acid	EC10	11.8 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga. Growth Inhibition Test)
110-16-7 maleic acid	EC10	44.6 mg/l	Bacteria	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshe mm-T test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	not readily biodegradable.	aerobic	16.8 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Acrylic acid 79-10-7	inherently biodegradable	aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Acrylic acid 79-10-7	readily biodegradable	aerobic	81 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	readily biodegradable	aerobic	94.2 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	readily biodegradable	aerobic	85 %	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
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3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	5.25				20 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
2-Hydroxyethyl methacrylate 868-77-9	0.42				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acrylic acid 79-10-7		3.16				QSAR (Quantitative Structure Activity Relationship)
Acrylic acid 79-10-7	0.46				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	0.97				20 °C	not specified
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
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:	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: 1,2,3,7,15,16
Date of previous issue:	21.05.2015
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Safety Data Sheet

LOCTITE 569 HYDRAULIC SEALANT known as Loctite 569
50ML AU

Page 1 of 6

SDS No. : 150775
V001.4
Date of issue: 07.02.2020

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

Product name: LOCTITE 569 HYDRAULIC SEALANT known as Loctite 569 50ML AU

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	
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:

Warning

Hazard statement(s):	H319 Causes serious eye irritation. 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/vapours/spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear eye protection/face protection.
Response:	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. P337+P313 If eye irritation persists: Get medical advice/attention.
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).

Signal word:

HAZARDOUS

Section 3. Composition / information on ingredients

General chemical description: Mixture
Type of preparation: Anaerobic Sealant

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
<i>α</i> , <i>α</i> -dimethylbenzyl hydroperoxide	80-15-9	1- < 3 %

Section 4. First aid measures

Ingestion:	Rinse mouth, do not induce vomiting, consult a doctor.
Skin:	Rinse with running water and soap. Remove contaminated clothing and footwear. If skin irritation persists, call a physician.
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:** Carbon dioxide, foam, powder
- Decomposition products in case of fire:** Oxides of carbon.
Irritating fumes.
- Particular danger in case of fire:** See section 10.
- 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.
People who are not part of the emergency service should stay away.
- Environmental precautions:** Do not let product enter drains.
Follow all local, state, federal and provincial regulations for disposal.
- 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.
- 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/suction at the workplace.
- 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: brown
liquid
Odor: mild
Specific gravity: 1.049
Flash point: > 93.3 °C (> 199.94 °F)
(Tagliabue closed cup)
Solubility in water: < 1.00000 g/l

Section 10. Stability and reactivity

Conditions to avoid: Excessive heat.

Incompatible materials: Reacts with strong oxidants.

Hazardous decomposition products: Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

Section 11. Toxicological information

Health Effects:

Ingestion: Ingestion may cause stomach ache and vomiting.

Skin: May cause skin irritation.

Eyes: Contact with eyes will cause irritation.

Inhalation: This product is irritating to the respiratory system.

Aggravated med. condition: Eye, skin, and respiratory disorders.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
α, α-dimethylbenzyl hydroperoxide 80-15-9	LD50	382 mg/kg	oral		rat	other guideline: other guideline: Expert judgement
	LD50 Acute toxicity estimate (ATE)	530 - 1,060 mg/kg 1,100 mg/kg	dermal dermal		rat	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
α, α-dimethylbenzyl hydroperoxide 80-15-9	corrosive		rabbit	Draize Test

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study/ Route of administration	Metabolic activation/ Exposure time	Species	Method
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

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
α , α -dimethylbenzyl hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified

Section 12. Ecological information**General ecological information:**

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

Ecotoxicity:

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

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
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

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
α , α -dimethylbenzyl hydroperoxide 80-15-9		no data	0 %	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
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

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: IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
GHS: Globally Harmonized System
CAS: Chemical Abstracts Service
LD 50: Lethal Dose 50%
OECD: Organization for Economic Cooperation and Development
ADGC - Australian Dangerous Goods Code
IMDG: International Maritime Dangerous Goods code

Reason for issue: Reviewed MSDS. Reissued with new date. involved chapters: 1,2,3

Date of previous issue: 04.02.2015

Disclaimer:

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Safety Data Sheet

LOCTITE 263 BO50MLEN/CH/JP known as 263
THREADLOCKER 50 ML A/P

Page 1 of 10

SDS No. : 347828
V001.4
Date of issue: 22.01.2020

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

Product name: LOCTITE 263 BO50MLEN/CH/JP known as 263 THREADLOCKER 50 ML A/P

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:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Skin irritation	Category 2	
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 2	
Chronic hazards to the aquatic environment	Category 2	

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. 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. 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+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 Take off contaminated clothing. P391 Collect spillage.
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

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
3,3,5 Trimethylcyclohexyl methacrylate	7779-31-9	20- < 30 %
2,2'-Ethylenedioxydiethyl dimethacrylate	109-16-0	1- < 10 %
α , α -dimethylbenzyl hydroperoxide	80-15-9	1- < 3 %
maleic acid	110-16-7	< 1 %
Acetic acid, 2-phenylhydrazide	114-83-0	< 1 %

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

Section 5. Fire fighting measures

Suitable extinguishing media: Carbon dioxide, foam, powder

Combustion behaviour: Non flammable product (flash point is greater than 100°C (CC))

Decomposition products in case of fire: Oxides of carbon, oxides of nitrogen, irritating organic vapors.

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: Wear protective equipment.
Ensure adequate ventilation.
Avoid skin and eye contact.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Scrape up spilled material and place in a closed container for disposal.

Section 7. Handling and storage

Precautions for safe handling: See advice in section 8
Use only in well-ventilated areas.
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.
Avoid breathing vapors or mists of this product.

Conditions for safe storage: Store in a cool, well-ventilated place.
Store protected from heat influence.
cool and dry, in tightly closed containers

Section 8. Exposure controls / personal protection

National exposure standards:

None

Engineering controls: Ensure good ventilation/extraction.

Eye protection: Wear protective glasses.

Skin protection: Protective clothing that covers arms and legs.
Use of Butyl or Nitrile Rubber gloves is recommended.

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:	Red Liquid
Odor:	Characteristic
Flash point:	100 °C (212 °F) Estimated
Solubility in water:	< 1.00000 g/l

Section 10. Stability and reactivity

Stability:	Stable under normal conditions of temperature and pressure.
Conditions to avoid:	Excessive heat.
Incompatible materials:	Reducing agents. Strong acids and oxidizing agents. Oxygen scavengers. Strong alkalis.
Hazardous decomposition products:	Oxides of carbon. Irritating organic vapours.

Section 11. Toxicological information

Health Effects:	
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Skin:	Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals. Irritating to skin.
Eyes:	Contact with this product may cause severe eye irritation. Symptoms may include severe irritation, pain, tearing, blurred vision.
Inhalation:	Causes respiratory tract irritation.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LD0	> 5,000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
	LD50	> 5,000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
	LD0	> 2,000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
	LD50	> 2,000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
2,2'-Ethyleneoxydiethyl dimethacrylate 109-16-0	LD50	10,837 mg/kg	oral		rat	not specified
	LD50	> 2,000 mg/kg	dermal		mouse	not specified
α , α -dimethylbenzyl hydroperoxide 80-15-9	LD50	382 mg/kg	oral		rat	other guideline:
	LD50	530 - 1,060 mg/kg	dermal		rat	other guideline:
	Acute toxicity estimate (ATE)	1,100 mg/kg	dermal			Expert judgement
maleic acid 110-16-7	LD50	708 mg/kg	oral		rat	not specified
	LD50	1,560 mg/kg	dermal		rabbit	not specified
Acetic acid, 2-phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	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
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)
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
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	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)
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
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
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)
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
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	NOAEL=1,000 mg/kg	oral: gavage	28 ddaily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test)
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.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	LC50	1.9 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	EC50	14.43 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	EC10	0.43 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
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)
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 Zellvermehrungs- mm-Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	not readily biodegradable.	aerobic	16.8 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	readily biodegradable	aerobic	85 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution 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
3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9	5.25				20 °C	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)
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)
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: 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:

UN no.: 3082
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3,3,5-Trimethylcyclohexyl methacrylate)
 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. (3,3,5-Trimethylcyclohexyl methacrylate)
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

SUSMP Poisons Schedule None

AICS: All components are listed or are exempt from listing on the Australian Inventory of Chemical Substances (AICS).

Section 16. Other information

Abbreviations/acronyms: ADGC - Australian Dangerous Goods Code
GHS: Globally Harmonized System
IMDG: International Maritime Dangerous Goods code
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations

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