

Safety Data Sheet

LOCTITE PC 9593 A RESIN

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SDS No. : 673265 V001.3 Date of issue: 23.08.2024

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

Product name:	LOCTITE PC 9593 A RESIN
Intended use:	2-Component epoxy adhesive
Supplier: Henkel Australia Pty Ltd 135-141 Canterbury Road Kilsyth, Victoria, 3137 Australia Phone: +61 (3) 9724 644	14
E-mail address of person responsible for Safety Data Sheet:	SDSinfo.Adhesive@henkel.com
Emergency Telephone for Chemical Accidents:	24 HOUR EMERGENCY CONTACT NUMBER: 1800 032 379

Section 2. Hazards identification

Classification of the substance or mixture Hazardous according to the criteria of Safe Work Australia.

GHS Classification:

Hazard Class	Hazard Category
Skin irritation	Category 2
Serious eye irritation	Category 2A
Skin sensitizer	Category 1
Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 3
Hazard pictogram:	

Warning

Signal word:

Hazard statement(s):	H315 Causes skin irritation.
	H317 May cause an allergic skin reaction.
	H319 Causes serious eye irritation.
	H401 Toxic to aquatic life.
	H412 Harmful to aquatic life with long lasting effects.
Precautionary Statement(s):	
Prevention:	P261 Avoid breathing mist/vapours.
	P264 Wash hands thoroughly after handling.
	P272 Contaminated work clothing should not be allowed out of the workplace.
	P273 Avoid release to the environment.
	P280 Wear protective gloves, eye protection, and face protection.
Response:	P302+P352 IF ON SKIN: Wash with plenty of water.
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove
	contact lenses, if present and easy to do. Continue rinsing.
	P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
	P337+P313 If eve irritation persists: Get medical advice/attention.
	P362+P364 Take off contaminated clothing and wash it before reuse.
Disposal	P501 Dispose of contents/container to an annropriate treatment and disposal facility in
Disposai.	accordance with annlicable laws and regulations
	accordance with appreadic 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 Epoxy resin

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Aluminium oxide - non fibrous form	1344-28-1	30- < 60 %
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	9003-36-5	10- < 30 %
Silicon carbide	409-21-2	< 10 %
2,2'-[(1-Methylethylidene)bis(4,1- phenyleneoxymethylene)]bisoxirane	1675-54-3	5- < 10 %
Talc	14807-96-6	< 10 %
Silicon dioxide, crystalline	7631-86-9	< 10 %
Magnesium oxide	1309-48-4	< 10 %
Calcium oxide	1305-78-8	1-< 3 %

Section 4. First aid measures		
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.	
Skin:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing before reuse.	
Eyes:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.	

Inhalation:	Move to fresh air. Keep affected person warm and at rest. If not breathing, give artificial respiration. Get medical attention.
First Aid facilities:	Eye wash and safety shower Normal washroom facilities
	Section 5. Fire fighting measures
Suitable extinguishing media:	Dry chemical, carbon dioxide (CO2) foam or water spray.
Decomposition products in case of fire:	Irritating and toxic gases or fumes may be released during a fire. Oxides of carbon. Irritating organic fragments. aldehydes
Particular danger in case of fire:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. In case of fire, keep containers cool with water spray.
Special protective equipment for fire-fighters:	Wear protective equipment. 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	
Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Clean residue with soap and water. Store in a closed container until ready for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

Section 7. Handling and storage	
Precautions for safe handling:	Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed. Refer to Section 8.
Conditions for safe storage:	Store in original container until ready to use. Store in a cool, dry, well ventilated area. Keep container tightly sealed.

Section 8. Exposure controls / personal protection

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Peak Limit. (ppm)	Peak Limit. (mg/m3)	STEL (ppm)	STEL (mg/m3)
alpha-Alumina (Al2O3); Aluminium oxide 1344-28-1	Inhalable dust.		10				
SILICON CARBIDE 409-21-2	Inhalable dust.		10				
TALC, (CONTAINING NO ASBESTOS FIBRES) 14807-96-6			2.5				
SILICA, AMORPHOUS: FUMED SILICA (RESPIRABLE DUST) 7631-86-9	Respirable dust.		2				
MAGNESIUM OXIDE (FUME) 1309-48-4	Fume.		10				
CALCIUM OXIDE 1305-78-8			2				

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Engineering controls:	Use local exhaust ventilation if the potential for airborne exposure exists.
Eye protection:	Wear protective glasses with side-pieces.
Skin protection:	Use of protective coveralls and long sleeves is recommended. Suitable protective gloves. The use of polyvinyl alcohol (PVA) gloves is recommended.
Respiratory protection:	If inhalation risk exists, wear a respirator or air supplied mask complying with the requirements of AS/NZS 1715 and AS/NZS 1716.

Section 9. Physical and chemical properties

Appearance:	Blue
	Paste
Odor:	Odorless
pH: (Concentration: 100 %)	7
Flash point:	> 93.33 °C (> 199.99 °F)

Section 10. Stability and reactivity

Conditions to avoid:

Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight.

Incompatible materials:	Oxidizing agents. Acids. Bases. Amines.
Hazardous decomposition products:	Oxides of carbon.
-	Phenolics.
	Toxic fumes.
	Irritating vanors

Section 11. Toxicological information

Health Effects:	
Ingestion:	Not expected under normal conditions of use.
	May cause gastrointestinal tract irritation if swallowed.
Skin:	Causes skin irritation.
	May cause allergic skin reaction.
Eyes:	Causes serious eye irritation.
	This product may cause irritation with stinging, tearing, and redness.
Inhalation:	Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust. Inhalation of vapors or mists of the product may be irritating to the respiratory system.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	LD50	> 10,000 mg/kg	oral		rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 9003-36-5	LD50 LD50	> 5,000 mg/kg > 2,000 mg/kg	oral dermal		rat rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Silicon carbide 409-21-2	LD50 LD50	> 2,000 mg/kg > 2,000 mg/kg	oral dermal		rat rat	OECD Guideline 423 (Acute Oral toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	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)
Talc 14807-96-6	LD50 LC50 LD50	> 5,000 mg/kg > 2.1 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rat	OECD Guideline 423 (Acute Oral toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
Silicon dioxide, crystalline 7631-86-9	LD50 LC50 LD50	> 5,000 mg/kg > 5.01 mg/l > 5,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method) not specified
Magnesium oxide 1309-48-4	LD50 LD50	> 5,000 mg/kg > 2,000 mg/kg	oral dermal		rat rabbit	not specified not specified
Calcium oxide 1305-78-8	LD50 LC50 LD50	> 2,000 mg/kg > 6.04 mg/l > 2,500 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure) OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method) OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components	Result	Exposure	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	not irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Silicon carbide 409-21-2	not irritating	24 h	rat	other guideline:
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	moderately irritating	24 h	rabbit	Draize Test
Talc 14807-96-6	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Silicon dioxide, crystalline 7631-86-9	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Calcium oxide 1305-78-8	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Talc 14807-96-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Silicon dioxide, crystalline 7631-86-9	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Calcium oxide 1305-78-8	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components	Result	Test type	Species	Method
CAS-No.				
Aluminium oxide - non	not sensitising	Draize	guinea pig	Landsteiner & Jacobs Method
fibrous form	-	Test		
1344-28-1				
Reaction product:	Sub-Category 1A (sensitising)	Mouse	mouse	OECD Guideline 429 (Skin
bisphenol-F-		local		Sensitisation: Local Lymph
(epichlorhydrin); epoxy		lymphnod		Node Assay)
resin (number average		e assay		
molecular weight \leq 700)		(LLNA)		
9003-36-5				
2,2'-[(1-	sensitising	Mouse	mouse	OECD Guideline 429 (Skin
Methylethylidene)bis(4,1-		local		Sensitisation: Local Lymph
phenyleneoxymethylene)]		lymphnod		Node Assay)
bisoxirane		e assay		
1675-54-3		(LLNA)		
Talc	not sensitising	Guinea pig	guinea pig	OECD Guideline 406 (Skin
14807-96-6		maximisat		Sensitisation)
		ion test		
Calcium oxide	not sensitising	Mouse	mouse	OECD Guideline 429 (Skin
1305-78-8	-	local		Sensitisation: Local Lymph
		lymphnod		Node Assay)
		e assay		
		(LLNA)		

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of	Metabolic activation /	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	negative negative positive without metabolic activation positive without metabolic activation	mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test in vitro mammalian cell micronucleus test	with and without with and without with and without with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) equivalent or similar to OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Aluminium oxide - non fibrous form 1344-28-1	negative negative	oral: gavage oral: gavage		rat rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	negative negative	oral: gavage oral: gavage		mouse rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
Silicon carbide 409-21-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	negative	oral: gavage		mouse	not specified
Talc 14807-96-6	negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian cell transformation assay	with and without without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Talc 14807-96-6	negative	oral: gavage		rat	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
Silicon dioxide, crystalline 7631-86-9	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)
Silicon dioxide, crystalline	negative	inhalation		rat	not specified

7631-86-9				
Calcium oxide 1305-78-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without	OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	NOAEL=>= 0.075 mg/l	inhalation: dust	6 months6 h/d, 5 d/week	rat	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
Aluminium oxide - non fibrous form 1344-28-1	NOAEL=113.36 mg/kg	oral: drinking water	364 dAd libitum (daily)	rat	OECD Guideline 452 (Chronic Toxicity Studies)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	NOAEL=250 mg/kg	oral: gavage	13 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	NOAEL=50 mg/kg	oral: gavage	14 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Talc 14807-96-6	NOAEL=100 mg/kg	oral: feed	101 d7 d/w	rat	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
Silicon dioxide, crystalline 7631-86-9	NOAEL=> 4,000 - 4,500 mg/kg	oral: feed	13 weeksdaily	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Silicon dioxide, crystalline 7631-86-9	NOAEL=1.3 mg/m3	inhalation	13 w6 h/d, 5 d/w	rat	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Calcium oxide 1305-78-8	NOAEL=1,000 mg/kg	oral: gavage	up to 48 consecutive daysdaily	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:

H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.

Toxicity:

Hazardous components	Value	Value	Acute	Exposure	Species	Method
CAS-No.	type		Toxicity Study	time		
Aluminium oxide - non fibrous form 1344-28-1	LC50	Toxicity > Water solubility	Fish	96 h	Salmo trutta	OECD Guideline 203 (Fish, Acute Toxicity Test)
Aluminium oxide - non fibrous form 1344-28-1	EC50	Toxicity > Water solubility	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Aluminium oxide - non fibrous form 1344-28-1	NOEC	Toxicity > Water solubility	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcanitata)	Test) OECD Guideline 201 (Alga, Growth Inhibition Test)
Aluminium oxide - non fibrous form 1344-28-1	EC50	Toxicity > Water solubility	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Aluminium oxide - non fibrous form 1344-28-1	EC0	Toxicity > Water solubility	Bacteria		not specified	not specified
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 9003-36-5	LC50	5.7 mg/l	Fish	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 9003-36-5	EC50	2.55 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 0003-36-5	EC50	1.8 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 0003 36 5	IC50	> 100 mg/l	Bacteria	3 h	activated sludge, industrial	other guideline:
Silicon carbide 409-21-2	EC50	Toxicity > Water solubility	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Silicon carbide 409-21-2	EC50	Toxicity > Water solubility	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane	LC50	1.2 mg/l	Fish	96 h	Oncorhynchus mykiss	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates
1675-54-3 2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane	EC50	2.7 mg/l	Daphnia	48 h	Daphnia magna	and Amphibians) other guideline:
1675-54-3 2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso	EC50	> 11 mg/l	Algae	72 h	Scenedesmus capricornutum	other guideline:
1675-54-3 2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso	NOEC	4.2 mg/l	Algae	72 h	Scenedesmus capricornutum	other guideline:
1675-54-3						

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2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane	IC50	> 100 mg/l	Bacteria	3 h	activated sludge, industrial	other guideline:
1675-54-3 Talc 14807-96-6	LC50	Toxicity > Water solubility	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute
Silicon dioxide, crystalline 7631-86-9	LC50	> 10,000 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute
Silicon dioxide, crystalline 7631-86-9	EL50	> 1,000 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Silicon dioxide, crystalline 7631-86-9	NOELR	10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silicon dioxide, crystalline 7631-86-9	EL50	> 10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silicon dioxide, crystalline 7631-86-9	EC0	10,000 mg/l	Bacteria	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
Magnesium oxide 1309-48-4	EC50	> 10,000 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Calcium oxide 1305-78-8	LC50	50.6 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Calcium oxide 1305-78-8	EC50	49.1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Calcium oxide 1305-78-8	EC50	184.57 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium oxide 1305-78-8	NOEC	48 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium oxide 1305-78-8	EC20	229.2 mg/l	Bacteria	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

Persistence and degradability:

Hazardous components	Result	Route of	Degradability	Method
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	not readily biodegradable.	aerobic	0 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane 1675-54-3	not readily biodegradable.	aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components	LogPow	Bioconcentration	Exposure	Species	Temperature	Method
CAS-No.		factor (BCF)	time			

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Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	2.7 - 3.6			OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane 1675-54-3	> 2.64 - 3.78		25 °C	OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
Talc 14807-96-6	-9.4		25 °C	QSAR (Quantitative Structure Activity Relationship)
Silicon dioxide, crystalline 7631-86-9	0.53			QSAR (Quantitative Structure Activity Relationship)

	Section 13. Disposal considerations
Waste disposal of product:	Dispose of in accordance with local and national regulations. Do not empty into drains / surface water / ground water.
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	5

AIIC:

All components are listed or are exempt from listing on the Australian Inventory of Industrial Chemicals or Introduced under AICIS.

Section 16. Other information		
Abbreviations/acronyms:	GHS: Globally Harmonized System CAS: Chemical Abstracts Service LD 50: Lethal Dose 50% LC 50: Lethal Concentration 50% NOAEL: No Observed Adverse Effect Level 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:	10.05.2022	
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. The information contained in the Safety Data Sheet is offered in good faith and has been developed from what is believed to be accurate and reliable sources. The information is offered without warranty, representation, inducement or licence and Henkel Australia Pty. Limited assumes no legal responsibility for reliance upon same. Henkel Australia Pty. Limited disclaims any liability for loss, injury or damage incurred in connection with the use of the material or its associated Safety Data Sheet. This information is not to be construed as a representation that the material is suitable for any particular purpose or use except those conditions and warranties implied by either Commonwealth or State statutes. Customers are encouraged to make their own enquiries as to the material's characteristics and, where appropriate, to conduct their own tests in the specific context of the material's intended use. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.	



Safety Data Sheet

LOCTITE PC 9593 A RESIN

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SDS No. : 673265 V001.3 Date of issue: 23.08.2024

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

Product name:	LOCTITE PC 9593 A RESIN
Intended use:	2-Component epoxy adhesive
Supplier: Henkel Australia Pty Ltd 135-141 Canterbury Road Kilsyth, Victoria, 3137 Australia Phone: +61 (3) 9724 644	14
E-mail address of person responsible for Safety Data Sheet:	SDSinfo.Adhesive@henkel.com
Emergency Telephone for Chemical Accidents:	24 HOUR EMERGENCY CONTACT NUMBER: 1800 032 379

Section 2. Hazards identification

Classification of the substance or mixture Hazardous according to the criteria of Safe Work Australia.

GHS Classification:

Hazard Class	Hazard Category
Skin irritation	Category 2
Serious eye irritation	Category 2A
Skin sensitizer	Category 1
Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 3
Hazard pictogram:	(!)

Warning

Signal word:

Hazard statement(s):	H315 Causes skin irritation.
	H317 May cause an allergic skin reaction.
	H319 Causes serious eye irritation.
	H401 Toxic to aquatic life.
	H412 Harmful to aquatic life with long lasting effects.
Precautionary Statement(s):	
Prevention:	P261 Avoid breathing mist/vapours.
	P264 Wash hands thoroughly after handling.
	P272 Contaminated work clothing should not be allowed out of the workplace.
	P273 Avoid release to the environment.
	P280 Wear protective gloves, eye protection, and face protection.
Response:	P302+P352 IF ON SKIN: Wash with plenty of water.
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove
	contact lenses, if present and easy to do. Continue rinsing.
	P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
	P337+P313 If eve irritation persists: Get medical advice/attention.
	P362+P364 Take off contaminated clothing and wash it before reuse.
Disposal	P501 Dispose of contents/container to an annropriate treatment and disposal facility in
Disposai.	accordance with annlicable laws and regulations
	accordance with appreadic 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 Epoxy resin

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Aluminium oxide - non fibrous form	1344-28-1	30- < 60 %
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	9003-36-5	10- < 30 %
Silicon carbide	409-21-2	< 10 %
2,2'-[(1-Methylethylidene)bis(4,1- phenyleneoxymethylene)]bisoxirane	1675-54-3	5- < 10 %
Talc	14807-96-6	< 10 %
Silicon dioxide, crystalline	7631-86-9	< 10 %
Magnesium oxide	1309-48-4	< 10 %
Calcium oxide	1305-78-8	1-< 3 %

	Section 4. First aid measures
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Skin:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing before reuse.
Eyes:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Inhalation:	Move to fresh air. Keep affected person warm and at rest. If not breathing, give artificial respiration. Get medical attention.
First Aid facilities:	Eye wash and safety shower Normal washroom facilities
	Section 5. Fire fighting measures
Suitable extinguishing media:	Dry chemical, carbon dioxide (CO2) foam or water spray.
Decomposition products in case of fire:	Irritating and toxic gases or fumes may be released during a fire. Oxides of carbon. Irritating organic fragments. aldehydes
Particular danger in case of fire:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. In case of fire, keep containers cool with water spray.
Special protective equipment for fire-fighters:	Wear protective equipment. 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		
Environmental precautions:	Do not allow product to enter sewer or waterways.	
Clean-up methods:	Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Clean residue with soap and water. Store in a closed container until ready for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.	

Section 7. Handling and storage		
Precautions for safe handling:	Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed. Refer to Section 8.	
Conditions for safe storage:	Store in original container until ready to use. Store in a cool, dry, well ventilated area. Keep container tightly sealed.	

Section 8. Exposure controls / personal protection

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Peak Limit. (ppm)	Peak Limit. (mg/m3)	STEL (ppm)	STEL (mg/m3)
alpha-Alumina (Al2O3); Aluminium oxide 1344-28-1	Inhalable dust.		10				
SILICON CARBIDE 409-21-2	Inhalable dust.		10				
TALC, (CONTAINING NO ASBESTOS FIBRES) 14807-96-6			2.5				
SILICA, AMORPHOUS: FUMED SILICA (RESPIRABLE DUST) 7631-86-9	Respirable dust.		2				
MAGNESIUM OXIDE (FUME) 1309-48-4	Fume.		10				
CALCIUM OXIDE 1305-78-8			2				

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Engineering controls:	Use local exhaust ventilation if the potential for airborne exposure exists.
Eye protection:	Wear protective glasses with side-pieces.
Skin protection:	Use of protective coveralls and long sleeves is recommended. Suitable protective gloves. The use of polyvinyl alcohol (PVA) gloves is recommended.
Respiratory protection:	If inhalation risk exists, wear a respirator or air supplied mask complying with the requirements of AS/NZS 1715 and AS/NZS 1716.

Section 9. Physical and chemical properties

Appearance:	Blue
	Paste
Odor:	Odorless
pH: (Concentration: 100 %)	7
Flash point:	> 93.33 °C (> 199.99 °F)

Section 10. Stability and reactivity

Conditions to avoid:

Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight.

Incompatible materials:	Oxidizing agents. Acids. Bases. Amines.
Hazardous decomposition products:	Oxides of carbon.
-	Phenolics.
	Toxic fumes.
	Irritating vanors

Section 11. Toxicological information

Health Effects:	
Ingestion:	Not expected under normal conditions of use.
	May cause gastrointestinal tract irritation if swallowed.
Skin:	Causes skin irritation.
	May cause allergic skin reaction.
Eyes:	Causes serious eye irritation.
	This product may cause irritation with stinging, tearing, and redness.
Inhalation:	Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust. Inhalation of vapors or mists of the product may be irritating to the respiratory system.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	LD50	> 10,000 mg/kg	oral		rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 9003-36-5	LD50 LD50	> 5,000 mg/kg > 2,000 mg/kg	oral dermal		rat rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Silicon carbide 409-21-2	LD50 LD50	> 2,000 mg/kg > 2,000 mg/kg	oral dermal		rat rat	OECD Guideline 423 (Acute Oral toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	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)
Talc 14807-96-6	LD50 LC50 LD50	> 5,000 mg/kg > 2.1 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rat	OECD Guideline 423 (Acute Oral toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
Silicon dioxide, crystalline 7631-86-9	LD50 LC50 LD50	> 5,000 mg/kg > 5.01 mg/l > 5,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method) not specified
Magnesium oxide 1309-48-4	LD50 LD50	> 5,000 mg/kg > 2,000 mg/kg	oral dermal		rat rabbit	not specified not specified
Calcium oxide 1305-78-8	LD50 LC50 LD50	> 2,000 mg/kg > 6.04 mg/l > 2,500 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure) OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method) OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components	Result	Exposure	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	not irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Silicon carbide 409-21-2	not irritating	24 h	rat	other guideline:
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	moderately irritating	24 h	rabbit	Draize Test
Talc 14807-96-6	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Silicon dioxide, crystalline 7631-86-9	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Calcium oxide 1305-78-8	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Talc 14807-96-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Silicon dioxide, crystalline 7631-86-9	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Calcium oxide 1305-78-8	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components	Result	Test type	Species	Method
CAS-No.				
Aluminium oxide - non	not sensitising	Draize	guinea pig	Landsteiner & Jacobs Method
fibrous form	-	Test		
1344-28-1				
Reaction product:	Sub-Category 1A (sensitising)	Mouse	mouse	OECD Guideline 429 (Skin
bisphenol-F-		local		Sensitisation: Local Lymph
(epichlorhydrin); epoxy		lymphnod		Node Assay)
resin (number average		e assay		
molecular weight \leq 700)		(LLNA)		
9003-36-5				
2,2'-[(1-	sensitising	Mouse	mouse	OECD Guideline 429 (Skin
Methylethylidene)bis(4,1-		local		Sensitisation: Local Lymph
phenyleneoxymethylene)]		lymphnod		Node Assay)
bisoxirane		e assay		
1675-54-3		(LLNA)		
Talc	not sensitising	Guinea pig	guinea pig	OECD Guideline 406 (Skin
14807-96-6		maximisat		Sensitisation)
		ion test		
Calcium oxide	not sensitising	Mouse	mouse	OECD Guideline 429 (Skin
1305-78-8	-	local		Sensitisation: Local Lymph
		lymphnod		Node Assay)
		e assay		
1		(LLNA)		

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of	Metabolic activation /	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	negative negative positive without metabolic activation positive without metabolic activation	mammalian cell gene mutation assay bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test in vitro mammalian cell micronucleus test	with and without with and without with and without with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) equivalent or similar to OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Aluminium oxide - non fibrous form 1344-28-1	negative negative	oral: gavage oral: gavage		rat rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	negative negative	oral: gavage oral: gavage		mouse rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
Silicon carbide 409-21-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	negative	oral: gavage		mouse	not specified
Talc 14807-96-6	negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian cell transformation assay	with and without without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Talc 14807-96-6	negative	oral: gavage		rat	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
Silicon dioxide, crystalline 7631-86-9	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)
Silicon dioxide, crystalline	negative	inhalation		rat	not specified

7631-86-9				
Calcium oxide 1305-78-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without	OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Aluminium oxide - non fibrous form 1344-28-1	NOAEL=>= 0.075 mg/l	inhalation: dust	6 months6 h/d, 5 d/week	rat	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
Aluminium oxide - non fibrous form 1344-28-1	NOAEL=113.36 mg/kg	oral: drinking water	364 dAd libitum (daily)	rat	OECD Guideline 452 (Chronic Toxicity Studies)
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	NOAEL=250 mg/kg	oral: gavage	13 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	NOAEL=50 mg/kg	oral: gavage	14 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Talc 14807-96-6	NOAEL=100 mg/kg	oral: feed	101 d7 d/w	rat	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
Silicon dioxide, crystalline 7631-86-9	NOAEL=> 4,000 - 4,500 mg/kg	oral: feed	13 weeksdaily	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Silicon dioxide, crystalline 7631-86-9	NOAEL=1.3 mg/m3	inhalation	13 w6 h/d, 5 d/w	rat	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Calcium oxide 1305-78-8	NOAEL=1,000 mg/kg	oral: gavage	up to 48 consecutive daysdaily	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:

H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.

Toxicity:

Hazardous components	Value	Value	Acute	Exposure	Species	Method
CAS-No.	type		Toxicity Study	time		
Aluminium oxide - non fibrous form 1344-28-1	LC50	Toxicity > Water solubility	Fish	96 h	Salmo trutta	OECD Guideline 203 (Fish, Acute Toxicity Test)
Aluminium oxide - non fibrous form 1344-28-1	EC50	Toxicity > Water solubility	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute
Aluminium oxide - non fibrous form	NOEC	Toxicity > Water solubility	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella	Test) OECD Guideline 201 (Alga, Growth
1344-28-1 Aluminium oxide - non fibrous form 1344-28-1	EC50	Toxicity > Water solubility	Algae	72 h	subcapitata) Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	Inhibition Test) OECD Guideline 201 (Alga, Growth Inhibition Test)
Aluminium oxide - non fibrous form	EC0	Toxicity > Water solubility	Bacteria		not specified	not specified
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700)	LC50	5.7 mg/l	Fish	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700)	EC50	2.55 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700)	EC50	1.8 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	IC50	> 100 mg/l	Bacteria	3 h	activated sludge, industrial	other guideline:
Silicon carbide 409-21-2	EC50	Toxicity > Water solubility	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Silicon carbide 409-21-2	EC50	Toxicity > Water solubility	Algae	72 h	Desmodesmus subspicatus	Test) OECD Guideline 201 (Alga, Growth
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane	LC50	1.2 mg/l	Fish	96 h	Oncorhynchus mykiss	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates
1675-54-3 2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane	EC50	2.7 mg/l	Daphnia	48 h	Daphnia magna	and Amphibians) other guideline:
1675-54-3 2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso	EC50	> 11 mg/l	Algae	72 h	Scenedesmus capricornutum	other guideline:
xırane 1675-54-3 2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso	NOEC	4.2 mg/l	Algae	72 h	Scenedesmus capricornutum	other guideline:
1675-54-3						

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2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane	IC50	> 100 mg/l	Bacteria	3 h	activated sludge, industrial	other guideline:
1675-54-3 Talc 14807-96-6	LC50	Toxicity > Water solubility	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute
Silicon dioxide, crystalline 7631-86-9	LC50	> 10,000 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute
Silicon dioxide, crystalline 7631-86-9	EL50	> 1,000 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Silicon dioxide, crystalline 7631-86-9	NOELR	10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silicon dioxide, crystalline 7631-86-9	EL50	> 10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silicon dioxide, crystalline 7631-86-9	EC0	10,000 mg/l	Bacteria	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
Magnesium oxide 1309-48-4	EC50	> 10,000 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Calcium oxide 1305-78-8	LC50	50.6 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Calcium oxide 1305-78-8	EC50	49.1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Calcium oxide 1305-78-8	EC50	184.57 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium oxide 1305-78-8	NOEC	48 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium oxide 1305-78-8	EC20	229.2 mg/l	Bacteria	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

Persistence and degradability:

Hazardous components	Result	Route of	Degradability	Method
Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 9003-36-5	not readily biodegradable.	aerobic	0 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane 1675-54-3	not readily biodegradable.	aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components	LogPow	Bioconcentration	Exposure	Species	Temperature	Method
CAS-No.		factor (BCF)	time			

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Reaction product: bisphenol- F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) 9003-36-5	2.7 - 3.6			OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
2,2'-[(1- Methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane 1675-54-3	> 2.64 - 3.78		25 °C	OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
Talc 14807-96-6	-9.4		25 °C	QSAR (Quantitative Structure Activity Relationship)
Silicon dioxide, crystalline 7631-86-9	0.53			QSAR (Quantitative Structure Activity Relationship)

	Section 13. Disposal considerations
Waste disposal of product:	Dispose of in accordance with local and national regulations. Do not empty into drains / surface water / ground water.
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	5

AIIC:

All components are listed or are exempt from listing on the Australian Inventory of Industrial Chemicals or Introduced under AICIS.

	Section 16. Other information
Abbreviations/acronyms:	GHS: Globally Harmonized System CAS: Chemical Abstracts Service LD 50: Lethal Dose 50% LC 50: Lethal Concentration 50% NOAEL: No Observed Adverse Effect Level 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:	10.05.2022
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