



Safety Data Sheet

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Loctite Epoxy Weld Resin

SDS No. : 157281

V001.2

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SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name: Loctite Epoxy Weld Resin

Intended use: Epoxy resin

Supplier:
Henkel New Zealand Ltd
2 Allens Rd
East Tamaki
Auckland, 2013
New Zealand
Phone: +64 (9) 272-6710

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classified as hazardous under the New Zealand Hazardous Substances and New Organisms Act (HSNO).

Classified as Dangerous Goods under the Land Transport Rule: Dangerous Goods 2005.

GHS Classification:

<u>Hazard Class</u>	<u>Hazard Category</u>
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 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. H411 Toxic 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 eye irritation persists: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage.
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

General chemical description: Mixture
Type of preparation: Mixture

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	30- < 50 %
Calcium carbonate	471-34-1	20- < 30 %
Barium sulfate	7727-43-7	10- < 20 %
Bisphenol A, polymer with formaldehyde and epichlorohydrin	28906-96-9	1- < 10 %
2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane	2095-03-6	0.1- < 1 %

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:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical attention from a specialist.
Inhalation:	Move to fresh air. Keep warm and in a quiet place. If adverse health effects develop seek medical attention.
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
Fine water spray
- Improper extinguishing media:** Water spray jet
- 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 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

- Personal precautions:** Danger of slipping on spilled product.
Wear impervious gloves and chemical splash goggles.
Ensure adequate ventilation.
Avoid skin and eye contact.
- Environmental precautions:** Do not empty into drains / surface water / ground water.
- Clean-up methods:** Collect spilled material with an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.
Dispose of contaminated material as waste according to Section 13.

SECTION 7. HANDLING AND STORAGE

- Precautions for safe handling:** Gloves and safety glasses should be worn
Ensure that workrooms are adequately ventilated.
Avoid skin and eye contact.
- Conditions for safe storage:** Keep container tightly sealed.
Store in a cool, dry place.
Keep away from heat and direct sunlight.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Ceiling	STEL (ppm)	STEL (mg/m3)
CALCIUM CARBONATE 471-34-1			10	-	-	-
BARIUM SULPHATE 7727-43-7			10	-	-	-

Biological Exposure Indices:
None

Engineering controls:	Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.
Eye protection:	Tightly fitting safety goggles
Skin protection:	Use of protective coveralls and long sleeves 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. Nitrile 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:	black paste
Odor:	mild
Specific gravity:	1.82
Boiling point:	> 149 °C (> 300.2 °F)
Flash point:	> 204 °C (> 399.2 °F)
Solubility in water:	Insoluble
Viscosity (dynamic):	60,000 - 150,000 mPa.s (Brookfield; Instrument: HBT; 25 °C (77 °F); speed of rotation: 5 min-1; Spindle No: TA; Method: ; LCT STM 10; Viscosity Brookfield)
VOC content:	< 3 % (2010/75/EC)

SECTION 10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of temperature and pressure.
Conditions to avoid:	Avoid heating. Keep away from open flames, hot surfaces and sources of ignition. Store away from incompatible materials.
Incompatible materials:	Acids. Amines. Bases. Oxidizing agents.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide. Carbon dioxide. Oxides of nitrogen.
Hazardous polymerization:	Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Health Effects:**Ingestion:**

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

Skin:

This product is irritating to the skin.

Symptoms may include redness, edema, drying, defatting and cracking of the skin.
May cause sensitization by skin contact.**Eyes:**

Causes serious eye irritation.

Inhalation:

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

Vapors may cause headaches, nausea, dizziness and respiratory tract irritation.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
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)
Calcium carbonate 471-34-1	LD50 LC50 LD50	> 2,000 mg/kg > 3 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rat	OECD Guideline 420 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
Barium sulfate 7727-43-7	LD50 LD50	> 15,000 mg/kg > 2,000 mg/kg	oral dermal		rat rat	not specified OECD Guideline 402 (Acute Dermal Toxicity)
2,2'-[methylenebis(p-phenyleneoxymethylene)] bisoxirane 2095-03-6	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
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	not irritating	4 h	rabbit	not specified
Calcium carbonate 471-34-1	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Barium sulfate 7727-43-7	not irritating	15 min	Human, EpiSkin™ (SM), Reconstructed Human Epidermis (RHE)	EPISKIN Method

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Calcium carbonate 471-34-1	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Barium sulfate 7727-43-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
reaction product: bisphenol-A- (epichlorhydrin) 25068-38-6	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Calcium carbonate 471-34-1	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Barium sulfate 7727-43-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
2,2'-[methylenebis(p- phenyleneoxymethylene)] bisoxirane 2095-03-6	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
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
Calcium carbonate 471-34-1	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)
Barium sulfate 7727-43-7	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)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
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)
Calcium carbonate 471-34-1	NOAEL=1,000 mg/kg	oral: gavage	48 ddaily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Barium sulfate 7727-43-7	NOAEL=2000 ppm	oral: drinking water	92 ddaily	rat	not specified

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
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:
Calcium carbonate 471-34-1	LC50	Toxicity > Water solubility	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Calcium carbonate 471-34-1	EC50	Toxicity > Water solubility	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Calcium carbonate 471-34-1	EC50	Toxicity > Water solubility	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium carbonate 471-34-1	NOEC	14 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium carbonate 471-34-1	EC50	Toxicity > Water solubility	Bacteria	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Barium sulfate 7727-43-7	LC50	Toxicity > Water solubility	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Barium sulfate 7727-43-7	NOEC	Toxicity > Water solubility	Fish	33 d	Danio rerio	OECD Guideline 210 (fish early life stage toxicity test)
Barium sulfate 7727-43-7	EC50	Toxicity > Water solubility	Daphnia	48 h	Daphnia	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Barium sulfate 7727-43-7	EC50	Toxicity > Water solubility	Algae	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Barium sulfate 7727-43-7	NOEC	Toxicity > Water solubility	Algae	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Barium sulfate 7727-43-7	EC0	> 10,000 mg/l	Bacteria	30 min		not specified
2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane 2095-03-6	LC50	> 1 - 10 mg/l	Fish	96 h	not specified	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane 2095-03-6	EC50	> 1 - 10 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

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)
2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane 2095-03-6	not readily biodegradable.	aerobic	< 10 %	OECD 301 A - F

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
reaction product: bisphenol-A-(epichlorhydrin) 25068-38-6	3.242				25 °C	EU Method A.8 (Partition Coefficient)
Calcium carbonate 471-34-1	-2.12					QSAR (Quantitative Structure Activity Relationship)
Barium sulfate 7727-43-7		74.4		Lepomis macrochirus		other guideline:

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal of product: Collection and delivery to recycling enterprise or other registered elimination institution.

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

SECTION 14. TRANSPORT INFORMATION

Dangerous Goods information:

Land Transport:

Classified as Dangerous Goods under the Land Transport Rule: Dangerous Goods 2005.

Land Transport:

UN no.: 3082
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
 Class or division: 9
 Packing group: III

Marine transport IMDG:

UN no.: 3082
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
 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. (Bisphenol-A Epichlorhydrin resin)
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), A197 (IATA), 2.10.2.7 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

SECTION 15. REGULATORY INFORMATION

New Zealand regulatory information:

Classified as hazardous under the New Zealand Hazardous Substances and New Organisms Act (HSNO).

HSNO Approval Number: HSR002670

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

NZIoC: Compliant for NZIOC

SECTION 16. OTHER INFORMATION

Abbreviations/acronyms:

- STEL - Short term exposure limit
- TWA - Time weighted average
- HSNO - Hazardous Substances and New Organisms
- GHS: Globally Harmonized System
- CAS: Chemical Abstracts Service
- LD 50: Lethal Dose 50%
- LC 50: Lethal Concentration 50%
- IMDG: International Maritime Dangerous Goods code
- IATA-DGR: International Air Transport Association – Dangerous Goods Regulations

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