

SAFETY DATA SHEETS (SDS)

Enviro Epoxy EF Part A



Hazard Identifiers

Version: 1

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SECTION 1 – IDENTIFICATION OF MATERIAL & SUPPLIER

- 1.1 Product Name:** Enviro Epoxy EF Part A
Manufacturer's Product Code: N/A
- 1.2 Recommended Use:** Part A of a two component, epoxy patching compound
- 1.3 Company:** Envirosystems Technologies Pty Ltd
Address: 295 Princes Highway St Peters, NSW 2044.
Website: www.envirosystems.com.au
Telephone: +61 2 85958699 (business hours)
Fax: +61 2 85958660
- 1.4 Emergency Telephone:** Info Safe – 1800 638 556, Poisons Centre – 131126
- Other Information:** All information in this SDS is to the best of our knowledge at time of publication. Users of this product should fully review this SDS prior to use to ensure best safety practices. Further information and or clarification can be obtained by contacting our technical department on the above telephone number.

SECTION 2 – HAZARDS IDENTIFICATION

- 2.1 Hazard Classification:** Classified as **Hazardous** according to WHS Regulations, Australian GHS criteria and a **Non-Dangerous Goods** according to the Australian Dangerous Goods Code.

Class	Category
Skin corrosion / irritation	2
Eye corrosion / irritation	2
Sensitizer - Skin	1
Carcinogenicity	2
Specific target organ toxicant - single	3
Aquatic Hazard - Acute	3
Aquatic Hazard - Chronic	3

- 2.2 Label Elements**



Signal word

Warning

H-code	Hazard Statements
H319	Causes serious eye irritation
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

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H413	May cause long lasting harmful effects to aquatic life
P-Code	Precautionary Statement - Prevention
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. -- No smoking
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation wear respiratory protection
P234	Keep only in original container.
P264	Wash with plenty of water and soap thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace
P-Code	Precautionary Statement - 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/shower.
P304, P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305, P351, P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician/first aider
P342, P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider
P333, P313	If skin irritation or rash occurs: Get medical advice/attention.
P362, P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P301, P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P-Code	Precautionary Statement - Storage
P405, P303, P235	Store locked up in a cool well-ventilated area
P-Code	Precautionary Statement - Disposal
P501	Dispose of contents / containers to hazardous or special waste collection point. In accordance with local regulation

2.3 Other Hazards

None known

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

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3.1 Substances

3.2 Mixtures

See section below for Mixtures

CAS No.	Material	Content %
25068-38-6	bisphenol A/ diglycidyl ether resin, liquid	10-30
64742-95-6	Solvent Naptha (petroleum), light aromatic	1-5
98-82-8	Cumene	<0.1
68609-97-2	Dodecyl and tetradecyl glycidyl ethers	1-5
14808-60-7	Crystalline Silica (Quartz)	<60

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

General Advice:

Immediately remove contaminated clothing. If in danger of loss of consciousness, place patient in recovery position and transport accordingly. Apply artificial respiration if necessary. First aid personnel should pay attention to the own safety.

Ingestion:

Do not induce vomiting. Observe the patient carefully. Wash mouth with water then provide liquid slowly and as much as casualty can comfortably drink. Never give liquid to a person showing signs of being sleepy or with reduced awareness. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Immediately transport to hospital or doctor without delay. For advice, contact a Poisons Information Centre or a doctor at once.

Inhalation:

Keep patient calm and remove to fresh air. Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Perform CPR if necessary. Transport to hospital, or doctor.

Eye Contact:

While holding eyes open, gently flood with plenty of fresh water for 15 minutes. Seek medical attention; if pain persists or recurs seek medical attention. Skilled personnel should only undertake removal of contact lenses after an eye injury.

Skin Contact:

Flush contacted area thoroughly with soap and plenty of water, shower if available. Quickly remove contaminated clothing including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. If irritation occurs, get medical assistance.

4.2 Most important symptoms and effects, both acute and delayed

Any relevant information can be found in other parts of this section and in sections 2 and 11.

4.3 Advice for doctor

Treat symptomatically

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Dry chemical powder, foam, BCF (where regulations permit) and alcohols stable foams. Water fog or fine spray for large fires only.

5.2 Special hazards arising from the substance or mixture

On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon dioxide (CO₂), phenolics products typical of burning

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organic material. Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

5.3 Advice for firefighters

Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. If material is released indicate risk of slipping. Do not walk through spilled material.

6.2 Environmental precautions

Do not discharge into sewers or waterways and soil.

6.3 Methods and material for containment and cleaning up

Small or major spills should be absorbed with dry, inert filler (soil or sand) which then can be shoveled into appropriately labeled drums for disposal. Disposal of this material should be undertaken by a registered chemical disposal company. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves.

6.4 Reference to other sections

Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

SECTION 7 – HANDLING & STORAGE

7.1 Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Handle in accordance with good industrial hygiene and safety practice. When using do NOT eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Protection against fire and explosion. Avoid all personal contact, including inhalation. Do NOT cut, drill, grind, weld or perform similar operations on or near containers. Do NOT allow clothing with this material to stay in contact with skin.

Since this is in a liquid form when applied there is no risk from silica dust, however sometimes with general use of the product it may be sanded after it has cured and solid. Respiratory protection must be worn as this product contains silica which is a health hazard. It may cause cancer or causes damage to organs through prolonged or repeated exposure by inhaled.

7.2 Conditions for safe storage

Storage Requirements:

Store in a cool, dry area away from incompatible materials.

Incompatible materials:

Do NOT store near amines, mercaptans, strong acids and oxidising agents

Temperature Conditions:

Up to 40° C

Protection from weather:

Store undercover and away from frost and moisture. Avoid reaction with oxidising agents.

7.3 Specific end use(s)

Once mixed with part b and applied, produces an epoxy patching compound.

7.4 Regulations and standards

Classified as Hazardous Liquid which should be stored and handled in accordance

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(Australia):

with regulations

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits: Australia

Ingredient	TWA	STEL
Cumene	25ppm	75ppm

Emergency limits:

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
benzyl alcohol	10ppm	60ppm	150ppm	150ppm
bisphenol A/ diglycidyl ether resin, liquid		90 mg/m ³	990 mg/m ³	5900 mg/m ³

8.2 Exposure controls

General protection and hygiene measures:

Good Ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations. Do not eat, drink or smoke when handling. Wash hands at the end of work and before eating. Keep working clothes separately. Remove contaminated, soaked clothing immediately. Clean work areas regularly.

Personal protection equipment:

Respiratory protection

Respiratory protection should be worn. Air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards. Since this is in a liquid form when applied there is no risk from silica, however sometimes with general use of the product it may be sanded after it has cured and solid. Respiratory protection must be worn as this product contains silica which is a health hazard. It may cause cancer or causes damage to organs through prolonged

Eye protection

Chemical goggles with unperforated side shields may be used where continuous eye protection is desirable. Full face respiratory may be required if exposure causes discomfort.

Hand protection

For full contact, material: Chloroprene. Minimum layer thickness: 0.6 mm. For splash contact Material: Nature latex/chloroprene. Minimum layer thickness: 0.6 mm.

Skin protection

When handling liquid-grade epoxy resins wear chemically protective gloves e.g nitrile or nitrile-butatoluene rubber

Other Information

Always wash hands before smoking, eating, drinking or using the toilet and after finishing work. Observe the usual precautions when handling chemicals. DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin). DO NOT use barrier creams containing emulsified fats and oils as these may absorb the resin; silicone-based barrier creams should be reviewed prior to use.

8.3 Further information for system design and engineering measures

Ventilation is recommended under normal use conditions. State regulations on speed and direction of airflow away from operators must be observed. Keep

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containers closed when not in use.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

9.1	Odour:	Mild
	Odour Threshold	Not Available
	Colour:	Off White
	Physical State:	Liquid Gel
	Flash Point:	>200°C
	Boiling Point:	Not Available
	Melting Point:	Not Available
	Specific Gravity:	1.9
	pH:	7
	Solubility in Water (g/L):	Insoluble
	Flammability:	Yes
	Explosive Lower Limit:	Not Available
	Explosive Higher Limit:	Not Available
	Vapour Pressure:	Not Available
	Vapour Density (Air = 1)	Not Available
	Volatile component	Not Available
	Auto-ignition temperature (°C)	Not Available
9.2	Other information	None available

SECTION 10 – STABILITY AND REACTIVITY

10.1-3	Reactivity; Chemical stability; Possibility of hazardous reactions	If stored and handled in accordance with standard industrial practices not hazardous reactions are known. Unstable in the present of incompatible material.
10.4	Conditions to avoid	Avoid all sources of ignition: heat, sparks, open flame.
10.5	Incompatible materials	Reacts with acids and strong oxidizing agents. Reacts with halogenated compounds. Strong exothermic reaction.
10.6	Hazardous decomposition products	See section 5

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity/Effects

Dodecyl and tetradecyl glycidyl ethers:

Acute toxicity

LD50 Oral - Rat - female - > 2,000 mg/kg

Irritation

Skin – Rabbit Result: Irritating to skin. - 24 h (OECD Test Guideline 404)

Eyes – Rabbit Result: Mild eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation

Buehler Test - Guinea pig Result: May cause sensitisation by skin contact.

bisphenol A/ diglycidyl ether resin, liquid:

Acute toxicity

dermal (rat) LD50: >800 mg/kg

Oral (rat) LD50: 13447 mg/kg

Irritation

Eye (rabbit): 100mg – Mild

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Solvent Naptha (petroleum), light aromatic / Cumene:

Acute toxicity

Inhalation (rat) 4 hour(s) LC50 > 6193 mg/m³

Oral (rat) LD50: 3492 mg/kg

Dermal (rabbit) LD50 > 3160 mg/kg

Irritation

Mildly irritating to skin with prolonged exposure

May cause mild, short-lasting discomfort to eyes.

Skin Sensitization

Not expected to be a skin sensitizer

Chronic Toxicity/Effects

Single dose toxicity

Solvent Naptha (petroleum), light aromatic / Cumene: May cause drowsiness or dizziness. May be irritating to the respiratory tract.

Repeated dose toxicity

Solvent Naptha (petroleum), light aromatic / Cumene: Not expected to cause organ damage from prolonged or repeated exposure.

Genetic toxicity

Dodecyl and tetradecyl glycidyl ethers: Hamster ovary Result: negative.

Mutagenicity (micronucleus test) Mouse - male and female Result: negative
bisphenol A/ diglycidyl ether resin, liquid: *S. typhimurium* strains TA100 and TA1535, bisphenol A diglycidyl ether (10-10,000 ug/plate) was mutagenic with and without S9; negative results were obtained in TA98 and TA1537 (Canter et al., 1986; Pullin, 1977). In a spot test, BADGE (0.05 or 10.00 mg) failed to show mutagenicity in strains TA98 and TA100 (Wade et al., 1979). Negative results were also obtained in the body fluid test using urine of female BDF and ICR mice (1000 mg/kg bisphenol A diglycidyl ether), the mouse host-mediated assay (1000 mg/kg), micronucleus test (1000 mg/kg), and dominant lethal assay (~3000 mg/kg).

Solvent Naptha (petroleum), light aromatic / Cumene: Not expected to be a germ cell mutagen. Based on test data for the material. Test(s) equivalent or similar to OECD Guidelines.

Carcinogenicity

Dodecyl and tetradecyl glycidyl ethers: Is not identified as probable, possible or confirmed human carcinogen by IARC.

bisphenol A/ diglycidyl ether resin, liquid: IARC concluded that "there is limited evidence for the carcinogenicity of bisphenol A diglycidyl ether in experimental animals." Its overall evaluation was "Bisphenol A diglycidyl ether is not classifiable as to its carcinogenicity to humans (Group 3).

Solvent Naptha (petroleum), light aromatic / Cumene: Caused cancer in laboratory animals, but the relevance to humans is uncertain.

2,4,6-Tris(dimethylaminomethyl)phenol: Not identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Solvent Naptha (petroleum), light aromatic / Cumene: Not expected to be a reproductive toxicant. Based on test data for the material. Test(s) equivalent or similar to OECD Guidelines.

Teratogenicity

No data available.

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Silica:

Since this is in a liquid form when applied there is no risk from silica, however sometimes with general use of the product it may be sanded after it has cured and solid. Respiratory protection must be worn as this product contains silica which is a health hazard. It may cause cancer or causes damage to organs through prolonged or repeated exposure by inhaled.

Long Term Effects:

Above

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Dodecyl and tetradecyl glycidyl ethers:

static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - > 5,000 mg/l - 96 h (OECD Test Guideline 203)

Immobilization EC50 - *Daphnia magna* (Water flea) - 7.2 mg/l - 48 h (OECD Test Guideline 202)

IC50 - *Pseudokirchneriella subcapitata* (algae) - 843.75 mg/l - 72 h (OECD Test Guideline 201)

Solvent Naptha (petroleum), light aromatic / Cumene:

Expected to be toxic to aquatic organisms

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

12.2 Persistence and degradability

Solvent Naptha (petroleum), light aromatic / Cumene:

Water, Ready Biodegradability, 28 day(s) Percent Degraded; 78%

2,4,6-Tris(dimethylaminomethyl)phenol:

Biodegradability aerobic - Exposure time 28 d Result: 4 % - Not readily biodegradable. (OECD Test Guideline 301D)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

Additional Information

Do NOT discharge into sewer or waterways. Prevent, by any means available, spillage from entering drains or water courses.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Material Recommendation:

Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration. Do **NOT** allow wash water from cleaning or process equipment to enter drains.

Uncleaned packaging Recommendation:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

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SECTION 14 – TRANSPORT INFORMATION

Transport Information

Classified as a **Non-Dangerous Good** according to the Australian Code for the Transportation of Dangerous Goods by Road and Rail.

U.N. Number: N/A
DG Class: N/A
EPG card: N/A
Hazchem Code: N/A
Proper Shipping Name: N/A
Packing Group: N/A
Poison Schedule S5

Classification for SEA transport (IMO-IMDG)

U.N. Number: N/A
DG Class: N/A
Proper Shipping Name: N/A
Packing Group: N/A
Marine Pollutant: Yes

Classification for AIR transport (IATA/CAO)

U.N. Number: N/A
DG Class: N/A
Proper Shipping Name: N/A
Packing Group: N/A

Label

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National and local regulations must be observed. For information on labeling please refer to section 2 of this document.

Australian Inventory:
Controlled Schedule
Carcinogenic Substances:

Poisons Schedule Number: S5

Listed
Not listed substances

SECTION 16 – OTHER INFORMATION

Safety Data Sheets are updated regularly. Please ensure you have a current copy. SDS can be obtained from our website: www.envirosystems.com.au
The SDS should be used to assist in the Risk Management. Many other factors determine whether the reported Hazards are risks in any given workplace.
Specific Risks may be determined by reference to various Exposure Scenarios, Scale of use, Frequency of use and current or available engineering controls must be considered.
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Emergency Telephone: Info Safe – 1800 638 556, Poisons Centre – 13112