

# SAFETY DATA SHEETS (SDS)

## Enviro Epoxy SL Part B



Version: 2

Issued by: Envirosystems Technologies

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Hazard Identifiers



### SECTION 1 – IDENTIFICATION OF MATERIAL & SUPPLIER

- 1.1 Product Name:** Enviro Epoxy SL Part B  
**Manufacturer's Product Code:** N/A
- 1.2 Recommended Use:** Part B of a three component epoxy coating.
- 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 **Dangerous Goods** according to the Australian Dangerous Goods Code.

Class	Category
Acute Toxicity Oral	4
Acute Toxicity Inhalation	4
Skin Corrosion/Irritation	1B
Serious eye damage/eye irritation	1
Skin Sensitization	1A
Reproductive toxicity	2
Specific target organ toxicity - single	3
Specific target organ toxicity - repeated	2
Hazardous to the aquatic environment- chronic	3

- 2.2 Label Elements**



Signal word

**DANGER**

H-code	Hazard Statements
H332	Harmful if inhaled
H302	Harmful if swallowed
H317	May cause allergic skin reaction
H314	Causes severe skin burns and eye damage

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H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H412	Harmful to aquatic life with long lasting effects
<b>P-Code</b>	<b>Precautionary Statement - Prevention</b>
P280	Wear protective gloves / protective clothing / eye protection / face protection
P260	Do not breath dust , mist or vapors
P273	Avoid release to the environment
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat drink or smoke when using this product
P264	Wash with plenty of water and soap thoroughly after handling
<b>P-Code</b>	<b>Precautionary Statement – Response</b>
P310	Immediately call a Poison Center or Doctor / Physician
P305, P351, P338, P310	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Immediately call a POISON CENTER/doctor.
P303, P361, P353	If on skin or hair: Take off immediately all contaminated clothing. Rinse skin with water / shower.
P333, P313	If skin irritation or rash occurs: Get medical advice/ attention.
P304, P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P301, P330, P331	If swallowed: Rinse mouth. Do not induce vomiting.
P361, P364	Take off immediately all contaminated clothing and wash before reuse.
<b>P-Code</b>	<b>Precautionary Statement - Storage</b>
P405	Store locked up
<b>P-Code</b>	<b>Precautionary Statement - Disposal</b>
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

### 3.1 Substances

### 3.2 Mixtures

See section below for Mixtures

CAS No.	Material	Content %
1761-71-3	4,4'-Methylenebis (cyclohexylamine)	30-60%
100-51-6	Benzyl alcohol	30-60%
80-05-7	Bisphenol A	<10%

## SECTION 4 – FIRST AID MEASURES

### 4.1 Description of first aid measures

**General Advice:**

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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. Wash mouth with water and seek medical attention immediately. Provide liquid slowly and as much as they can comfortably drink. Never give liquid to a person showing signs of being sleepy or with reduced awareness i.e. becoming unconscious.

### **Inhalation:**

Keep patient calm and remove to fresh air. If breathing is difficult give oxygen. Seek medical attention immediately. Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.

### **Eye Contact:**

While holding eyes open, gently flood with plenty of fresh water for 15 minutes. Seek immediate 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. Seek medical attention. Remove contaminated clothing including footwear.

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|--|--|
| <b>4.2 Most important symptoms and effects, both acute and delayed</b> | Any relevant information can be found in other parts of this section and in sections 2 and 11. |
| <b>4.3 Advice for doctor</b>   | Treat symptomatically.   |

## SECTION 5 – FIRE FIGHTING MEASURES

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|--|---|
| <b>5.1 Extinguishing media</b>                                   | <p>Suitable extinguishing media:<br/>Dry chemical powder, foam, BCF (where regulations permit). Water can be used to cool a fire, but it is not ideal.</p> <p>Unsuitable extinguishing media that may not be used for safety reasons:<br/>None known</p> <p>Hazchem code:<br/>No Data Available</p>   |
| <b>5.2 Special hazards arising from the substance or mixture</b> | Oxides of carbon and other possibly toxic fumes from fire. Keep away from oxidizing agents, isocyanates, acetaldehyde, LiAlH <sub>4</sub> , (lithium aluminum hydride), aluminum alkyl compounds, acids and alkalis as ignition may result.   |
| <b>5.3 Advice for firefighters</b>                               | 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. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include:, carbon dioxide (CO <sub>2</sub> ), aldehydes, nitrogen oxides (NO <sub>x</sub> ), other pyrolysis products typical of burning organic material. Contains low boiling substance: Closed containers may |

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rupture due to pressure buildup under fire conditions. May emit corrosive fumes.  
WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.

### 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.
- 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.
- 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: The product is combustible. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.
- 7.2 Conditions for safe storage**  
**Storage Requirements:**  
Store in a cool, dry area. This product is classified as a 'C1' Combustible Liquid for the purpose of storage and handling in accordance with the requirement of AS1940.  
**Storage Incompatibility:**  
Store under inert gas. Sensitive to carbon dioxide.  
**Suitable containers:**  
Store in original packaging.  
**Temperature Conditions:**  
5° to 35° C  
**Protection from weather:**  
Store undercover and away from frost and moisture
- 7.3 Specific end use(s)** Once mixed with other parts and applied, produces a hard wearing, durable surface suitable for commercial and industrial applications.
- 7.4 Regulations and standards (Australia):** Classified as a Class 8 Corrosive Liquid which should be stored and handled in accordance with regulations

### SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters**

Emergency limits:

Ingredient	TEEL-1	TEEL-2	TEEL-3

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Benzyl alcohol	30ppm	49ppm	49ppm
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### 8.2 Exposure controls

#### General protection and hygiene measures:

Avoid exposure. Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. 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

In accordance with instructions: not required. Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent) Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

##### Eye protection

Chemical goggles. Full face shield may be required for supplementary but never for primary protection of eyes. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

##### Hand protection

Protective gloves made of Long PVC or nitrile rubber gauntlets. The selection of appropriate gloves not only depends on the material, but also on other quality characteristics, and may vary depending on the manufacturer. Please observe information from your glove supplier in terms of permeability and breakthrough time.

##### Skin protection

Overalls clothing

##### Other Information

Use barrier creams to protect skin from contact with the material. Always wash hands before smoking, eating, drinking or using the toilet and after finishing work. Observe the usual precautions when handling chemicals.

### 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 containers closed when not in use.

## SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

9.1	<b>Odour:</b>	Not Available
	<b>Colour:</b>	Clear colourless to slight amber
	<b>Physical State:</b>	Low Viscosity Liquid
	<b>Flash Point:</b>	112°C
	<b>Boiling Point:</b>	Not Available
	<b>Melting Point:</b>	Not Available
	<b>Specific Gravity:</b>	1.04
	<b>pH (5% solution):</b>	Not Available
	<b>Solubility in Water (g/L):</b>	Not Available
	<b>Flammability:</b>	Yes
	<b>Lower Limit:</b>	Not Available
	<b>Higher Limit:</b>	Not Available
	<b>Vapour Pressure:</b>	Not Available
	<b>Vapour Density (Air = 1)</b>	Not Available
9.2	<b>Other information</b>	Non available

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### SECTION 10 – STABILITY AND REACTIVITY

<b>10.1 Reactivity; Chemical stability; -3 Possibility of hazardous reactions</b>	If stored and handled in accordance with standard industrial practices not hazardous reactions are known. Unstable in the present of incompatible material.
<b>10.4 Conditions to avoid</b>	Avoid all sources of ignition: heat, sparks, open flame. See SDS section 7 - Handling and storage.
<b>10.5 Incompatible materials</b>	Keep away from oxidizing agents, acids and alkalis. .
<b>10.6 Hazardous decomposition products</b>	Oxides of carbon and other possibly toxic fumes from fire.

### SECTION 11 – TOXICOLOGICAL INFORMATION

#### Acute Toxicity/Effects

	Acute toxicity	Irritation
Enviro Epoxy B part B	Not available	Not available
Benzyl Alcohol	dermal (rat) LD50: 1000000 ppm/90M	Eye (rabbit): 0.75 mg open SEVERE
	Inhalation (rat) LC50: >4.178 mg/L/4h	Skin (man): 16 mg/48h- mild
	Oral (rat) LD50: 1560 mg/kg	Skin (rabbit):10 mg/24h open-mild
4,4'-Methylenebis (cyclohexylamine)	LD50 Oral - Rat - male and female - 380 mg/kg	Skin – Rabbit Result: Corrosive - 24 h
	LD50 Dermal - Rabbit - male and female - > 1,000 mg/kg	Eyes - Rabbit Result: Corrosive - 24 h
Bisphenol A	LD50 Oral - Rat - male and female - > 2,000 - 5,000 mg/kg	Skin - Rabbit Result: No skin irritation - 4 h
	LC50 Inhalation - Rat - male and female - 6 h - 170 mg/m3	Eyes - Rabbit Result: Severe eye irritation - 24 h
	LD50 Dermal - Rabbit - 6,400 mg/kg	

#### Respiratory or skin sensitization

4,4'-Methylenebis (cyclohexylamine): Buehler Test - Guinea pig May cause sensitisation by skin contact. (OECD Test Guideline 406)

#### Chronic Toxicity/Effects

##### Specific target organ toxicity - single exposure

Benzyl Alcohol: No Data Available

Cyclohexylamine: No data available

Bisphenol A : Inhalation - May cause respiratory irritation.

##### Specific target organ toxicity - repeated exposure

Benzyl Alcohol: Overexposure to vapors causes headache, vertigo, nausea, vomiting, and diarrhoea. Over-exposure can cause central nervous system depression.

Cyclohexylamine: Ingestion - May cause damage to organs through prolonged or repeated exposure. - Liver, Musculo-skeletal system

Bisphenol A: No data available

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### Genetic toxicity

Benzyl Alcohol: No Data Available

Cyclohexylamine: Ames test *S. typhimurium* Result: negative. Mutagenicity (micronucleus test) Mouse - male and female Result: negative.

Bisphenol A : Ames test *S. typhimurium* Result: negative. Mouse - male and female Result: negative.

### Carcinogenicity

Benzyl Alcohol: No Data Available

Cyclohexylamine: Not identified as probable, possible or confirmed human carcinogen by IARC.

Bisphenol A : Not identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

Benzyl Alcohol: No Data Available

Cyclohexylamine: No Data Available

Bisphenol A : Reproductive toxicity Category 2

### Teratogenicity

Benzyl Alcohol: No Data Available

Cyclohexylamine: No Data Available

Bisphenol A : No Data Available

### Long Term Effects:

Susceptible individuals may develop allergic reactions such as dermatitis or asthma like symptoms on a single significant skin exposure or may become sensitized to the material on repeated contact. Corrosive to eyes and skin. May cause sensitization by skin contact.

## SECTION 12 – ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Benzyl Alcohol:

EC03 (168h) Algae or other aquatic plants =16mg/L (US EPA, Ecotox database - Aquatic Toxicity Data)

LC50 (96h) Fish 10mg/L (US EPA, Ecotox database - Aquatic Toxicity Data)

NOEC (336h) Fish 5.1mg/L (Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity)

EC50 (48h) Crustacea 230mg/L (Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity)

EC50 (72h) Algae or other aquatic plants 7.221 mg/L (Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity)

#### Bisphenol A:

Toxicity to fish

flow-through test LC50 - *Pimephales promelas* (fathead minnow) - 4.6 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - *Daphnia magna* (Water flea) - 10.2 mg/l - 48 h

Toxicity to algae

static test EC50 - *Pseudokirchneriella subcapitata* (green algae) - 2.73 - 3.1 mg/l -

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96 h

### **4,4'-Methylenebis (cyclohexylamine):**

Toxicity to fish static test LC50 - *Leuciscus idus* (Golden orfe) - 67.8 mg/l - 96 h (DIN 38412)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - *Daphnia magna* (Water flea) - 9.24 mg/l - 48 h

Toxicity to algae static test EC50 - *Desmodesmus subspicatus* (green algae) - 140 - 200 mg/l - 72 h

Toxicity to bacteria EC50 - *Pseudomonas putida* - 156 mg/l - 30 min

## **12.2 Persistence and degradability**

### **Benzyl Alcohol:**

Persistence: Water/Soil  
Low

Persistence: Air  
Low

### **Bisphenol A:**

aerobic - Exposure time 28 d Result: 89 % - Readily biodegradable. (OECD Test Guideline 301F)

### **Cyclohexylamine:**

aerobic - Exposure time 28 d Result: < 10 % - According to the results of tests of biodegradability this product is not readily biodegradable.

## **12.3 Bioaccumulative potential**

### **Benzyl Alcohol:**

LOW (LogKOW = 1.1)

### **Cyclohexylamine:**

Cyprinus carpio (Carp) - 42 d - 0.015 mg/l  
Bioconcentration factor (BCF): 20 - 67

### **Isophorone diamine:**

No data available

## **12.4 Mobility in soil**

### **Benzyl Alcohol:**

LOW (KOC = 15.66)

### **Bisphenol A:**

No data available

### **Cyclohexylamine:**

No data available

## **12.6 Additional Information**

No data available

# 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.



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### 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.

## SECTION 14 – TRANSPORT INFORMATION

### Transport Information

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

U.N. Number:	1760
DG Class:	8
EPG card:	8A1
Hazchem Code:	N/A
Proper Shipping Name:	Amines, Liquid, Corrosive, N.O.S.
Packing Group:	III
Marine Pollutant	Yes

### 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.

### Poisons Schedule Number: 5

Benzyl alcohol (100-51-6) are found on the following regulatory lists  
Australia Hazardous Substances Information System - Consolidated Lists  
Australia Inventory of Chemical Substances (AICS)

Australian Inventory:	Listed
Controlled Schedule	No listed substances
Carcinogenic 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](http://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