SAFETY DATA SHEETS (SDS)
Enviro Prime PW Part B

Version: 1

Issued by: Envirosystems Technologies

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Hazard Identifiers

SECTION 1 – IDENTIFICATION OF MATERIAL & SUPPLIER

1.1	**Product Name:**	Enviro Prime PW Part B
	Manufacturer's Product Code:	N/A
1.2	**Recommended Use:**	Part B of a two component, solvent free epoxy primer
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 MSDS is to the best of our knowledge at time of publication. Users of this product should fully review this MSDS 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 Dermal	4
Acute Toxicity Inhalation	4
Skin Corrosion/Irritation	1B
Serious eye damage/eye irritation	1
Skin Sensitization	1
Hazardous to the aquatic environment- chronic	3

2.2 Label Elements

Signal word **DANGER**

H-code	Hazard Statements
H302	Harmful if swallowed
H312	Harmful in contact with skin
H332	Harmful if inhaled
H314	Causes severe skin burns and eye damage
H317	May cause allergic skin reaction
H412	Harmful to aquatic life with long lasting effects

P-Code	Precautionary Statement - Prevention
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
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
P-Code	**Precautionary Statement - Response**
P310	Immediately call a Poison Center or Doctor / Physician
P305, P351, P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
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.
P301, P330, P331	If swallowed: Rinse mouth. Do not induce vomiting.
P361, P364	Take off immediately all contaminated clothing and wash before reuse.
P-Code	**Precautionary Statement - Storage**
P405	Store locked up
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

3.1 Substances

3.2 Mixtures

See section below for Mixtures

CAS No.	Material	Content %
2855-13-2	Isophorone diamine	50-80%
100-51-6	Benzyl alcohol	10-30%
69-72-7	Salicylic acid	<10%

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 reparation if necessary. First aid personal should pay attention to the own safety.

Ingestion:
Do not induce vomiting. Urgent hospital treatment is likely to be needed. Give water to rinse out mouth, 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 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. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Skilled personnel should only undertake removal of contact lenses after an eye injury. Transport to hospital or doctor without delay.

Skin Contact:

Flush contacted area thoroughly with soap and large amounts of water, shower if available. Seek medical attention. Remove contaminated clothing including footwear.

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 (decontamination, vital functions), no know specific antidote. Pulmonary odema prophyaxis. Medical monitoring for at least 24 hours. For ingestion milt or water are preferred diluents, no more than 2 glasses of water should be given to an adult and neutralizing agent should never be given as endothermic heat reaction my compound injury.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:
Water spray for large fires only. Dry chemical powder, foam, Carbon dioxide, BCF (where regulations permit)

Unsuitable extinguishing media that may not be used for safety reasons:
None known

Hazchem code:
2X

5.2 Special hazards arising from the substance or mixture

Oxides of carbon and other possibly toxic fumes from fire. Keep away from oxidizing agents, acids and alkalis as ignition may result. Heating may cause expansion or decomposition leading to violent rupture of containers.

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. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include:, carbon dioxide (CO2), aldehydes, nitrogen oxides (NOx), other pyrolysis products typical of burning organic material. Contains low boiling substance: Closed containers may 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 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. For major spills Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Consider evacuation. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue. Collect solid residues and seal in labelled drums for disposal
6.4	**Reference to other sections**	Relevant information in other sections must be considered. This applies 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 original containers. Keep containers securely sealed. Store in a cool, dry area. **Storage Incompatibility:** Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air. Avoid strong acids, acid chlorides, acid anhydrides and chloroformates. Avoid contact with copper, aluminium and their alloys. Avoid reaction with oxidising agents. May froth in contact with water slowly oxidises in air, oxygen forming benzaldehyde. **Suitable containers:** Glass container is suitable for laboratory quantities. Do not use aluminium or galvanised containers. Lined metal can, lined metal pail/ can. Plastic pail. Polyliner drum. Packing as recommended by manufacturer. **Temperature Conditions:** 5º to 35º C **Protection from weather:** Store undercover and away from frost and moisture
7.3	**Specific end use(s)**	Once mixed with part A 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
Benzyl alcohol	30ppm	52ppm	740ppm
Salicylic acid	0.11 mg/m3	1.2 mg/m3	180 mg/m3

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: generally, not required in well ventilated areas. However, Type AK-P (organic and ammonia) Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent) is still preferred to be worn and is required when irritation occurs or the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES). The degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter. For 10 times over the exposure standard it is recommended an air supplied full face mask.
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. Gloves suitable for up to 60 minutes' use. 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 Odour: Not Available
Colour: Yellowish

	Physical State:	Low Viscosity Liquid
	Flash Point:	>150ºC
	Boiling Point:	Not Available
	Melting Point:	Not Available
	Specific Gravity:	0.98
	pH (5% solution):	>11
	Solubility in Water (g/L):	Not Available
	Flammability:	Not Available
	Lower Limit:	N/A
	Higher Limit:	N/A
	Vapour Pressure:	Not Available
	Vapour Density (Air = 1)	N/A
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. See SDS section 7 - Handling and storage.
10.5	**Incompatible materials**	Keep away from oxidizing agents, acids and alkalis and halogenated compounds Acids.
10.6	**Hazardous decomposition products**	Oxides of carbon and other possibly toxic fumes from fire.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity/Effects

	Acute toxicity	**Irritation**
Enviro Prime PW 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
Salicylic acid	dermal (rat) LD50: >2000 mg/ kg	Eye (rabbit): 100 mg - SEVERE
	Oral (rat) LD50: 200-2000 mg/kg	Skin (rabbit): 500 mg/24h - mild
Isophorone diamine	Oral (rat) LD50: 1030 mg/kg	Skin (rabbit): Corrosive
	Inhalation (rat) LC50: >5.01 mg/L/4h	Eye (rabbit): risk of serious damage to eyes
	dermal (rat) LD50: >2000 mg/ kg	

Isophorone diamine: Assessment of acute toxicity, Of moderate toxicity after short-term skin contact. Of moderate toxicity after single ingestion. Assessment of irritating effects, corrosive! Damages skin and eyes.

Chronic Toxicity/Effects

Isophorone diamine:

Repeated dose toxicity
Assessment of repeated dose toxicity: The substance may cause damage to the kidney after repeated ingestion of high doses, as shown in animal studies.

Genetic toxicity
Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in a test with mammals.

Carcinogenicity
Assessment of carcinogenicity: Study scientifically not justified.

Reproductive toxicity
Assessment of reproduction toxicity: Repeated oral uptake of the substance did not cause damage to the reproductive organs. Study scientifically not justified.

Teratogenicity
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

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 or inhalation.

SECTION 12 – ECOLOGICAL INFORMATION

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)

Salicylic acid:
BCF (96h) Algae or other aquatic plants <50mg/L (US EPA, Ecotox database - Aquatic Toxicity Data)

LC50 (96h) Fish >100mg/L (Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity)

EC50 (48h) Crustacea 118mg/L (Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity)

NOEC (504h) Crustacea 10mg/L (Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity)

EC50 (72h) Algae or other aquatic plants >100mg/L (Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity)

EC50 (168h) Algae or other aquatic plants 6.906-13.812mg/L (Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity)

Isophorone diamine:
Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms.
Toxicity to fish
LC50 (96 h) 110 mg/l, Leuciscus idus (Directive 84/449/EEC, C.1, semistatic)
Nominal values (confirmed by concentration control analytics)

Aquatic invertebrates
EC50 (48 h) 23 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
Nominal values (confirmed by concentration control analytics)

EC50 (48 h) 388 mg/l, Chaetogammarus marinus (semistatic)
The details of the toxic effect relate to the nominal concentration.

Aquatic plants
EC50 (72 h) > 50 mg/l (growth rate), Scenedesmus subspicatus (Directive 88/302/EEC, part C, p. 89)
Nominal concentration.
EC10 (72 h) 11.2 mg/l (growth rate), Scenedesmus subspicatus (Directive 88/302/EEC, part C, p. 89)
Nominal concentration.

Chronic toxicity to fish
Study scientifically not justified.

Chronic toxicity to aquatic invertebrates
No observed effect concentration (21 d) 3 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic)
Nominal values (confirmed by concentration control analytics)

Assessment of terrestrial toxicity
Study scientifically not justified.

Microorganisms/Effect on sludge

Isophorone diamine:
Toxicity to microorganisms
DIN 38412 Part 8 bacterium/EC10 (18 h): 1,120 mg/l
Nominal concentration.

Persistence and degradability

Benzyl Alcohol:
Persistence: Water/Soil
Low

Persistence: Air
Low

Salicylic acid:
Persistence: Water/Soil
Low

Persistence: Air
Low

Isophorone diamine:
Persistence: Water/Soil
High

	Persistence: Air High
Bioaccumulative potential	**Benzyl Alcohol:** LOW (LogKOW = 1.1) **Salicylic acid:** MEDIUM (BCF = 1000) **Isophorone diamine:** LOW (BCF = 3.4)
Mobility in soil	**Benzyl Alcohol:** LOW (KOC = 15.66) **Salicylic acid:** LOW (KOC = 23.96) **Isophorone diamine:** LOW (KOC = 340.4)
Additional Information	**Isophorone diamine:** Adsorbable organically-bound halogen (AOX): This product contains no organically-bound halogen. Other ecotoxicological advice: Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

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.

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:	2289
DG Class:	8
Hazchem Code:	2X
Proper Shipping Name:	ISOPHORONEDIAMINE
Packing Group:	III
Marine Pollutant	NO

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), Salicylic acid(69-72-7) and Isophorone diamine 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
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.

Emergency Telephone: Info Safe – 1800 638 556, Poisons Centre – 13112