SAFETY DATA SHEETS (SDS)
Enviro Ultra Tuff Part B

Hazard Identifiers

Version: 3

Issued by: Envirosystems Technologies

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SECTION 1 – IDENTIFICATION OF MATERIAL & SUPPLIER

1.1 **Product Name:** Enviro Ultra Tuff Part B
Manufacturer's Product Code: N/A
1.2 **Recommended Use:** Part B of a two component (plus colour pack), 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
Skin Corrosion/Irritation	1B
Serious eye damage/ irritation	1
Skin Sensitization	1

2.2 **Label Elements**

Signal word **Danger**

H-code	Hazard Statements
H314	Causes severe skin burns and eye damage
H317	May cause allergic skin reaction
P-Code	**Precautionary Statement - Prevention**
P260	Do Not breathe dust/ fume/ gas/ mist/ vapours/ spray
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P-Code	**Precautionary Statement - Response**
P308, P313	IF exposed or concerned: Get medical advice/attention
P363	Wash contaminated clothing before reuse.

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 or doctor/ physician.
P303, P361, P353	IF ON SKIN (or hair): Remove/ 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. Call a POISON CENTER/doctor if you feel unwell.
P301, P330, P331	If swallowed: Rinse mouth. Do not induce vomiting.
P370, P378	In case of fire: Use CO2, dry chemical, or foam for extinction
P-Code	**Precautionary Statement - Storage**
P405	Store locked up
P235, P403	Store in a cool well-ventilated area
P-Code	**Precautionary Statement - Disposal**
P501	Dispose of contents/ container to an approved waste disposal plant. 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 %
38294-64-3	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25-50
100-51-6	Benzyl alcohol	25-50
1477-55-0	m-phenylenebis(methylamine)	5-10
69-72-7	Salicylic acid	<3

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:
IF SWALLOWED Transport to hospital, or doctor. For advice, contact a Poisons Information Centre or a doctor. In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. If medical attention is not available on the worksite or

surroundings send the patient to a hospital together with a copy of the SDS.
Inhalation:
Keep patient calm and remove to fresh air. Transport to hospital, or doctor.
Eye Contact:
While holding eyes open, gently flood with plenty of fresh water for 15 minutes. Washing within one minute is essential to achieve maximum effectiveness. Immediate medical attention required. If pain persists or recurs also 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. Seek medical attention in event of irritation. 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

May cause sensitisation in susceptible persons. Treat symptomatically. Because of the danger of aspiration, emesis or gastric lavage should not be used unless the risk is justified by the presence of additional toxic substances..

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:
Water fog or fine spray, dry chemical powder, foam, BCF (where regulations permit). Alcohols resistant foams are preferred. Protein foams may functions but will be less effective.

Unsuitable extinguishing media that may not be used for safety reasons:
Do not use direct water stream as it might spread the fire.

5.2 Special hazards arising from the substance or mixture

Oxides of carbon and other possibly toxic fumes from fire.

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. 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), phenolics products typical of burning organic material. Closed containers may rupture due to pressure buildup under fire conditions.

Hazchem code: 3Y

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. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback.

6.2 Environmental precautions

Do not discharge into sewers or waterways and soil.

6.3	**Methods and material for containment and cleaning up**	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.
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 flammable. 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 and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e. pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store away from strong acids, strong bases and strong oxidising agents.
Temperature Conditions:
Up to 40º 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 Hazardous Liquid which should be stored and handled in accordance with regulations

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits Australia

Ingredient	WES	
2-Methylpropan-1-ol	0.1mg/m³	

8.2 Exposure controls

General protection and hygiene measures:
General 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
A/P2 Filter of sufficient capacity if ventilation is inadequate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent). When there is a potential to exceed exposure limits or guidelines a positive pressure full face respirator should be worn. If there are no applicable limits, wear respiratory protection when adverse effects like irritation or discomfort have been experienced or when indicated by you risk assessment process.

Eye protection
Chemical goggles. Full face respiratory may be required if exposure causes discomfort.
Hand protection
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
Butyl rubber, BR
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.5 mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Skin protection
Overalls clothing, P.V.C. apron.
Other Information
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:**	Ammoniacal odour
	Odour Threshold	Not determined
	Colour:	Yellowish
	Physical State:	Fluid
	Flash Point:	101°C
	Boiling Point:	Not Available
	Melting Point:	Not Available
	Specific Gravity:	1.05 g/cm³
	pH:	Not Available
	Solubility in Water (g/L):	Not miscible
	Flammability:	N/A
	Explosion Lower Limit:	1.2 Vol %
	Explosion Higher Limit:	13.0 Vol %
	Vapour Pressure:	0.1 hPa at 20 oC
	Vapour Density (Air = 1)	Not determined
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**	Heat, flames and sparks.
10.5	**Incompatible materials**	Keep away from oxidizing agents, acids and alkalis.

10.6	**Hazardous decomposition products**	Oxides of carbon and other possibly toxic fumes from fire.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity/Effects

100-51-6 Benzyl alcohol:
Acute oral toxicity
LD50 1,230 mg/kg (rat)

Acute Dermal toxicity
LD50 2000 mg/kg (rabbit)

1477-55-0 m-phenylenebis(methylamine)*Acute oral toxicity*
LD50 930 mg/kg (rat)

Acute Dermal toxicity
LD50 > 3100 mg/kg (rabbit)

Enviro Ultra Tuff Part B
Skin corrosion/irritation
Caustic effect on skin and mucous membranes.

Serious eye damage/eye irritation
Strong caustic effect. Risk of serious damage to eyes.

Respiratory or skin sensitisation
May cause sensitisation by skin contact.

Chronic Toxicity/Effects

Enviro Ultra Tuff part B:
Specific target organ systematic toxicity (single exposure)
No information available.

Specific target organ systematic toxicity (repeated exposure)
No information available.

Genetic toxicity
No information available.

Carcinogenicity
No information available.

Reproductive toxicity
No information available.

Teratogenicity
No information available.

Aspiration Hazard
No information available.

Long Term Effects:

No information available.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity

38294-64-3 Reaction products of 3- am inomethyl-3,5,5 trimethylcyclohexylamine and 4,4'- Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane:
Acute toxicity to aquatic invertebrates
11.1 mg/l (Daphnia) LC50(96h)

Acute toxicity to algae/aquatic plants
79.4 mg/l (algae) ErC50(72h)

100-51-6 Benzyl alcohol
Acute toxicity in fish
646 mg/L (leuciscus idus) LC50 96 h

Acute toxicity to aquatic invertebrates
400 mg/l (Daphnia)

Acute toxicity to algae/aquatic plants
640 mg/l (algae) ErC50(96h)

1477-55-0 m-phenylenebis(methylamine)
Acute toxicity in fish
87.6 mg/L (leuciscus idus) LC50 96 h

Acute toxicity to aquatic invertebrates
15.2 mg/l (Daphnia) LC50(48h)

Acute toxicity to algae/aquatic plants
20.3 mg/l (algae) ErC50(72h)

Microorganisms/Effect on sludge

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Additional Information

Do NOT discharge into sewer or waterways. Harmful to fish

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.

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:	2735
DG Class:	8
EPG card:	N/A
Hazchem Code:	3Y
Proper Shipping Name:	POLYAMINES, LIQUID, COROSIVE, N.O.S. (Epoxide resin hardener)
Packing Group:	III

Classification for SEA transport (IMO-IMDG)

U.N. Number:	2735
DG Class:	8
Proper Shipping Name:	POLYAMINES, LIQUID, COROSIVE, N.O.S. (Epoxide resin hardener)
Packing Group:	III
Marine Pollutant:	No
EmS-No	F-A, S-B

Classification for AIR transport (IATA/ICAO)

U.N. Number:	2735
DG Class:	8
Proper Shipping Name:	POLYAMINES, LIQUID, COROSIVE, N.O.S. (Epoxide resin hardener)
Packing Group:	III

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: N/A

Australian Inventory: Listed
Controlled Schedule Not 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