SAFETY DATA SHEETS (SDS)
Enviro 800 TC Part A

Version: 5

Issued by: Envirosystems Technologies

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Hazard Identifiers

SECTION 1 – IDENTIFICATION OF MATERIAL & SUPPLIER

1.1	**Product Name:**	Enviro 800 TC Part A
	Manufacturer's Product Code:	N/A
1.2	**Recommended Use:**	Part A of a two component, polyurethane 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
Flammable Liquid	3
Acute Toxicity - Dermal	4
Acute Toxicity - Inhalation	4
Eye Irritation	2A
Carcinogenicity	2

2.2 Label Elements

Signal word **Warning**

H-code	Hazard Statements
H226	Flammable liquid and vapour
H312	Harmful in contact with skin
H332	Harmful if inhaled
H319	Causes serious eye irritation
H351	Suspected of causing cancer.
P-Code	**Precautionary Statement - Prevention**
P201	Obtain special instructions before use
P280	Wear protective gloves / protective clothing / eye

	protection / face protection
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P233	Keep container tightly closed.
P271	Use only outdoors or in a well-ventilated area.
P-Code	**Precautionary Statement - Response**
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.
P308, P313	IF exposed or concerned: Get medical advice/attention
P370, P378	In case of fire: Use alcohol resistant foam or normal protein foam for extinction.
P361, P364	Take off immediately all contaminated clothing and wash before reuse.
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

3.1 Substances

3.2 Mixtures

See section below for Mixtures

CAS No.	Material	Content %
Not Available	synthetic resin	10-60
13463-67-7 <60	titanium dioxide	<60
1330-20-7	xylene	10-30
54839-24-6	propylene glycol monoethyl ether acetate - alpha isomer	5-15
123-86-4	n-butyl acetate	5-15
100-41-4	ethylbenzene	<5
123-42-2	diacetone alcohol	<5
	Ingredients determined not to be hazardous	Balance

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 personal 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. Seek medical attention. Avoid giving milk or oils or alcohol. If vomiting occurs, lean

patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

Inhalation:

Keep patient calm and remove to fresh air. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. If not breathing and immediately contact emergency services and apply artificial respiration. Perform CPR if necessary.

Eye Contact:

While holding eyes open, gently flood with plenty of fresh water for 15 minutes. Seek medical attention without delay; 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 availed. Seek medical attention if irritation occurs. 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

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

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) and alcohols stable foams.

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

5.2 Special hazards arising from the substance or mixture

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

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 (CO_2), phenolics products typical of burning organic material. Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

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. 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. 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: The product is combustible. Prevent electrostatic charge - sources of ignition should be kept well clear. Avoid all personal contact, including inhalation. Do NOT cut, drill, grind, weld or perform similar operations on or near containers. Do NOT allow clothing wet with material to stay in contact with skin.
7.2	**Conditions for safe storage**	**Storage Requirements:** Store in a cool, dry area away from incompatible materials. **Temperature Conditions:** Up to 40º C **Protection from weather:** Store undercover and away from frost and moisture. Avoid contact with oxidising agents.
7.3	**Specific end use(s)**	Once mixed with part A and applied, produces a polyurethane coating.
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:

Ingredient	TWA	STEL
titanium dioxide	10mg/m3	
xylene	80ppm	150ppn
n-butyl acetate	150ppm	200ppm
ethylbenzene	100ppm	125ppm
diacetone alcohol	50ppm	

Emergency limits:

Ingredient	TEEL-1	TEEL-2	TEEL-3
titanium dioxide	10mg/m3	10mg/m3	10mg/m3
diacetone alcohol	50ppm	50ppm	2100ppm

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. Air quality should be checked regularly in accordance with AS/NZS 1715. Use dilution ventilation systems to dilute and displace contaminated air with fresh air supplied to the work area by mechanical exhaust fans (make sure explosion and spark proof equipment as solvents are used) or natural air currents through doors, windows or other openings in the building. **Personal protection equipment:** *Respiratory protection* Avoid breathing of vapors/gases. Select and use respirators in accordance with AS/NZS 1715/1716.The use of a respirator for organic vapors with (disposable) or with replaceable filters is recommended. Filter capacity and respirator type depends on exposure levels and type of contaminant. If entering spaces where the airborne concentration of a contaminant is unknown then the use of a self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715/1716, or any other acceptable International Standard is recommended *Eye protection* Safety glasses with side shields or chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants *Hand protection* Protective gloves made of Isocyanate resistant materials include Neoprene, Viton, nitrile rubber and some PVA. *Skin protection* Long sleeve shirt and long pants or if exposure is severe overalls. *Other Information* Always wash hands before smoking, eating, drinking or using the toilet and after finishing work.
8.3	**Further information for system design and engineering measures**	Keep containers closed when not in use.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

9.1	**Odour:**	Not Available
	Odour Threshold	No test data avaliaible
	Colour:	Clear to white
	Physical State:	Smooth flowing flammable liquid
	Flash Point:	33-36
	Boiling Point:	143
	Melting Point:	Not Available
	Specific Gravity:	0.93-1.32
	pH (5% solution):	Not Available
	Solubility in Water (g/L):	Insoluble (Hydrophobic)
	Flammability:	Yes
	Lower Limit:	2.1
	Higher Limit:	9.8
	Vapour Pressure:	0.9 at 25°C
	Vapour Density (Air = 1)	4.1
	Volatile component	46-54

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 section 7 hazardous reactions are unlikely. 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**	See section 7
10.6	**Hazardous decomposition products**	See section 5

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity/Effects

Enviro 800 TC part A:

titanium dioxide:
Acute toxicity
Inhalation (rat) LC50: >2.28 mg/l/4hr
Inhalation (rat) LC50: >3.56 mg/l/4hr
Inhalation (rat) LC50: >6.82 mg/l/4hr
Inhalation (rat) LC50: 3.43 mg/l/4hr
Inhalation (rat) LC50: 5.09 mg/l/4hr
Oral (rat) LD50: >2000 mg/kg

Irritation
Skin (human): 0.3 mg /3D (int)-mild

xylene:
Acute toxicity
Dermal (rabbit) LD50: >1700 mg/kg
Inhalation (rat) LC50: 5000 ppm/4hr
Oral (rat) LD50: 4300 mg/kg

Irritation
Eye (human): 200 ppm irritant
Eye (rabbit): 5 mg/24h SEVERE
Eye (rabbit): 87 mg mild
Skin (rabbit):500 mg/24h moderate

propylene glycol monoethyl ether acetate - alpha isomer:
Acute toxicity
Inhalation (rat) LC50: >6.999 mg/L/4h
Oral (rat) LD50: >5000 mg/kg

Irritation
Eye: Slight Eye
Skin: Slight [BP Chemicals]

n-butyl acetate:
Acute toxicity
Dermal (rabbit) LD50: >14080 mg/kg
Inhalation (rat) LC50: 2000 ppm/4hr

Inhalation (rat) LC50: 390 ppm/4hr
Oral (rat) LD50: 10736 mg/kg

Irritation
Eye (human): 300 mg
Eye (rabbit): 20 mg (open)-SEVER
Eye (rabbit): 20 mg/24h – moderate
Skin (rabbit): 500 mg/24h-moderate

ethylbenzene:
Acute toxicity
Dermal (rabbit) LD50: ca.15432.6 mg/kg
Inhalation (mouse) LC50: 35.5 mg/L/2hr
Inhalation (rat) LC50: 55 mg/L/2hr
Oral (rat) LD50: 3500 mg/kg

Irritation
Eye (rabbit): 500 mg - SEVERE
Skin (rabbit): 15 mg/24h mild

diacetone alcohol:
Acute toxicity
dermal (rat) LD50: >1875 mg/kg
Oral (rat) LD50: 2520 mg/kg

Irritation
Eye (human): 100 ppm/15 mins.
Eye (rabbit): 5 mg SEVERE
Skin (rabbit): 500 mg open mild

Chronic Toxicity/Effects

Enviro 800 TC part A:
Specific target organ systematic toxicity (single exposure)
Data Not Available to make classification.

Specific target organ systematic toxicity (repeated exposure)
Data Not Available to make classification.

Genetic toxicity
Data Not Available to make classification.

Carcinogenicity
TITANIUM DIOXIDE and ETHYLBENZENE These substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. WARNING

Reproductive toxicity
Data Not Available to make classification.

Teratogenicity
Data Not Available to make classification..

Long Term Effects:

There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby. Women exposed to xylene in the first 3 months of pregnancy showed a slightly increased risk of miscarriage and birth defects. Evaluation of workers chronically exposed to xylene has demonstrated lack of genetic toxicity. Exposure to the material for

prolonged periods may cause physical defects in the developing embryo (teratogenesis).

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity

titanium dioxide:
LC50 96h Fish 9.214mg/L EPIWIN Suite V3.12 -Aquatic Toxicity Data (Estimated)
EC50 48h Crustacea >10mg/L Europe ECHA Registered Substances Ecotoxicological Information - Aquatic Toxicity
EC50 72h Algae or other aquatic plants 5.83mg/L US EPA, Ecotox database - Aquatic Toxicity
EC20 72h Algae or other aquatic plants 1.81mg/L US EPA, Ecotox database - Aquatic Toxicity
NOEC 336h Fish 0.089mg/L US EPA, Ecotox database - Aquatic Toxicity

xylene:
LC50 96h Fish 2.6mg/L Europe ECHA Registered Substances Ecotoxicological Information - Aquatic Toxicity
EC50 48h Crustacea >3.4mg/L Europe ECHA Registered Substances Ecotoxicological Information - Aquatic Toxicity
EC50 72h Algae or other aquatic plants 4.6mg/L Europe ECHA Registered Substances Ecotoxicological Information - Aquatic Toxicity
EC50 24h Crustacea 0.711mg/L US EPA, Ecotox database - Aquatic Toxicity
NOEC 73h Algae or other aquatic plants 0.44mg/L Europe ECHA Registered Substances Ecotoxicological Information - Aquatic Toxicity

propylene glycol monoethyl ether acetate - alpha isomer:
LC50 96h Fish 74.914mg/L EPIWIN Suite V3.12 -Aquatic Toxicity Data (Estimated)
EC50 48h Crustacea =96130mg/L IUCLID Toxicity Data
EC50 96h Algae or other aquatic plants 5.751mg/L EPIWIN Suite V3.12 -Aquatic Toxicity Data (Estimated)
EC50 24h Crustacea =180260mg/L IUCLID Toxicity Data
NOEC 48h Crustacea 32mg/L IUCLID Toxicity Data

n-butyl acetate:
LC50 96h Fish 18mg/L Europe ECHA Registered Substances - Ecotoxicological Information
EC50 48h Crustacea =32mg/L IUCLID Toxicity Data
EC50 96h Algae or other aquatic plants 1.675mg/L EPIWIN Suite V3.12 -Aquatic Toxicity Data (Estimated)
EC50 96h Fish 18mg/L Europe ECHA Registered Substances - Ecotoxicological Information

ethylbenzene:
LC50 96h Fish 0.0043mg/L US EPA, Ecotox database - Aquatic Toxicity Data
EC50 48h Crustacea 1.184mg/L US EPA, Ecotox database - Aquatic Toxicity Data
EC50 96h Algae or other aquatic plants 3.6mg/L Europe ECHA Registered Substances - Ecotoxicological Information
EC50 96h Crustacea =0.49mg/L IUCLID Toxicity Data
NOEC 168h Crustacea 0.96mg/L METI (Japan) - Bioconcentration Data

diacetone alcohol:
LC50 96h Fish 420mg/L US EPA, Ecotox database - Aquatic Toxicity Data
EC50 96h Algae or other aquatic plants 6791.439mg/L EPIWIN Suite V3.12 -Aquatic Toxicity Data (Estimated)
EC50 384h Crustacea 229.014mg/L EPIWIN Suite V3.12 -Aquatic Toxicity Data (Estimated)

Microorganisms/Effect on sludge	No data
Persistence and degradability	titanium dioxide water/soil HIGH, air HIGH xylene water/soil HIGH (Half-life = 360 days), air LOW (Half-life = 1.83 days) propylene glycol monoethyl ether acetate - alpha isomerwater/soil LOW, air LOW n-butyl acetate water/soil LOW, air LOW ethylbenzene water/soil HIGH (Half-life = 228 days) , air LOW (Half-life = 3.57 days) diacetone alcohol water/soil HIGH, air HIGH
Bioaccumulative potential	titanium dioxide LOW (BCF = 10) xylene MEDIUM (BCF = 740) propylene glycol monoethyl ether acetate - alpha isomer LOW (LogKOW = 1.0074) n-butyl acetate LOW (BCF = 14) ethylbenzene LOW (BCF = 79.43) diacetone alcohol LOW (LogKOW = -0.3376)
Mobility in soil	titanium dioxide LOW (BCF = 10) xylene MEDIUM (BCF = 740) propylene glycol monoethyl ether acetate - alpha isomer LOW (LogKOW = 1.0074) n-butyl acetate LOW (BCF = 14) ethylbenzene LOW (BCF = 79.43) diacetone alcohol LOW (LogKOW = -0.3376)
Additional Information	None

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:	1263
DG Class:	3
EPG card:	N/A
Hazchem Code:	3Y
Proper Shipping Name:	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Packing Group:	3
Poison Schedule	N/A

Classification for SEA transport (IMO-IMDG)	U.N. Number:	1263
	DG Class:	3
	Proper Shipping Name:	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound))
	Packing Group:	III
	Marine Pollutant:	NO
Classification for AIR transport (IATA/ICAO)	U.N. Number:	1263
	DG Class:	3
	Proper Shipping Name:	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
	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: S6

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