

SAFETY DATA SHEETS (SDS)

Enviro 820 TC



Version: 3

Issued by: Envirosystems Technologies

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Hazard Identifiers



SECTION 1 – IDENTIFICATION OF MATERIAL & SUPPLIER

- 1.1 Product Name:** Enviro 820 TC
Manufacturer's Product Code: N/A
- 1.2 Recommended Use:** Polyurethane Coating
- 1.3 Company:** Envirosystems Technologies Pty Ltd
Address: 295 Princes Highway St Peters, NSW 2044.
Website: www.envirosystems.com.au
Telephone: +61 (02) 8595 8699 (business hours)
Fax: +61 (02) 8595 8660
- 1.4 Emergency Telephone:** +61 (02) 8595 8699 (7am to 5pm Monday to Friday AEST)
13 11 26 - Poisons Centre

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 - Inhalation	4
Specific target organ toxicity (repeated exposure)	2
Specific target organ toxicity (single exposure)	3
Skin Corrosion/ Irritation	2
Serious Eye Damage / Irritation	2A
Skin Sensitisation	1A
Aquatic Environment Acute	3
Aquatic Environment Chronic	3

- 2.2 Label Elements**



Signal word

Warning

H-code	Hazard Statements
H226	Flammable liquid and vapour
H315	Causes skin irritation

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H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life
H413	Harmful to aquatic life with long lasting effects
P-Code	Precautionary Statement - Prevention
P210	Keep away from heat/sparks/open flames/hot surfaces. — No smoking
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash hands thoroughly after handling
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P314	Get medical attention/advice if you feel unwell
P-Code	Precautionary Statement - Response
P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
P301, P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303, P361, P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305, P351, P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P304, P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P370, P378	In case of fire: Use CO2, dry chemical, or foam for extinction
P331	Do NOT induce vomiting
P-Code	Precautionary Statement - Storage
P405	Store locked up.
P403, P235, P233	Store in a cool well-ventilated place. Keep container tightly closed
P-Code	Precautionary Statement - Disposal
P273	Avoid release to the environment
P501	Dispose of contents/ container to an approved waste disposal plant

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2.3 Other Hazards

Not applicable

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

See section below for Mixtures

3.2 Mixtures

CAS No.	Material	Content %
1330-20-7	Xylene	30-60
100-41-4	Ethylbenzene	10-20
108-65-6	2-Propanol, 1-methoxy-, acetate	5-10
25973-55-1	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol	1-5
5124-30-1	4,4'-Methylenedicyclohexylene diisocyanate	0.1-1
41556-26-7	Bis (1-2,2,5,6-Pentamethyl-4) Piperidiny Sebacate	0.1-1
77-58-7	Dibutyltin dilaurate	<0.3
82919-37-7	Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	<0.3
	Non-hazardous ingredients	Remaining

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings

Ingestion:

If swallowed, may produce an allergic reaction. If an allergic reaction occurs, stop use and seek medical help right away. Do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 38.3°C, shortness of breath, chest congestion or continued coughing or wheezing.

Inhalation:

May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.

Eye Contact:

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor. Treat symptomatically. In case of accident or if you feel unwell or persistent irritation occurs, seek medical advice immediately (show the label where possible). If easy to do, remove contact lenses.

Skin Contact:

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Treat symptomatically. May cause an allergic skin reaction. If redness, swelling, pain and/or blisters occur, seek medical advice immediately (show the label where possible).

4.2 Most important symptoms and effects, both acute and delayed

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.

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4.3 Advice for doctor Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

- 5.1 Extinguishing media** Suitable extinguishing media:
Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
- Unsuitable extinguishing media that may not be used for safety reasons:
High volume water jet
- 5.2 Special hazards arising from the substance or mixture** Oxides of carbon and possibly toxic fumes from fire. Fire in vicinity poses risk of pressure build-up and rupture. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area. Flammable vapours may be present even at temperatures below the flash point. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water.
- 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.
- Hazchem Code** •3Y

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Secure the area. Ensure adequate ventilation, especially in confined areas. 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. Do not operate electrical equipment.
- 6.2 Environmental precautions** Collect spillage.
- 6.3 Methods and material for containment and cleaning up** Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator. Ventilate contaminated area thoroughly. If contamination of site occurs remediation may require specialist advice.
- 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

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7.1 Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Handle in accordance with good industrial hygiene and safety practice.

The personal protective measures described in section 8 must be observed. The precautions required in the handling of solvents must be taken. Avoid contact with skin and eyes and the inhalation of vapor.

7.2 Conditions for safe storage

Storage Requirements:

Keep container tightly closed, store in a cool, dry area

Storage Incompatibility:

Strong oxidising agents, naked flames. Do not smoke. Remove ignition sources. Avoid sparks.

Suitable containers:

Original packing as recommended by manufacturer.

Temperature Conditions:

5° to 35° C

Protection from weather:

Store undercover and away from frost and moisture

7.3 Specific end use(s)

Envirosystem coating systems.

7.4 Regulations and standards (Australia):

N/A

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

Ingredient	STEL	TWA
Xylene	150 ppm 655 mg/m ³	80 ppm 350 mg/m ³
Ethylbenzene	125 ppm 543 mg/m ³	100 ppm 434 mg/m ³
2-Propanol, 1-methoxy-, acetate	100 ppm 548 mg/m ³	50 ppm 274 mg/m ³
4,4'-Methylenedicyclohexylene diisocyanate	0.07 mg/m ³	0.02 mg/m ³
Dibutyltin dilaurate	0.2 mg/m ³	0.1 mg/m ³

8.2 Exposure controls

General protection and hygiene measures:

Ensure adequate ventilation, especially in confined areas. Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Personal protection equipment:

Respiratory protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency,

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confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapours, Type A boiling point >65°C. If there are no applicable limits, wear respiratory protection when adverse effects like irritation or discomfort have been experienced or when indicated by your risk assessment process.

Eye protection:

Safety goggles / face protection shield

Hand protection:

Gloves made from the following materials may provide suitable chemical protection. Short term protection: Nitrile rubber gloves, PVC, neoprene. Longer term: Viton / Butyl rubber. Not suitable are Natural rubber gloves. Contaminated gloves should be disposed of.

Skin protection

Overalls clothing, antistatic footwear. Wear fire resistant or flame retardant 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:	Aromatic
	Colour:	clear amber
	Physical State:	Liquid
	Flash Point:	29°C
	Boiling Point:	137 - 143°C
	Melting Point:	Not Available
	Specific Gravity:	0.98
	pH:	Not Available
	Viscosity (Kinematic):	56 mm ² /s
	Viscosity (Dynamic):	55 mPa.s
	Solubility in Water (g/L):	Insoluble
	Flammability:	
	Lower Limit:	1.1%
	Higher Limit:	7.7%
	Vapour Pressure:	52
	Vapour Density (Air = 1)	3.7
	Auto-ignition temperature	Not Available
9.2	Other information	Non available

SECTION 10 – STABILITY AND REACTIVITY

10.1	Reactivity; Chemical stability;	If stored and handled in accordance with standard industrial practices not
-3	Possibility of hazardous reactions	hazardous reactions are known.
10.4	Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. In certain circumstances product can ignite due to static electricity.

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|--|---|
| 10.5 Incompatible materials | Strong acids, Strong bases and Strong oxidising agents. |
| 10.6 Hazardous decomposition products | No hazardous decomposition products when stored and handled correctly. But Oxides of carbon and other possibly toxic fumes from fire. |

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity/Effects

Enviro Thinner No.8

Acute oral toxicity LD50

ATEmix (oral) 26,853.00 calculated based on chapter 3.1 of the GHS document

Xylene = 3500 mg/kg (Rat)

Ethylbenzene = 3500 mg/kg (Rat)

2-Propanol, 1-methoxy-, acetate = 8532 mg/kg (Rat)

4,4'-Methylenedicyclohexylene diisocyanate = 1065 mg/kg (Rat)

Bis (1-2,2,5,6-Pentamethyl-4) PiperdinyI Sebacate = 2615 mg/kg (Rat)

Dibutyltin dilaurate = 45 mg/kg (Rat) = 175 mg/kg (Rat)

Acute inhalation toxicity LC50

ATEmix (inhalation-vapour) 20.00 calculated based on chapter 3.1 of the GHS document

ATEmix (inhalation-dust/mist) 2.70 calculated based on chapter 3.1 of the GHS document

Xylene = 29.08 mg/L (Rat) 4 h = 5000 ppm (Rat) 4 h

Ethylbenzene = 17.2 mg/L (Rat) 4 h

4,4'-Methylenedicyclohexylene diisocyanate = 0.434 mg/L (Rat) 4 h

Acute dermal toxicity LD50

ATEmix (dermal) 2,596.00 calculated based on chapter 3.1 of the GHS document

Ethylbenzene = 15400 mg/kg (Rabbit)

Dibutyltin dilaurate = 45 mg/kg (Rat) = 630 mg/kg (Rabbit)

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

May cause sensitisation by inhalation. May cause sensitisation by skin contact.

Chronic Toxicity/Effects

Genetic toxicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity:

No information available.

Additional:

No information available.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity

Acute Toxicity to Algae

Ethylbenzene

438 mg/L EC50 96 h Pseudokirchneriella subcapitata

4.6 mg/L EC50 72 h Pseudokirchneriella subcapitata

1.7 - 7.6 mg/L EC50 96 h Pseudokirchneriella subcapitata static

2.6 - 11.3 mg/L EC50 72 h Pseudokirchneriella subcapitata static

Acute Toxicity to Fish

Xylene

13.4 mg/L LC50 96 h Pimephales promelas flow-through

13.5 - 17.3 mg/L LC50 96 h Oncorhynchus mykiss

13.1 - 16.5 mg/L LC50 96 h Lepomis macrochirus flow-through

23.53 - 29.97 mg/L LC50 96 h Pimephales promelas static

19 mg/L LC50 96 h Lepomis macrochirus

2.661 - 4.093 mg/L LC50 96 h Oncorhynchus mykiss static

30.26 - 40.75 mg/L LC50 96 h Poecilia reticulata static

780 mg/L LC50 96 h Cyprinus carpio semi-static

780 mg/L LC50 96 h Cyprinus carpio

7.711 - 9.591 mg/L LC50 96 h Lepomis macrochirus static

Ethylbenzene

11.0 - 18.0 mg/L LC50 96 h Oncorhynchus mykiss static

7.55 - 11 mg/L LC50 96 h Pimephales promelas flow-through

9.1 - 15.6 mg/L LC50 96 h Pimephales promelas static

9.6 mg/L LC50 96 h Poecilia reticulata static

4.2 mg/L LC50 96 h Oncorhynchus mykiss semi-static

32 mg/L LC50 96 h Lepomis macrochirus static

2-Propanol, 1-methoxy-, acetate

161 mg/L LC50 96 h Pimephales promelas static

4,4'-Methylenedicyclohexylene diisocyanate

1.2 mg/L LC50 96 h Brachydanio rerio static

1.2 - 2.76 mg/L LC50 96 h Brachydanio rerio

Bis (1-2,2,5,6-Pentamethyl-4) PiperdinyI Sebacate

0.97 mg/L LC50 96 h Lepomis macrochirus static

Dibutyltin dilaurate

2 mg/L LC50 48 h Oryzias latipes

Acute Toxicity to crustacean

Xylene

3.82 mg/L EC50 48 h water flea

0.6 mg/L LC50 48 h Gammarus lacustris

Ethylbenzene

1.8 - 2.4 mg/L EC50 48 h Daphnia magna

2-Propanol, 1-methoxy-, acetate

500 mg/L EC50 48 h Daphnia magna

Bis (1-2,2,5,6-Pentamethyl-4) PiperdinyI Sebacate 20 mg/L EC50 24 h Daphnia

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magna

Ethyl benzene

Toxicity to Algae

EC50: 7.7 mg/L (96h)

Toxicity to Fish

LC50: 5.1 mg/L (Atlantic silverfish; 96h)

Daphnia Magna (Water Flea)

LC50: 1.8-2.4 mg/L (48h)

Microorganisms/Effect on sludge

No information available.

Persistence and degradability

No information available

Bioaccumulative potential

Partition coefficient

Xylene = 3.15

Ethylbenzene = 3.118

2-Propanol, 1-methoxy-, acetate = 0.43

Bis (1-2,2,5,6-Pentamethyl-4) PiperdinyI Sebacate = 0.37

Mobility in soil

No information available.

Additional Information

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Not expected to have ozone depletion potential.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Material Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Since empty containers retain product residue, follow label warnings even after container is emptied.

Uncleaned packaging Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Observe all label precautions until container is cleaned, reconditioned or destroyed. Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal.

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:

1866

DG Class:

3

EPG card:

Not applicable

Hazchem Code:

•3Y

Proper Shipping Name:

RESIN SOLUTION

Packing Group:

III

EmS-No

F-E, S-E

Special Precautions for users

223, 955

IERG

14

ERG Code

3L

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Poison Schedule

S5

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:**

Listed
No 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: +61 (02) 8595 8699 (7am to 5pm Monday to Friday AEST) or Poisons Centre – 13112