

Material Safety Data Sheet

Page: 1 of 5

P228

Issue Date : July 2009

Issued by: A. & I. Coatings

Product Name : **ENVIROTHANE 4110 PACK B – SOLVENT FREE EPOXY COATING**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

Product Name	ENVIROTHANE 4110 Pack B – SOLVENT FREE EPOXY COATING
Product Use	Envirothane 4110 Pack B is a component of a two part epoxy coating. It is mixed with Envirothane 4110 Pack A , 1:3 by volume and applied by brush, roller or spray to surfaces.
Company Name	Architectural and Industrial Coatings (ABN: 48 183 706 679)
Address	7 Lackey Road, MOSS VALE, N.S.W. 2577 AUSTRALIA
Emergency Tel.	A/H. 02 4868 1038 (M) 0439 602 243
Telephone No./Fax	Tel: 02 4869 1441 Fax: 02 4869 3031

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	Name	CAS No.	Proportion
	Benzol Alcohol	100-51-6	30 -60%
	Cyclohexylamine	1761-71-3	1 - 5%
	Benzaneamine Polymer	135108-88-2	30 - 60%

3. HAZARDS IDENTIFICATION

Not flammable.
C1 Combustible
This product is only used when mixed with Pack A, therefore also consult Material Safety Data Sheet for **Envirothane 4110 Pack A**.
Harmful by inhalation and if swallowed.
May cause irritation to the Respiratory tract.
Irritating to the eyes.
May cause sensitisation and irritation to the skin.
Repeated and prolonged absorption may cause headaches and nausea.

4. FIRST AID MEASURES

Swallowed	If swallowed, DO NOT INDUCE VOMITING ; rinse mouth with water and contact a Poisons Information Centre. Urgent hospital treatment is likely to be needed. Give activated charcoal if instructed. Do not give anything by mouth to an unconscious person.
Inhalation	Remove victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.
Skin	Flush contaminated area with lukewarm, gently flowing water for at least 40 minutes, by the clock. DO NOT INTERRUPT FLUSHING . If necessary, keep emergency vehicle waiting (show paramedics this MSDS and take their advice). Under running water, remove contaminated clothing, shoes and leather goods (eg watchbands and belts). Strongly basic ingredients tend to penetrate the skin and so need longer rinsing than other substances. If irritation persists, repeat flushing. Seek medical attention if any irritation occurs.
Eyes	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.
First Aid Facilities	Clean water supply, barrier cream, soap, and eye wash stations.
Advice to Doctor	Treat symptomatically. For advice, contact a Poisons Information Centre Australia 131 126

5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards	This product is classified as a C1 combustible product. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.
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Material Safety Data Sheet

Page: 2 of 5

P228

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Extinguishing Media Water fog or fine spray is the preferred medium for large fires. Try to contain spills, minimize spillage entering drains or water courses.

5. FIRE FIGHTING MEASURES Continued/.....

Specific Methods If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Full protective clothing and self contained breathing apparatus is recommended.

6. ACCIDENTAL RELEASE MEASURES

In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Immediately call the Fire Brigade. Wear self-contained Breathing apparatus (S.C.B.A.) and full protective clothing to minimize skin and eye exposure. Eye/face protect equipment should include a fully enclosed helmet. Stop the leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Because of the corrosiveness of this product, special personal care should be taken in any clean up operation. Sweep up and shovel or collect recoverable product using clean non-sparking tools and place into suitable labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Contaminated area may be neutralized by washing with weak or dilute acid. Vinegar, citrus juice and most soft drinks may be suitable. This material may be suitable for approved landfill. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

7. HANDLING AND STORAGE

Handling Information Keep exposure to this product to a minimum, and minimize the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimize risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage Regulations This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area. Check containers periodically for corrosion and leaks. Containers should be kept closed in order to minimize contamination. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 10,000kg or L of Dangerous Goods of Packaging Group III, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits Exposure limits have not been established by ASCC for any of the significant ingredients in this product.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Skin Protection Because of the dangerous nature of this product make sure that all skin areas are completely covered by impermeable gloves, overalls, apron and face shield. See below for suitable material types.

Clothing The wearing of protective clothing made from the following material is recommended during the application period: PVC, nitrile, butyl rubber.

Material Safety Data Sheet

Page: 3 of 5

P228

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Industrial Clothing (AS2919). Gloves: PVC or Neoprene (AS2161). Footwear enclosed safety boots is recommended (AS-NZS2210)

8. EXPOSURE CONTROLS, PERSONAL PROTECTION Continued/.....

Eye Protection	Protective glasses or goggles must be worn when this product is being used. Failure to protect your eyes may lead to severe harm to them or to general health. It is recommended that you not wear contact lenses. Emergency eye wash facilities must also be available in an area close to where this product is being used. Industrial Eye Protection (AS1336) and (AS/NZS 1337).
Respiratory	Where there is a risk of exposure to this product, we recommend that you use a respirator. It should be fitted with a type A cartridge, suitable for organic vapours. (AS-NZS) 1715/1716).
Protective Equipment	Avoid breathing the vapour. Avoid contact with skin and eyes. It is advisable to wear the recommended personal protective equipment as described in this Material Safety Data Sheet.
Eng. Controls	This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.
Hygiene Measures	Ensure a high level of personal hygiene is maintained when using this product. Always wash hands before eating, drinking, smoking or using the toilet and at the end of work periods. Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless mobile liquid
Odour	Ammoniacal odour
Boiling Point	207°C @ 100kPa
Melting Point	No specific data. Liquid at normal temperatures.
Solubility in Water	<1%
Specific Gravity (H₂O = 1)	1.03
pH Value	Corrosive
Vapour Pressure	<1.36kPa @ 21°C
Vapour Density (Air = 1)	
Evaporation Rate	Not available
Viscosity	Not available
Volatile Component	Not available
Flash Point	112°C (Closed cup)
Flammability	C1
Ignition Temperature	Not available
Flammable Limits LEL	Not applicable. This product is not flammable.
Flammable Limits UEL	Not applicable. This product is not flammable.

10. STABILITY AND REACTIVITY

Reactivity	Most strong alkalis and bases react with inorganic and organic acids to form salts. They can also react with some metals liberating hydrogen gas. These reactions may be rapid and sometimes liberate much heat. They can also decompose many organic materials such as esters, in a reaction called hydrolysis.
Conditions to Avoid	This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Keep away from heat, flames and sparks. Keep away from sources of sparks or ignition. Keep isolated from combustible materials.
Incompatibilities	Acids, oxidising agents, zinc, tin, aluminium and their alloys, Sodium or Calcium Hypochlorite. Product slowly corrodes copper, aluminium, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Materials reactive with hydroxyl compounds. A reaction accompanied by large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or splattering of hot material.

Material Safety Data Sheet

Page: 4 of 5

P228

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Fire Decomposition Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

11. TOXICOLOGICAL INFORMATION

Toxicology No toxicity data is available for this specific product.
Target Organs Components of the product may affect the nervous system.
Skin Contact with skin will result in irritation.
Eyes May cause sensitisation by skin contact.
Swallowed May cause irritation to mouth throat and stomach if ingested.
Inhalation No inhalation toxicity data is available. May cause irritation to respiratory tract.
Oral LD50 (rat): >2000 mg/kg
Dermal LD50 (rabbit): >2110 mg/kg

12. ECOLOGICAL INFORMATION

Environmental Toxic to aquatic organism; may cause long-term effects in the aquatic environment. **Protection**

13. DISPOSAL CONSIDERATIONS

Waste Disposal There are many pieces of legislation covering waste disposal and they differ in each state and territory, so each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. The Hierarchy of Controls seems to be common – the user should investigate: Reduce, Reuse, and Recycle and only if all else fails should disposal be considered. Note that properties of a product may change in use, so that the following suggestions may not always be appropriate. The following may help you in properly addressing this matter for this product. This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to separate the contamination in some way. Only if neither of these options is suitable, landfill, but we recommend that it be neutralised in a controlled manner before disposal.

14. TRANSPORT INFORMATION

This material is a Non-Flammable Liquid but according to The Australian Code for the Transport of Dangerous Goods by Road and Rail is still considered as Hazardous Goods for Transport.

ADG Code: : 2735, AMINES, LIQUID, CORROSIVE, N.O.S.

Hazchem Code: 2X

Dangerous Goods Class : Class 8, Corrosive Substance

Packaging group : III

Proper Shipping Name : Not required

Segregation Dangerous Goods :

Class 8 – Corrosive substances are incompatible in a placard load with any of the following:

- Class 1, Explosives
- Class 4.3, Dangerous When Wet Substances
- Class 5.1, Oxidising Agents
- Class 5.2, Organic Peroxides
- Class 6, Toxic Substances where the Toxic Substances are cyanides and the Corrosives are acids
- Foodstuffs and foodstuff empties.

They may however be loaded in the same vehicle or packed in the same freight container with the following:

- Class 2.1, Flammable Gases
- Class 2.2, Non-Flammable, Non-Toxic gases
- Class 2.3, Poisonous Gases
- Class 3, Flammable Liquids

Material Safety Data Sheet

Page: 5 of 5

P228

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- Class 4.1, Flammable Solids
- Class 4.2 Spontaneously Combustible Substances
- Class 5.1, Oxidising Agents
- Class 6, Toxic Substances where the Toxic Substances are cyanides and the Corrosives are acids
- Class 9 Miscellaneous Dangerous Goods.

15. REGULATORY INFORMATION

Risk Phrase	R34 Causes burns R43 May cause sensitisation by skin contact. R66 Repeated exposure may cause skin dryness or cracking R20/22 Harmful by inhalation if swallowed R51/53 Toxic to aquatic organisms. May cause long term adverse effects to the aquatic environment.
Safety Phrase	S20 When using do not eat or drink. S26 In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre. S28 After contact with skin, wash immediately with plenty of water. S38 In case of insufficient ventilation, wear suitable respiratory equipment. S45 In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show the label where possible). S24/25 Avoid contact with skin and eyes. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
Poisons Schedule	S5
Hazard Category	Non-flammable liquid. Hazardous goods under Australian Dangerous Goods Code.

16. OTHER INFORMATION

Contact Person/Point EMERGENCY INFORMATION CONTACT: Mr Peter Gillies
02 4869 1441 (BH)
02 4868 1038 (AH or (M) 0439 602 243

Mr Michael Gillies
02 6352 1525 (BH) or (M) 0408 099 145

... End of MSDS ...

This information is, as of this date, true and accurate to the best of A. & I. Coatings' knowledge. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. Actual conditions of use and handling may require consideration of information other than, or in addition to, that provided herein.