



Safety Data Sheet

Hazardous Substance, Non Dangerous Goods

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name: TuffJoint-90 Part B (for use with TuffJoint-90 Part A)

Recommended use: Component of a 2 part Polyurea system.
Spray-applied, abrasion-resistant, membrane.

Supplier: LIQUIMIX PTY LTD
ABN: 32 062 887 585

Street Address: 24 Rosa Place
Richlands Qld 4077
Australia

Telephone: + 61 7 3277 6655
Facsimile: + 61 7 3009 0558

Emergency telephone number: Australia: 1 800 786 152 (ALL HOURS) NZ: 0800 767 376

2. HAZARDS IDENTIFICATION

Australia

This material is hazardous according to health criteria of ASCC Australia.

Hazard Category:

Xn Harmful
C Corrosive

Risk Phrase(s):

R21/22: Harmful in contact with skin and if swallowed.
R34: Causes burns.
R41: Risk of serious damage to eyes.

Safety Phrase(s)

S23: Do not breathe vapour.
S24/25: Avoid contact with skin and eyes.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Class: 8 Corrosive

Classified as a C2 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

Poisons Schedule (Aust): None allocated



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3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL ENTITY.	CAS No.	PROPORTION
Polyoxypropylenediamine	9046-10-0	30-60
Other polyoxypropyleneamines	-	30-60
Catalyst	-	<u>10-29</u>
		100%

4. FIRST AID MEASURES

If poisoning occurs: Contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 03 474 7000).

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin contact: For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.

Eye contact: Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.

Ingestion: Immediately rinse mouth with water. Give water to drink. Do NOT induce vomiting. Seek immediate medical assistance.

First Aid Facilities: Provide eye baths and safety showers close to areas where there is potential for eye and skin contact.

Notes to physician: Treat symptomatically. Can cause corneal burns.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Foam, dry agent (carbon dioxide, dry chemical powder).

Hazards from combustion products: On burning may emit toxic fumes, including those of ammonia, oxides of nitrogen and carbon. Aldehydes and ketones may be formed on burning in a limited air supply.

Precautions for fire fighters and special protective equipment: Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

Hazchem code: 2X



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6. ACCIDENTAL RELEASE MEASURES

Emergency procedures: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination. Do not touch or walk through spilled material.

Methods and materials for containment and clean up procedures: Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled drums for disposal. Wash area down with excess water to remove residual material.

Dangerous Goods – Initial Emergency Response Guide No: 36

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact. Avoid inhaling vapours or spray mists. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Do not dispose of material to sewers or waterways.

Conditions for safe storage: This material is alkaline, store away from acids, oxidising agents and nitrites. Keep containers closed at all times - check regularly for leaks.

Classified as a C2 combustible liquid for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and handling.

This material is classified as a Dangerous Good Class 8 Corrosive Substance as per the criteria of the Australian Dangerous Goods Code and must be stored in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National exposure standards

No value assigned for this specific material by the Australian Safety and Compensation Council (ASCC).

Keep exposures as low as practicable below the exposure standards.

Biological limit values

As per the "National Model Regulations for the Control of Workplace Hazardous Substances [NOHSC:

1005 (1994)]" the ingredients in this material do not have a Biological Limit Allocated.

Engineering controls: Use in a well ventilated area. Use with local exhaust ventilation or while wearing air supplied mask. Keep containers closed when not in use.

Personal protective equipment: OVERALLS, RUBBER BOOTS, FACE SHIELD OR AIR MASK, GLOVES AND APRON.

Wear overalls, face shield, elbow-length impervious gloves, splash apron and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

If inhalation risk exists, wear air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Form / colour / odour: Clear liquid with ammoniacal odour.

Solubility: Soluble in water.

Specific Gravity (water=1):	1.00	Melting Point (°C):	N Av
Rel Vapour Density (air= 1):	N Av.	Boiling Point (°C):	N Av
Vapour Pressure at 20°C (mmHg):	N Av	Decomp. Point (°C):	N Av
Flash Point (PMCC) (°C):	>200	Sublimation Point (°C):	N Av
Flammability Limits (%):	N App	pH (neat):	N Av
Autoignition Temp (°C):	N Av	Viscosity (20°C):	N Av
% Volatile by weight:	N Av	Evaporation Rate:	N Av
Solubility in water:	Insoluble	Odour Threshold (ppm)	N Av

(Typical values only - consult specification sheet)

N Av = Not available. N App = Not applicable.

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of use.

Conditions to avoid: No information available.

Incompatible materials: Incompatible with acids, oxidising agents and nitrates; amines in the product can combine with nitrates to form nitrosamines.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, ammonia and oxides of nitrogen.

Hazardous reactions: Reacts violently with acids.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Inhalation of mists or aerosols may produce respiratory irritation. Severe overexposure may result in the difficulty in breathing, headache, nausea, vomiting and drowsiness. Prolonged or repeated overexposure may result in lung damage.

Skin contact: Corrosive to skin – may cause skin burns. Prolonged or widespread skin contact may result in the absorption of potentially harmful amounts of material.

Eye contact: A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Ingestion: Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract. Aspiration may occur during swallowing or vomiting resulting in lung damage.



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Long Term Effects: This product contains one or more amines which may produce temporary and reversible hazy or blurred vision. Symptoms disappear when exposure is terminated.

Acute toxicity / Chronic toxicity

No LD50 data available for the product. However for the constituent,

Polyoxypropylenediamine: (1)

Oral LD50 (rat): 242 mg/kg
Dermal LD50 (rabbit): 360 mg/kg
Eye irritant (rabbit): 100mg (Severe)

Reaction with nitrites or other nitrosating agents may result in the formation of nitrosamines. Many nitrosamines have been found to cause cancer in laboratory animals.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Not available

Persistence/degradability

Not available

Mobility

Not available

13. DISPOSAL CONSIDERATIONS

Disposal method

Refer to State/Territory Land Waste Management Authority.

The generation of waste should be avoided or minimised wherever possible.

Special precautions for landfill or incineration: None required

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.

UN No: 2735
Class: 8 Corrosive
Packing Group: III
Hazchem Code: 3X
Proper Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS POLYOXYPROPYLENEDIAMINE)

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7) or food and food packaging in any quantity, however exemptions may apply. Note that concentrated strong alkalis are incompatible with concentrated strong acids.



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MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN No: 2735
Class: 8 Corrosive
Packing Group: III
Proper Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS POLYOXYPROPYLENEDIAMINE)

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No: 2735
Class: 8 Corrosive
Packing Group: III
Proper Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS POLYOXYPROPYLENEDIAMINE)

15. REGULATORY INFORMATION

Country/Region	Inventory	Status
Australia	AICS	Listed

Hazard classification

Classified as non hazardous according to criteria of ASCC Australia.

Poisons schedule (Aust): None Allocated.

16. OTHER INFORMATION

Literary reference

(1) 'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, February 2001.

Reason(s) For Issue: First issue.

Material Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since LIQUIMIX Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.