



Material Safety Data Sheet

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Issue date: February 2011

Futurathane 5041 Polyol

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Futurathane 5041 Polyol

Synonym: None

Use: Polyurethane coating polyol component

Era Polymers Pty Ltd
25-27 Green Street
Banksmeadow NSW 2019
Australia
Ph: +61 2 9666 3788
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Emergency Advice All Hours:

Technical Manager +61 2 9666 3788

2. HAZARDS IDENTIFICATION

HAZARDOUS ACCORDING TO NOHSC CRITERIA

Hazard Category: Harmful (Xn), Corrosive (C)

Hazard Classification: HAZARDOUS SUBSTANCE, DANGEROUS GOOD

RISK PHRASES

R21/22 Harmful in contact with skin and if swallowed.

R34 Causes burns.

R43 May cause sensitisation by skin contact.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY PHRASES

S24/25 Avoid contact with skin and eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and contact a doctor.

S28 After contact with skin, wash immediately with plenty of water and soap.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, contact a doctor immediately and show this container or label.

S61 Avoid release to the environment. Refer to special instructions/safety data sheet.

Poison Schedule: S5 [Aust]

This material is a Scheduled **S5** Poison and must be stored, handled and used according to the appropriate regulations.

Warning Statement:

Do not swallow. Avoid skin and eye contact - will cause burns. Skin contact may cause allergic reaction. Avoid release into the aquatic environment.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
POLYOXYPROPYLENE DIAMINE	Greater than 60%	9046-10-0
DIETHYLTOLUENE DIAMINE [DETDA]	10 to 30%	68479-98-1
BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDYL) SEBACATE	1 to 10%	41556-26-7
POLY(OXY-1,2-ETHANEDIYL), α -(3-(3-(2H-BENZOTRIAZOL-2-YL)-5-(1,1-DIMETHYLETHYL)-4-HYDROXYPHENYL)-1-OXOPROPYL)-, ω -HYDROXY-	1 to 10%	104810-48-2

All other ingredients not hazardous according to NOHSC Criteria.



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4. FIRST AID MEASURES

Swallowed:

If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. NEVER give an unconscious person anything to ingest. If large quantities of this material are swallowed, seek medical attention immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Eye:

If material is splashed into eyes, flush with plenty of water for at least 15 minutes, ensuring eyelids are held open. Seek medical attention immediately.

Skin:

If material is splashed onto the skin, remove any contaminated clothing and shoes, and wash skin immediately with plenty of water. Flush skin with water for at least 15 minutes. Seek medical attention immediately. Wash clothing and thoroughly clean shoes before reuse.

Inhaled:

Remove victim to fresh air. Apply resuscitation if victim is not breathing. If breathing is difficult, give oxygen. Seek medical attention.

First Aid Facilities:

Eye wash fountain, safety shower and normal washroom facilities.

Advice to Doctor:

Treat symptomatically.

In case of poisoning, contact Poisons Information Centre

In Australia call Tel: 131126

In New Zealand Tel: 034747000

5. FIRE-FIGHTING MEASURES

Fire/Explosion Hazard

EXTINGUISHING MEDIA: For small fires, use dry chemical powder. For larger fires, use water spray, fog or foam. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus (SCBA) required for fire-fighting personnel. Full protective clothing is also recommended.

HAZARDOUS DECOMPOSITION PRODUCTS: Fire may produce toxic and/or corrosive fumes including oxides of carbon and oxides of nitrogen.

HAZCHEM CODE: 2X [Aust]

FLAMMABILITY

Not flammable or combustible. If involved in a fire may generate noxious and corrosive fumes.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Splash goggles, full suit, boots and gloves. Refer to Section 8 of the Material Safety Data Sheet for further details.

ENVIRONMENTAL PRECAUTIONS AND CLEAN-UP METHODS: Corrosive liquid. Stop leak if possible to do so without risk. Absorb with dry earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent from entering sewers, basements and confined areas. Dike if necessary. Eliminate all ignition sources. Call for assistance on disposal. Neutralise the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirement. For further information on disposal, refer to Section 13 of this Material Safety Data Sheet.



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7. HANDLING AND STORAGE

HANDLING:

Keep container dry. Keep away from heat. Do not breathe gas/fumes/vapour/spray. Never add water to this product. Avoid contact with skin and eyes. Keep away from incompatibles such as acids.

STORAGE:

Keep container in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready to use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

No exposure standards are available for this product, however, the following exposure standards have been assigned by [NOHSC] to the following components of the product:

POLYOXYPROPYLENE DIAMINE

No exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC)

DIETHYLTOLUENE DIAMINE [DETDA]

No exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC)

BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDYL) SEBACATE

No exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC)

POLY(OXY-1,2-ETHANEDIYL), α -(3-(3-(2H-BENZOTRIAZOL-2-YL)-5-(1,1-DIMETHYLETHYL)-4-HYDROXYPHENYL)-1-OXOPROPYL)-, ω -HYDROXY-

No exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC)

Engineering Controls

Corrosive liquid. Single significant exposure may cause severe injury. Maintain adequate ventilation at all times. Exposure to this material may be controlled in a number of ways. Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions. If engineering controls and work practices are not effective in preventing or controlling exposure, then suitable personal protective equipment, which is known to perform satisfactorily, should be used. Ensure that eyewash stations and safety showers are proximal to the workstation location.

Personal Protection Equipment

CLOTHING: Wear suitable protective clothing to prevent any skin contact with this product. Arms and legs should be fully covered.

GLOVES: Wear impervious gloves to prevent any skin contact with this product.

EYES: Wear safety glasses with side shields, chemical goggles or face shield to protect eyes.

RESPIRATORY PROTECTION: Wear suitable respirator when ventilation is inadequate. Select and use respirators in accordance with AS/NZS 1715/1716. When the concentration of airborne contaminants reach the exposure standards then the use of a half-face respirator with acid vapour cartridge is recommended. For high concentration use a atmosphere-supplied, positive pressure demand self-contained or airline-breathing apparatus supplied air respirator complying with the requirements of AS/NZS 1715 is recommended. Filter capacity and respirator type depends on exposure levels. 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. The use of fully-encapsulating, gas-tight suits is also recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque light yellow to amber coloured liquid
Boiling Point Melting Point:	Not determined
Vapour Pressure:	Not determined
Specific Gravity:	Not determined
Flash Point:	Not determined



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Flammability Limits: Not determined
Solubility in Water: Slightly soluble

Other Properties

None determined.

10. STABILITY AND REACTIVITY

STABILITY:

Stable under normal conditions of use.

HAZARDOUS DECOMPOSITION PRODUCTS:

Emits toxic and/or corrosive fumes including oxides of carbon and nitrogen when heated to decomposition.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

Highly reactive with acids.

CONDITIONS TO AVOID:

Heat, flames, ignition sources and incompatibles.

11. TOXICOLOGICAL INFORMATION

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

ACUTE HEALTH EFFECTS:

Swallowed:

Harmful if swallowed.

Will cause burns to the mouth, mucous membranes, throat, oesophagus and stomach. If sufficient quantities are ingested (swallowed) death may occur.

Eye:

Will cause burns to the eyes with effects including: pain, tearing, conjunctivitis and if duration of exposure is long enough, blindness will occur.

Skin:

Harmful by skin contact.

Will cause burns to the skin, with effects including: redness, blistering, localised pain and dermatitis.

Inhaled:

Harmful if inhaled.

Will cause severe irritation to the nose, throat and respiratory system with effects including: dizziness, headache, coughing, loss of co-ordination, chest pains, respiratory paralysis and or failure.

Chronic:

Prolonged or repeated skin contact may lead to dermatitis.

Product may also be absorbed through the skin with resultant toxic effects.

Prolonged or repeated exposure may lead to irreversible damage to health.

Prolonged or repeated exposure may lead to permanent irreversible injury.

Prolonged or repeated skin contact will lead to necrosis (death) of the skin.

Prolonged or repeated contact with this substance will cause sensitisation by skin contact.

Toxicological Data:

There is no other toxicological data available for this product.



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Toxicological Data for Ingredient(s):

POLYOXYPROPYLENE DIAMINE:

Acute Toxicity: LD50 (oral, rat) = 480 mg/kg.

LD50 (dermal, rabbit) = 2090 mg/kg.

Chronic Toxicity: Repeated or prolonged exposure with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated or prolonged exposure to the substance can produce lung damage. May cause dermatitis.

Skin Irritation: Hazardous in case of skin contact (corrosive).

Draize method >6.50-8.00/8.0 (rabbit).

Eye Irritation: Very hazardous in case of eye contact (irritant).

Draize method >80.00/110 (rabbit).

DIETHYLTOLUENEDIAMINE [DETDA]:

Diethyltoluenediamine (DETDA) has acute oral (rat) and dermal (rabbit) LD50 values of 485 mg/kg and 700 mg/kg, respectively. A two-year feeding study (rats) showed DETDA caused adverse effects in the pancreas, liver, thyroid, and eyes. An increase in the number of tumours in the liver and thyroid of male rats, and in the liver and possibly mammary gland of female rats was found. In rare cases, sensitisation to DETDA has been reported to occur in humans.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

There is no information available for this product.

Ecotoxicity Data for Ingredient(s):

POLYOXYPROPYLENE DIAMINE:

LC50 (fish-trout, 96hr) > 100 mg/L

LC50 (algae, 72hr) = 135 mg/L

LC50 (daphnia, 48hr) = 15 mg/L

Mobility:

There is no information available for this product.

Persistence / Degradability:

This product is not readily biodegradable.

Chemical Fate Information:

This product is very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Avoid release of this product into drains, sewers and waterways.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all relevant Local, State and Federal regulations. Dispose of material through a licensed waste contractor. Any processing, use, or contamination of this product may change the requirements for disposal. It is the responsibility of the generator of the waste to properly classify, transport and dispose of the waste.

14. TRANSPORT INFORMATION

Road Transport

UN Number: 1760

Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (Contains Polyoxypropylene diamine)

Dangerous Goods Class: 8

Packing Group: III

Label: Harmful (Xn), Corrosive (C)



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Air Transport

UN Number: 1760

Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (Contains Polyoxypropylene diamine)

Dangerous Goods Class: 8

Packing Group: III

Label: Harmful (Xn), Corrosive (C)

Sea Transport

UN Number: 1760

Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (Contains Polyoxypropylene diamine)

Dangerous Goods Class: 8

Packing Group: III

Label: Harmful (Xn), Corrosive (C)

15. REGULATORY INFORMATION

Poison Schedule: S5 [Aust]

Inventory Status:

Inventory	Status
Australia (AICS)	Y

Y = all ingredients are on the inventory.

16. OTHER INFORMATION

Date of Preparation:

Issue date: 24 February 2011

Supersedes: May 2006

Reasons for Update:

Periodic review

Key Legend Information:

NOHSC - National Occupational Health & Safety Commission {Formerly Worksafe}[Aust]

SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]

TWA - Time Weighted Average [Int]

STEL - Short Term Exposure Limit [Int]

AICS - Australian Inventory of Chemical Substances

EPA - Environmental Protection Agency [Int]

NIOSH - National Institute for Occupational Safety and Health [US]

AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]

AS/NZS 1716 - Respiratory protective devices. [Aust/NZ]

IATA - International Aviation Transport Authority [Int]

ICAO - International Civil Aviation Organization [Int]

IMO - International Maritime Organisation. [Int]

IMDG - International Maritime Dangerous Goods [Int]

United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals. [Int]

EU - European Union

[Aust/NZ] = Australian New Zealand

[Int] = International

[US] = United States of America

Removal of the heading of *Poison Schedule [Aust]*, in section 3 and 15 of this Material Safety Data Sheet (MSDS) makes this a valid health and safety document in other international jurisdictions/countries. For full compliance please contact your Federal, State or Local regulators for further information.



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Disclaimer

This MSDS summarises our best knowledge of the health and safety hazard information available on the product and the measures to be used to handle and use the product safely. Each user should read this MSDS and consider the information in connection with the way the product is intended to be handled or used.

Principal References:

Information supplied by manufacturer, reference sources including the public domain.

END OF MSDS