



Material Safety Data Sheet

Page 1 of 6

Issue date: July 2010

Polyurea 2000 Isocyanate

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Polyurea 2000 Isocyanate

Synonym: Polyurea 2000 Part A

Use: Polyurethane spray elastomer isocyanate component

Era Polymers Pty Ltd
25-27 Green Street
Banksmeadow NSW 2019
Australia
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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), Irritant (Xi)

Hazard Classification: HAZARDOUS SUBSTANCE, NON-DANGEROUS GOOD

RISK PHRASES

R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R42/43 May cause sensitisation by inhalation and skin contact.

SAFETY PHRASES

S23 Do not breathe fumes/vapour/spray.
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 Wear suitable protective clothing and gloves.
S38 In case of insufficient ventilation, wear suitable respiratory protection.
S42 During spraying wear suitable respiratory equipment.
S45 In case of accident or if you feel unwell, contact a doctor immediately and show this container or label.

Poison Schedule: S6 [Aust]

This material is a Scheduled **S6** Poison and must be stored, handled and used according to the appropriate regulations.

Warning Statement:

Avoid breathing vapours. Avoid skin and eye contact. Breathing vapours may product asthma-like symptoms. Skin contact may cause allergic reaction.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
DIPHENYLMETHANE DIISOCYANATE, ISOMERS AND HOMOLOGUES [MDI]	30 to 60%	9016-87-9

All other ingredients not hazardous according to NOHSC Criteria.

4. FIRST AID MEASURES

General Advice:

Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Show this Material Safety Data Sheet to the medical professional in attendance.



Material Safety Data Sheet

Page 2 of 6

Issue date: July 2010

Polyurea 2000 Isocyanate

Swallowed:

If swallowed, DO NOT induce vomiting. If person is conscious give plenty of water to drink. Seek medical attention immediately.

Eye:

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

Skin:

If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly with plenty of water and soap. Flush skin with water. Seek medical attention if irritation persists after washing.

Inhaled:

Remove victim to fresh air. Apply resuscitation if victim is not breathing. If trained personnel available administer oxygen if breathing is difficult. Seek medical attention after significant exposure.

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

If safe to do so, move undamaged containers from fire area.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes on heating emitting toxic and/or irritating fumes including oxides of carbon and nitrogen.

FIRE FIGHTING PROCEDURES: Fire fighters to wear Self-contained breathing apparatus (SCBA) and full protective clothing.

EXTINGUISHING MEDIA: Use foam, carbon dioxide or dry chemical. Do not use water as extinguishing media unless unavoidable. Water reacts with isocyanate forming solid polyurea and liberating carbon dioxide gas. Gas may cause pressure built up. Water spray may be used to cool fire-exposed containers.

HAZCHEM CODE: None allocated [Aust]

FLAMMABILITY

This product is not flammable.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS. Material may be slippery when spilt. Walk cautiously. Bund area using sand or soil - to prevent run off into drains and waterways. Use absorbent (soil, sand, vermiculite or other inert material). Collect material in properly labelled containers for disposal. Do not seal drums - isocyanate will react with water producing carbon dioxide, so contaminated product could cause explosion of sealed drums.

7. HANDLING AND STORAGE

HANDLING:

Open drums carefully as content may be under pressure. In case of insufficient ventilation, wear suitable respiratory protection. Follow good industrial hygiene practices - do not eat, drink or smoke in the workplace.



Material Safety Data Sheet

Page 3 of 6

Issue date: July 2010

Polyurea 2000 Isocyanate

STORAGE:

Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials. Keep containers closed, when not using the product. Store in original packages as approved by manufacturer. Purge with nitrogen and close container when not in 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:

DIPHENYLMETHANE DIISOCYANATE, ISOMERS AND HOMOLOGUES [MDI]

Isocyanate exposure standard, as -NCO (Worksafe Australia)

[TWA] 0.02 mg/m³

[STEL] 0.07 mg/m³

Notices: Sen

Engineering Controls

Maintain adequate general and local exhaust ventilation at all times. If exhaust ventilation is not available or inadequate, use approved respirator to Australian Standards.

Personal Protection Equipment

CLOTHING: Wear suitable protective clothing to prevent skin contact.

GLOVES: Wear impervious gloves to prevent skin contact - PVC or natural rubber.

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

RESPIRATORY PROTECTION: Avoid breathing of vapours/gases. If ventilation is inadequate, wear approved respiratory protection. Select and use respirators in accordance with AS/NZS 1715/1716. The use of a respirator for organic vapours 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow viscous liquid
Boiling Point Melting Point:	BP > 200°C, MP < -20°C
Vapour Pressure:	< 0.01 mmHg @ 20°C
Specific Gravity:	1.00 - 1.21 @ 25°C
Flash Point:	> 177°C
Flammability Limits:	Not determined
Solubility in Water:	< 1 g/L, reacts with water liberating carbon dioxide

Other Properties

pH = 4.5 - 7.0 @ 20°C

Autoignition temperature > 400°C

10. STABILITY AND REACTIVITY

STABILITY:

Stable under normal conditions of use.

HAZARDOUS DECOMPOSITION PRODUCTS:

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

HAZARDOUS POLYMERIZATION:

Will not occur under normal conditions of use.

INCOMPATIBILITIES:

Acids, oxidizing agents, bases and water. Avoid undesired contact with polyols and amines.



Material Safety Data Sheet

Page 4 of 6

Issue date: July 2010

Polyurea 2000 Isocyanate

CONDITIONS TO AVOID:

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:

May cause irritation to mouth, throat and stomach with effects including mucous build up, irritation to the tongue and lips and pains in the stomach, which may lead to nausea, vomiting and diarrhoea.

Eye:

Will cause irritation to the eyes, with effects including: tearing, pain, stinging and blurred vision. Depending upon duration of exposure, eye damage may occur.

Skin:

Will cause irritation to the skin, with effects including: redness, itchiness, and possible dermatitis.

Inhaled:

Harmful if inhaled.

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

Chronic:

Prolonged or repeated skin contact may lead to dermatitis.

Prolonged contact may cause severe eye irritation and some form of permanent eye damage may occur.

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

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

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

Liver or kidney injuries may occur after repeated or prolonged exposure.

Toxicological Data:

LD50 (oral, rat) > 2000 mg/kg

LC50 (inhalation, rat, 4 hour) = 490 mg/m³

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Acute fish toxicity > 1000 mg/L

Mobility:

Do not contaminate water. Product reacts with water producing inert solid polyurea and liberating carbon dioxide gas.

Persistence / Degradability:

There is no information available for this product.

Chemical Fate Information:

There is limited ecological information available for this product, however, large quantities should not be discharged into drains, sewers or 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.



Material Safety Data Sheet

Page 6 of 6

Issue date: July 2010

Polyurea 2000 Isocyanate

[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.

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