



Material Safety Data Sheet

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Issue date: July 2009

AD-1147

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: AD-1147

Synonym: None

Use: Polyurethane Adhesive

Era Polymers Pty Ltd
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Australia
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2. HAZARDS IDENTIFICATION

HAZARDOUS ACCORDING TO NOHSC CRITERIA

Hazard Category: Harmful (Xn), Irritant (Xi)

Hazard Classification: HAZARDOUS SUBSTANCE, DANGEROUS GOOD

RISK PHRASES

R11 Highly flammable.
R20/21 Harmful by inhalation and in contact with skin.
R36/38 Irritating to eyes and skin.
R43 May cause sensitisation by skin contact.
R67 Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S7/9 Keep container tightly closed and in a well-ventilated place.
S16 Keep away from sources of ignition - No smoking.
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.
S36/37 Wear suitable protective clothing and gloves.

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. Skin contact may cause allergic reaction. Avoid release to the aquatic environment. Flammable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
ISOPROPANOL (ISOPROPYL ALCOHOL)	30 to 60%	67-63-0
TOLUENE	30 to 60%	108-88-3
PHENOL-FORMALDEHYDE POLYMER	10 to 30%	9003-35-4
ETHANOL	1 to 10%	64-17-5
PHENOL	1 to 10%	108-95-2

All other ingredients not hazardous according to NOHSC Criteria.



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4. FIRST AID MEASURES

Swallowed:

If swallowed, seek medical attention immediately. Only induce vomiting at the instructions of a medical professional.

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 wash skin thoroughly with water and soap. Seek medical attention. Do not reuse contaminated clothing without laundering.

Inhaled:

Remove victim to fresh air. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult. Seek medical attention if there are persistent symptoms.

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: Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus (SCBA) required for fire-fighting personnel. If possible to do so safely, shut off fuel to fire. Use water spray to spray to cool fire-exposed surfaces and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapours from this product may travel or be moved by air currents and be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge or other ignition sources at locations distant from the point of handling.

HAZCHEM CODE: 3[Y]E [Aust]

FLAMMABILITY

Highly flammable liquid. Avoid all sources of ignition, heat and naked flames. Vapours may travel a considerable distance to source of ignition and ignite.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved positive pressure self-contained respirator. In addition to the protective clothing / equipment in Section 8 (Exposure Controls / Personal Protection), wear impermeable boots.

METHODS FOR CLEANING UP:

Remove sources of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.



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7. HANDLING AND STORAGE

Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition, strong alkalis, acids, combustibles and oxidizing agents. All equipment must be earthed. Store in original packages as approved by manufacturer. Check all fittings, valves, reticulation (piping) and any ancillary equipment for leaks. A supplied air respirator or a Self-Contained Breathing Apparatus (SCBA) for emergencies should be available and checked regularly.

Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. In Australia, refer to AS1940 - The Storage and Handling of Flammable and Combustible Liquids.

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:

ISOPROPANOL (ISOPROPYL ALCOHOL)

(Worksafe Australia)

[TWA] 400 ppm 983 mg/m³

[STEL] 500 ppm 1,230 mg/m³

References: H;R

(ACGIH)

[TWA] 400 ppm 983 mg/m³

[STEL] 500 ppm 1,230 mg/m³

TOLUENE

(Worksafe Australia)

[TWA] 100 ppm 377 mg/m³

[STEL] 150 ppm 565 mg/m³

References: H;R

(ACGIH)

[TWA] 50 ppm 188 mg/m³

Carcinogen Category: A4

Notices: Sk

PHENOL-FORMALDEHYDE POLYMER

No Exposure details available

ETHANOL

(Worksafe Australia)

[TWA] 1,000 ppm 1,880 mg/m³

References: H

(ACGIH)

[TWA] 1,000 ppm 1,880 mg/m³

Carcinogen Category: A4

PHENOL

(Worksafe Australia)

[TWA] 1 ppm 4 mg/m³

Notices: Sk

References: A

(ACGIH)

[TWA] 5 ppm 19 mg/m³

Carcinogen Category: A4



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Engineering Controls

Highly flammable liquid. Maintain adequate ventilation at all times. Utilise a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure. Prevent accumulation of vapours in hollows or sumps. Eliminate any sources of ignition.

Personal Protection Equipment

CLOTHING: Wear suitable protective clothing to prevent contamination of skin.

GLOVES: Wear impermeable gloves to prevent contamination of skin.

EYES: Wear eye/face protection such as chemical splash proof goggles or face shield. Provide eye wash fountain and safety shower in close proximity to points of potential exposure.

RESPIRATORY PROTECTION: Avoid breathing of vapours/gases. Select and use respirators in accordance with AS/NZS 1715/1716. When gases exceed the exposure standards then the use of a half-face respirator with organic vapour cartridge is recommended. For high concentrations use an atmosphere-supplied, positive pressure demand self-contained or airline breathing apparatus, complying with the requirements of AS/NZS 1715 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:	Amber liquid
Boiling Point Melting Point:	Not determined
Vapour Pressure:	Not determined
Specific Gravity:	0.885 (calculated)
Flash Point:	Approx. 10°C (closed cup)
Flammability Limits:	Not determined
Solubility in Water:	Not determined

Other Properties

None determined.

10. STABILITY AND REACTIVITY

STABILITY:

Stable under normal conditions of use.

HAZARDOUS DECOMPOSITION PRODUCTS:

May emits oxides of carbon and nitrogen, phenols, formaldehyde, butyraldehyde, butyric acid, acrolein, crotonaldehyde, sulphur and silicon when heated to decomposition.

HAZARDOUS POLYMERIZATION:

May occur.

INCOMPATIBILITIES:

Avoid strong oxidisers, alkaline materials and acids.

CONDITIONS TO AVOID:

Heat, sparks, flames, ignition sources and incompatibles.



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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.

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:

Harmful by skin contact.

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

Inhaled:

Harmful if inhaled.

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

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.

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 contact with this substance will cause sensitisation by skin contact.

Toxicological Data:

ACUTE TOXICITY DATA:

Oral: LD50 (rat) > 3300 mg/kg

Dermal: LD50 (rabbit) > no data

Inhalation: LC50 (rat, 4 hour) > 5 mg/L

LOCAL EFFECTS ON SKIN AND EYE:

Dermal: irritating

Eye: no data

ALLERGIC SENSITISATION:

Dermal: sensitising

Inhalation: no data

GENOTOXICITY:

Ames Salmonella Assay: no data

Toxicological Data for Ingredient(s):

ACUTE TOXICITY DATA:

(1) Isopropanol

Oral: LD50 (rat) = 5000 mg/kg

Dermal: LD50 (rabbit) = 12800 mg/kg

Inhalation: LC50 (rat, 4 hour) > 16000 ppm



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(2) Toluene

Oral: LD50 (rat) = 5580 mg/kg

Dermal: LD50 (rabbit) = 12124 mg/kg

Inhalation: LC50 (rat, 4 hour) = 5060 ppm

Inhalation: LC50 (4 hour) = 8000 ppm

(3) Ethanol

Oral: LD50 (rat) = 7060 mg/kg

Dermal: LD50 (rabbit) = 20000 mg/kg

Inhalation: LC50 (rat, 10 hour) = 20000 ppm

(4) Phenol

Oral: LD50 (rat) = 414 mg/kg

Dermal: LC50 (rabbit) = 669 mg/kg

Inhalation: LC50 (rat, 4 hour) = 0.3 mg/L

(5) Formaldehyde

Oral: LD50 (rat) = 100 mg/kg

Dermal: LD50 (rabbit) = 270 mg/kg

Inhalation: LC50 (rat, 4 hour) = 250 - 478 ppm

LOCAL EFFECTS ON SKIN AND EYE:

(1) Isopropanol

Eye: irritating

(2) Toluene

Dermal: no data

Eye: no data

(3) Ethanol

Dermal: not irritating

Eye: irritating

(4) Phenol

Dermal: corrosive

Eye: causes severe damage

(5) Formaldehyde

Dermal: irritating

Eye: causes serious damage

(6) Phenol-formaldehyde polymer

Eye: irritating

ALLERGIC SENSITISATION:

(1) Formaldehyde

Dermal: sensitising

Inhalation: not sensitising

(2) Phenol-formaldehyde polymer

Dermal: sensitising

OTHER INFORMATION:

(1) Toluene

Reproductive toxin in laboratory animals

(2) Ethanol

Human teratogen

Human reproductive toxin

(3) Formaldehyde

Carcinogenic to laboratory animals

May cause irritation of respiratory tract and eyes

The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to the occurrence of nasopharyngeal cancer, a rare type of cancer. IARC also found limited evidence of cancer of the nasal cavity and paranasal sinuses and insufficient evidence for an association between formaldehyde and leukaemia.



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12. ECOLOGICAL INFORMATION

Ecotoxicity:

There is no information available for this substance.

Mobility:

There is no information available for this substance.

Persistence / Degradability:

There is no information available for this substance.

Chemical Fate Information:

No adverse environmental effects are expected with proper use and disposal of this product. The ecological assessment for this material is based on an evaluation of its components. This product may cause long-term adverse effects in the aquatic environment, so avoid release to watercourses, sewers and drains.

13. DISPOSAL CONSIDERATIONS

Recycling, recovery and reuse of material is encouraged where permitted. If disposal is necessary, it is recommended that the material be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

14. TRANSPORT INFORMATION

Road Transport

UN Number: 1133

Proper Shipping Name: ADHESIVES

Dangerous Goods Class: 3

Packing Group: II

Label: Harmful (Xn), Irritant (Xi)

Air Transport

UN Number: 1133

Proper Shipping Name: ADHESIVES

Dangerous Goods Class: 3

Packing Group: II

Label: Harmful (Xn), Irritant (Xi)

Sea Transport

UN Number: 1133

Proper Shipping Name: ADHESIVES

Dangerous Goods Class: 3

Packing Group: II

Label: Harmful (Xn), Irritant (Xi)

15. REGULATORY INFORMATION

Poison Schedule: S6 [Aust]

Inventory Status:

<i>Inventory</i>	<i>Status</i>
Australia (AICS)	Y
United States (TSCA)	Y
Canada (DSL)	Y
Europe (EINECS)	Y

Y = all ingredients are on the inventory or are not required to be listed on the inventory.



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16. OTHER INFORMATION

Date of Preparation:

Issue date: 10 July 2009

Supersedes: April 2005

Reasons for Update:

Review in all sections

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.

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