## Section 1 - Identification of The Material and Supplier

| | |
|---|---|
| **Company Details:** | **A&I Coatings Pty Ltd**<br>7 Lackey Rd, Moss Vale NSW 2577 |
| **Phone:** | +61 2 4869 1441 (Office Hours) |
| **Fax:** | +61 2 4869 3031 |
| **Website:** | www.aicoatings.com |
| **Email:** | helpdesk@aicoatings.com |
| **EMERGENCY TEL:** | **24-hour number 61 3 8769 0291** or (M) 0458 715 846 or (M) 0429 034 350 |
| **Chemical nature:** | Polymeric Aliphatic Isocyanate. |
| **Trade Name:** | **E8476B HARDENER** |
| **Other Names:** | This Part B of a two-part system. |
| **Product Use:** | Hardener in coating materials or adhesives for industrial and trade applications. This SDS must be read in conjunction with SDS for E8476 Pack A. |
| **Creation Date:** | **February 2016** |
| **This version issued:** | **July 2021** and is valid for 5 years from this date. |
| **Poisons Information Centre:** | **Phone 13 1126 from anywhere in Australia** |

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: Xn, Harmful. Xi, Irritating. Hazardous according to the criteria of SWA. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

**SUSMP Classification:** None allocated.
**ADG Classification:** None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.
**UN Number:** None allocated

## GHS Signal Word: WARNING

Skin Sensitisation Category 1
Acute Toxicity Inhalation Category 4
Specific target organ toxicity (single exposure), Category 3
Chronically hazardous to the aquatic environment, Category 3

**HAZARD STATEMENT:**

H317: May cause an allergic skin reaction.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
H412: Chronically hazardous to the aquatic environment.

**PREVENTION**

P102: Keep out of reach of children.
P261: Avoid breathing fumes, mists, vapours, or spray.
P262: Do not get in eyes, on the skin, or clothing.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves, protective clothing and eye or face protection.

**RESPONSE**

P312: Call a POISON CENTRE or doctor if you feel unwell.

P352: Wash with plenty of soap and water.
P363: Wash contaminated clothing before reuse.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+P313: If skin irritation or rash occurs: Get medical advice.
P370+P378: In case of fire, use carbon dioxide, dry chemicals, foam, water fog.

**STORAGE**

P402+P404: Store in a dry place. Store in a closed container.
P403+P235: Store in a well-ventilated place. Keep cool.

**DISPOSAL**

P501: If they cannot be recycled, dispose of contents to an approved waste disposal plant and containers to landfill (see Section 13 of this SDS).

## Emergency Overview

**Physical Description & Colour**: Colourless to yellowish liquid.
**Odour:** Almost odourless.
**Major Health Hazards:** harmful if inhaled, possible skin sensitiser. SWA has released a document entitled GUIDELINES FOR HEALTH SURVEILLANCE FOR ISOCYANATES which can be found at http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/514/Isocyanates.pdf.

## Section 3 - Composition/Information on Ingredients

| Ingredients | CAS No | Conc,% | TWA (mg/m$^3$) | STEL (mg/m$^3$) |
|---|---|---|---|---|
| Hexamethylene-1,6-diisocyanate | 822-06-0 | <0.15 | 0.02 | 0.07 |
| hydrophilic aliphatic polyisocyanate | 160994-68-3 | >80 | not set | not set |
| Other nonhazardous ingredients | secret | to 100 | not set | not set |

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other nonhazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

## Section 4 - First Aid Measures

### General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned, or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** If symptoms of poisoning become evident, contact a Poisons Information Centre, or call a doctor at once. Remove the source of contamination or move the 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 the victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.
**Skin Contact:** Gently blot away excess liquid. Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until the chemical is removed.
**Eye Contact:** Quickly and gently blot material from eyes. No effects expected. If irritation does occur, flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if the exposed person is wearing contact lenses.
**Ingestion:** If the product is swallowed or gets in the mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

## Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards**: The major hazard in fires is usually inhalation of heated and toxic or oxygen-deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. A violent steam generation or eruption may occur upon the application of a direct water stream on hot liquids.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.
**Extinguishing Media:** In case of fire, use carbon dioxide, dry chemicals, foam, water fog. Avoid the use of water jets.
**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. Cool closed, undamaged containers exposed to fire with water spray.

| | |
|---|---|
| **Flashpoint:** | No data |
| **Upper Flammability Limit:** | No data. |
| **Lower Flammability Limit:** | No data. |
| **Autoignition temperature:** | About 465°C |
| **Flammability Class:** | No data. |

## Section 6 - Accidental Release Measures

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or watercourses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include butyl rubber. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the clean-up area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.
Stop leak if safe to do so and contain the spill. Absorb onto sand, vermiculite, or other suitable absorbent material. If the spill is too large or if absorbent material is not available, try to create a dike to stop material from spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into 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. This material may be suitable for an approved landfill. Ensure legality of disposal by consulting regulations before disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of the nature of contamination when sending contaminated clothing to laundry.

## Section 7 - Handling and Storage

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS 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 to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of the product with incompatible materials listed in Section 10.
**Storage:** Store packages of this product in a cool place. Make sure that containers of this product are kept tightly closed. Keep containers dry and away from water. Keep containers of this product in a well-ventilated area. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

| **SWA Exposure Limits** | **TWA (mg/m$^3$)** | **STEL (mg/m$^3$)** |
|---|---|---|
| Hexamethylene-1,6-diisocyanate | 0.02 | 0.07 |

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.
**Ventilation:** This product should only be used in a well-ventilated area. If natural ventilation is inadequate, the use of an explosion-proof fan is suggested.
**Eye Protection:** Eye protection such as protective glasses or goggles is recommended when this product is being used.
**Skin Protection:** If you believe you may have sensitisation to this product or any of its declared ingredients, you should prevent skin contact by wearing impervious gloves, clothes and, preferably, an apron. Make sure that all skin areas are covered. See below for suitable material types.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: butyl rubber.

**Respirator:** Positive pressure air supplied full face respirator preferred for long term use. Cartridge filter mask complying with AS 1716 for organic vapours acceptable for short periods depending on risk assessment. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Devices.

**N.B. The final choice of appropriate personal protection will vary according to individual circumstances. This can include methods of handling and engineering controls as determined by appropriate applicator risk assessment.**

Eyebaths or eyewash stations and safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

## Section 9 - Physical and Chemical Properties:

| | |
|---|---|
| **Physical Description & Colour**: | Colourless to yellowish liquid. |
| **Odour:** | Almost odourless. |
| **Boiling Point:** | Decomposes before boiling at 100kPa. |
| **Freezing/Melting Point:** | No specific data. Pour point about -15°C |
| **Volatiles:** | No data. |
| **Vapour Pressure:** | Negligible at normal ambient temperatures. |
| **Vapour Density:** | No data. |
| **Specific Gravity:** | 1.16 at 20°C |
| **Water Solubility:** | Insoluble. |
| **pH:** | No data. |
| **Volatility:** | Negligible at normal ambient temperatures. |
| **Odour Threshold:** | No data. |
| **Evaporation Rate:** | No data. |
| **Coeff Oil/water Distribution**: | No data |
| **Viscosity:** | About 2.800 mPa.s at 23°C |
| **Autoignition temp:** | About 465°C |

## Section 10 - Stability and Reactivity

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf-life properties.

**Conditions to Avoid:** This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Containers should be kept dry. Keep containers and surrounding areas well ventilated.

**Incompatibilities:** No particular incompatibilities.

**Fire Decomposition:** Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Carbon monoxide poisoning produces headaches, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product may undergo polymerisation in the presence of certain chemical reagents. See Incompatibilities above. The polymerisation is often accompanied by the liberation of heat and may lead to a dangerous or explosive situation. If the product is seen to be heating up, treat it as a fire incident.

## Section 11 - Toxicological Information

**Local Effects:**

**Target Organs:** There is no data to hand indicating any particular target organs.

Hexamethylene-1,6-diisocyanate is classed by SWA as a potential sensitiser by skin contact.

## Classification of Hazardous Ingredients

| Ingredient | Risk Phrases |
|---|---|
| **Hexamethylene-1,6-diisocyanate** | No risk phrases at concentrations found in this product |

- Acute toxicity - category 3
- Eye irritation - category 2
- Specific target organ toxicity (single exposure) - category 3
- Skin irritation - category 2
- Respiratory sensitisation - category 1
- Skin sensitisation - category 1

**Hydrophilic Aliphatic Polyisocyanate:**
$LD_{50}$ Oral, Rat >2000mg/kg $LD_{50}$ Dermal, Rat = >2000mg/kg
$LC_{50}$ Inhalation, Rat = 0.39mg/L/4hr
**Reproductive toxicity/Fertility:** No data available
**Reproductive toxicity/Teratogenicity:** No data available
**Genotoxicity in vitro:** No indication of mutagenic effects (OECD 471)
**Genotoxicity in vivo:** No data available
**STOT evaluation – one-time exposure:** May cause respiratory irritation.
**STOT evaluation – repeated exposure:** Based on available data, the classification criteria are not met.

## Potential Health Effects

**Persons sensitised to isocyanates should avoid contact with this product.**

### Inhalation:
**Short Term Exposure:** Available data shows that this product is harmful, but symptoms are not available. In addition, the product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.
**Long Term Exposure:** No data for health effects associated with long term inhalation.

### Skin Contact:
**Short Term Exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. However, the product may be irritating but is unlikely to cause anything more than mild transient discomfort.
**Long Term Exposure:** No data for health effects associated with long term skin exposure.

### Eye Contact:
**Short Term Exposure:** This product may be irritating to the eyes but is unlikely to cause anything more than mild transient discomfort.
**Long Term Exposure:** No data for health effects associated with long term eye exposure.

### Ingestion:
**Short Term Exposure:** Significant oral exposure is unlikely. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.
**Long Term Exposure:** No data for health effects associated with long term ingestion.

### Carcinogen Status:
**SWA:** No significant ingredient is classified as carcinogenic by SWA.
**NTP:** No significant ingredient is classified as carcinogenic by NTP.
**IARC:** No significant ingredient is classified as carcinogenic by IARC.

## Section 12 - Ecological Information

This product is harmful to aquatic organisms. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

**Fish:** $LC_{50}$ *Danio rerio* (zebrafish): 28.3mg/L (OECD 203)
**Algae:** $EC_{50}$ *Scenedesmus subspicatus* >100mg/L (OECD 201)
**Bacteria:** $EC_{50}$ Activated sludge bacteria >10,000mg/L (OECD 209)
**Daphnia:** $EC_{50}$ >100mg/L (OECD 202)
**Biodegradation:** 2 %, 28 d, i.e. not readily degradable (OECD 301 F)

Isocyanate reacts with water at the interface forming $CO_2$ and a solid insoluble product with a high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water-soluble solvents. Previous experience shows that polyurea is inert and non-degradable.

## Section 13 - Disposal Considerations

**Disposal:** This product may be recycled if unused, or if it has not been contaminated to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation, or some other means. If neither of these options is suitable in-house, consider controlled incineration, or contact a specialist waste disposal company.

## Section 14 - Transport Information

**UN Number:** This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

## Section 15 - Regulatory Information

**AICS:** All the significant ingredients in this formulation are compliant with NICNAS regulations.
The following ingredient: Hexamethylene-1,6-diisocyanate, is mentioned in the SUSMP.

## Section 16 - Other Information

**This SDS contains only safety-related information. For other data see product literature.**

**Acronyms:**

| | |
|---|---|
| **ADG Code** | Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition) |
| **AICS** | Australian Inventory of Chemical Substances |
| **SWA** | Safe Work Australia, formerly ASCC and NOHSC |
| **CAS number** | Chemical Abstracts Service Registry Number |
| **Hazchem Code** | Emergency action code of numbers and letters that provide information to emergency services especially firefighters |
| **IARC** | International Agency for Research on Cancer |
| **NOS** | Not otherwise specified |
| **NTP** | National Toxicology Program (USA) |
| **R-Phrase** | Risk Phrase |
| **SUSMP** | Standard for the Uniform Scheduling of Medicines & Poisons |
| **UN Number** | United Nations Number |



Please read all labels carefully before using the product.

This SDS is prepared in accord with the SWA document “Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice” (July 2020 to GHS7).



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