

Safety Data Sheet

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Chemical Nature: Polyaspartic hardener.
Trade Name: Art Res Tabletop Polyaspartic
Product Use: Hardener component for two-part polyaspartic coating.
Product Code: EPASR
Creation Date: May 2022
This version issued: May 2022 and is valid for 5 years from this date.
Poisons Information Centre: Phone 13 1126 from anywhere in Australia

SUPPLIER CONTACT INFORMATION:

Name: Illawarra Coatings Pty. Ltd.
Address: 19 Technology Drive, APPIN NSW 2560. PO Box 95, APPIN NSW 2560
Telephone: 61.2.4631 2200
Website: www.illawarracoatings.com
Email: info@illawarracoatings.com
Emergency: 0414 874 494 (24 hours, 7 days a week)

SECTION 2 - HAZARDS IDENTIFICATION

Statement of Hazardous Nature

GHS Classification:
Acute toxicity, Inhalative, Category 4 (H332)
Sensitization of the skin, Category 1 (H317)
Specific target organ toxicity (single exposure), Category 3 (H335)

GHS-Labeling

Warning

Hazardous components which must be listed on the label
Hexamethylene-1,6-diisocyanate Homopolymer

Hazard statements:

H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Precautionary statements:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves.
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.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/ container to an approved waste disposal plant.

HAZARDOUS according to the criteria of NOHSC NON-DANGEROUS GOODS

Other hazards

In case of hypersensitivity of the respiratory tract (e.g. asthmatics and those who suffer from chronic bronchitis) it is inadvisable to work with the product.
Symptoms affecting the respiratory tract can also occur several hours after overexposure.
Dust, vapors and aerosols are the primary risk to the respiratory tract.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredients | CAS No | Conc, % | TWA (mg/m ³) | STEL (mg/m ³) |
|--|-------------|---------|--------------------------|---------------------------|
| Hexamethylene-1,6-diisocyanate Homopolymer) | 28182-81-2 | 30-60% | 0.02 | 0.07 |
| Dipropylene glycol dimethyl ether -4,1-diyl)bis-DL-aspartate | 111109-77-4 | 30-60% | not set | not set |
| Other ingredients said to be not hazardous or below Concentration cutoff levels | | to 100 | not set | not set |

CLASSIFICATION OF HAZARDOUS INGREDIENTS

Hazardous components

Hexamethylene-1,6-diisocyanate Homopolymer

Concentration [wt.-%]: ca. 100

EC-No.: 500-060-2

CAS-No.: 28182-81-2

GHS Classification: Acute Tox. 4 Inhalative H332 Skin Sens. 1 H317 STOT SE 3 H335

This contains:

hexamethylene-di-isocyanate

Concentration [wt.-%]: <= 0,25

CAS-No.: 822-06-0

GHS Classification: Acute Tox. 1 Inhalative H330 Acute Tox. 4 Oral H302 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Resp. Sens. 1 H334 Skin Sens. 1 H317 STOT SE 3 H335

Specific threshold concentration (GHS):

Resp. Sens. 1 H334 >= 0,5 %

Skin Sens. 1 H317 >= 0,5 %

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous 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 equaled (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: No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Quickly and gently blot away excess liquid. Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

Eye Contact: Quickly and gently blot material from eyes. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call 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.

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 chemical, foam, dry sand.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: Not flammable.

Upper Flammability Limit: No data.

Lower Flammability Limit: No data.

Autoignition temperature: No data.

Flammability Class: No data.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. 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 neoprene, 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 cleanup 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 spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material 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 approved landfill. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of 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 in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. 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 cool (15-30°C) well ventilated area. Protect this product from light. 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/m³) STEL (mg/m³)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

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, use of a fan is suggested.

Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin Protection: If you believe you may have a sensitisation to this product or any of its declared ingredients, you should prevent skin contact by wearing impervious gloves, clothes and, preferably, 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: neoprene, butyl rubber.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

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: | Clear homogeneous liquid. |
| Odour: | Characteristic odour. |
| Boiling Point: | 100°C @ 100kPa |
| Freezing/Melting Point: | About 0°C |
| Volatiles: | No data. |
| Vapour Pressure: | No data. |
| Vapour Density: | No data. |
| Specific Gravity: | No data. |
| Water Solubility: | Insoluble. |
| pH: | No data |
| Volatility: | No data. |
| Odour Threshold: | No data. |
| Evaporation Rate: | No data. |
| Coeff Oil/water Distribution: | No data |
| Viscosity: | Approximately 500 cps |
| Autoignition temp: | No data. |

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

This information is not available.

10.2 Chemical stability

This information is not available.

10.3 Possibility of hazardous reactions

Exothermic reaction with amines and alcohols; reacts slowly with water forming CO₂, in closed containers risk of bursting owing to increase of pressure.

10.4 Conditions to avoid

This information is not available.

10.5 Incompatible materials

This information is not available.

10.6 Hazardous decomposition products

No hazardous decomposition products when stored and handled correctly.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity, oral

Acute toxicity, oral

Hexamethylene-1,6-diisocyanate Homopolymer

LD50 rat, female: > 2.000 mg/kg

Method: OECD Test Guideline 423

Acute toxicity, dermal

Hexamethylene-1,6-diisocyanate Homopolymer
LD50 rat, male/female: > 2.000 mg/kg
Method: OECD Test Guideline 402
LD50 rabbit, male/female: > 2.000 mg/kg

Acute toxicity, inhalation

Hexamethylene-1,6-diisocyanate Homopolymer
LC50 rat, female: 0,390 mg/l, 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

The test atmosphere generated in the animal study is not representative of workplace environments, how the substance is placed on the market, and how it can reasonably be expected to be used. Therefore the test result cannot be directly applied for the purpose of assessing hazard. Based on expert judgment and the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

Converted acute toxicity point estimate 1,5 mg/l

Test atmosphere: dust/mist
Method: Expert judgement
Assessment: Harmful if inhaled.

Primary skin irritation

Hexamethylene-1,6-diisocyanate Homopolymer
Species: rabbit
Exposure duration: 4 h
Result: slight irritant
Classification: No skin irritation
Method: OECD Test Guideline 404

Primary mucosae irritation

Hexamethylene-1,6-diisocyanate Homopolymer
Species: rabbit
Result: slight irritant
Classification: No eye irritation
Method: OECD Test Guideline 405

Sensitisation

Hexamethylene-1,6-diisocyanate Homopolymer
Skin sensitization (local lymph node assay (LLNA)):
Species: Mouse
Result: positive
Classification: May cause sensitization by skin contact.
Method: OECD Test Guideline 429

Skin sensitisation according to Magnusson/Kligmann (maximizing test):

Species: Guinea pig
Result: positive
Classification: May cause sensitization by skin contact.
Method: OECD Test Guideline 406

Respiratory sensitization

Classification: No classification according to EC Directives 2006/121/EC or 1999/45/EC as respiratory sensitizer.
No pulmonary sensitisation observed in animal tests.
No pulmonary sensitisation potential was observed in guinea pigs after either intradermal or inhalative induction with polyisocyanate based on hexamethylene diisocyanate.

Subacute, subchronic and prolonged toxicity

Hexamethylene-1,6-diisocyanate Homopolymer

NOAEL: 3,3 mg/m³ air

Application Route: Inhalative

Species: rat, male/female

Dose Levels: 0 - 0,5 - 3,3 - 26,4 mg/m³

Exposure duration: 90 d

Frequency of treatment: 6 hours a day, 5 days a week

Test substance: as aerosol

Method: OECD Test Guideline 413

Evidence of damage to organs other than the organs of respiration was not found.

Carcinogenicity

Hexamethylene-1,6-diisocyanate Homopolymer

No data available.

Reproductive toxicity/Fertility

Hexamethylene-1,6-diisocyanate Homopolymer

Available data show no indications for reproductive toxicity.

Reproductive toxicity/Teratogenicity

Hexamethylene-1,6-diisocyanate Homopolymer

Animal experiments on structurally similar compounds showed no indication of specific reproductive toxicity.

Genotoxicity in vitro

Hexamethylene-1,6-diisocyanate Homopolymer

Test type: Salmonella/microsome test (Ames test)

Metabolic activation: with/without

Result: No indication of mutagenic effects.

Method: OECD Test Guideline 471

Test type: Point mutation in mammalian cells (HPRT test)

Test system: Chinese hamster ovary (CHO) cells

Metabolic activation: with/without

Result: negative

Method: OECD Test Guideline 476

Test type: Chromosome aberration test in vitro

Test system: Chinese hamster V79 cell line

Metabolic activation: with/without

Result: negative

Method: OECD Test Guideline 473

Genotoxicity in vivo

Hexamethylene-1,6-diisocyanate Homopolymer

No data available.

STOT evaluation – one-time exposure

Hexamethylene-1,6-diisocyanate Homopolymer

Route of exposure: Inhalative

May cause respiratory irritation.

STOT evaluation – repeated exposure

Hexamethylene-1,6-diisocyanate Homopolymer

Based on available data, the classification criteria are not met.

Aspiration toxicity

Hexamethylene-1,6-diisocyanate Homopolymer

Based on available data, the classification criteria are not met.

CMR Assessment

Hexamethylene-1,6-diisocyanate Homopolymer

Carcinogenicity: Based on available data, the classification criteria are not met.

Mutagenicity: In vitro tests did not show mutagenic effects

Teratogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity/Fertility: Based on available data, the classification criteria are not met.

Toxicology Assessment

Hexamethylene-1,6-diisocyanate Homopolymer

Acute effects: Harmful if inhaled.

Sensitization: May cause sensitization by skin contact.

Additional information

Hexamethylene-1,6-diisocyanate Homopolymer

Over-exposure, especially when spraying coatings containing isocyanate without the necessary precautions, entails the risk of concentration-dependent irritating effects on eyes, nose throat, and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the occupational exposure limit. Prolonged contact with the skin may cause tanning and irritant effects.

Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction.

SECTION 12 - ECOLOGICAL INFORMATION

Do not allow to escape into waterways, wastewater or soil.

12.1 Toxicity

Acute Fish toxicity

Hexamethylene-1,6-diisocyanate Homopolymer

LC50 > 100 mg/l

Test type: Acute Fish toxicity

Species: Danio rerio (zebra fish)

Exposure duration: 96 h

Method: Directive 67/548/EEC, Annex V, C.1.

Chronic Fish toxicity

Hexamethylene-1,6-diisocyanate Homopolymer

Study scientifically not justified.

Acute toxicity for daphnia

Hexamethylene-1,6-diisocyanate Homopolymer

EC50 > 100 mg/l

Species: Daphnia magna (Water flea)

Exposure duration: 48 h

Method: Directive 67/548/EEC, Annex V, C.2.

Chronic toxicity to daphnia

Hexamethylene-1,6-diisocyanate Homopolymer

Study scientifically not justified.

Acute toxicity for algae

Hexamethylene-1,6-diisocyanate Homopolymer

ErC50 > 1.000 mg/l

Test type: Growth inhibition

Species: scenedesmus subspicatus

Exposure duration: 72 h

Method: DIN 38412

Acute bacterial toxicity

Hexamethylene-1,6-diisocyanate Homopolymer

EC50 3.828 mg/l

Test type: Respiration inhibition

Species: activated sludge

Exposure duration: 3 h

Method: OECD Test Guideline 209

Ecotoxicology Assessment

Hexamethylene-1,6-diisocyanate Homopolymer

Acute aquatic toxicity: Based on available data, the classification criteria are not met.

Chronic aquatic toxicity: Based on available data, the classification criteria are not met.

Impact on Sewage Treatment: Because of the low bacterial toxicity, there is no risk of an adverse effect on the performance of biological waste water treatment plants.

12.2 Persistence and degradability

Biodegradability

Hexamethylene-1,6-diisocyanate Homopolymer

Test type: aerobic

Inoculum: activated sludge

Biodegradation: 1 %, 28 d, i.e. not readily degradable

Method: Directive 67/548/EEC Annex V, C.4.E.

Test type: aerobic

Inoculum: activated sludge

Biodegradation: 0 %, 28 d, i.e. not readily degradable

Stability in water

Hexamethylene-1,6-diisocyanate Homopolymer

Test type: Hydrolysis

Half life: 7,7 h at 23 °C

The substance hydrolyzes rapidly in water.

Photodegradation

Hexamethylene-1,6-diisocyanate Homopolymer

Test type: Phototransformation in air

Temperature: 25 °C

sensitizer: OH-radicals

Half-life indirect photolysis: 10,3 h

Method: SRC - AOP (calculation)

After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.

Test type: Phototransformation in air

Temperature: 25 °C

sensitizer: OH-radicals

Half-life indirect photolysis: 3 h

Method: SRC - AOP (calculation)

After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.

Studies of hydrolysis products.

Volatility (Henry's Law constant)

Hexamethylene-1,6-diisocyanate Homopolymer

Calculated value = < 0,000001 Pa*m³/mol at 25 °C

Method: Bond-method

The substance has to be scored as non-volatile from water.

12.3 Bioaccumulative potential

Bioaccumulation

Hexamethylene-1,6-diisocyanate Homopolymer

Bioconcentration factor (BCF): 3,2

Method: (calculated)

An accumulation in aquatic organisms is not to be expected.

Bioconcentration factor (BCF): 367,7

Method: (calculated)

An accumulation in aquatic organisms is not to be expected.

Studies of hydrolysis products.

12.4 Mobility in soil

Distribution among environmental compartments

Hexamethylene-1,6-diisocyanate Homopolymer

Adsorption/Soil

not applicable

Environmental distribution

Hexamethylene-1,6-diisocyanate Homopolymer

not applicable

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

Isocyanate reacts with water at the interface forming CO₂ and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by watersoluble solvents. Previous experience shows that polyurea is inert and non-degradable.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

13.1 Waste treatment methods

After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point set up within the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

None disposal into waste water.

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 of the significant ingredients in this formulation are compliant with NICNAS regulations.

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 |

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)