Section 1 – Identification of the Material and Supplier

Siegel Pty Ltd
7 Lackey Road
Moss Vale, NSW, 2577

P: +61 2 4858 1771
M: +61 437 550 160
F: +61 2 4869 3031
W: siegeladhesives.com

Chemical Nature:
Trade Name: SiegelPrime P12
Product Use: Moisture Barrier & Primer
Creation Date: February 2026
This version was issued: February 2026 and is valid for 5 years from this date
Poisons Information Centre: Call 13 11 26 from anywhere in Australia

Section 2 – Hazards Identification

2.1 Classification of the substance or mixture
HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	S6
Classification	Serious Eye Damage/Eye Irritation Category 2A, Sensitisation (Respiratory) Category 1, Specific Target Organ Toxicity - Repeated Exposure Category 2, Acute Toxicity (Inhalation) Category 4, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Carcinogenicity Category 2

Classification drawn from HCIS; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

2.2 Label elements:
Hazard pictogram(s)



Signal Word: Danger

2.3 Hazard Statements

H-Code	Hazard Statements
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes skin irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s) General	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.

Prevention	
P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
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, eye protection and face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.

Response	
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Storage	
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Disposal	
P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Section 3 – Composition & Information on Ingredients

Substances:
See section below for composition of Mixtures

CAS No	%[weight]	Name
9016-87-9	30-60	polymeric diphenylmethane diisocyanate
25686-28-6	30-60	MDI homopolymer
Not Available	to 100	All other substances - non-hazardous

*Classification drawn from HCIS; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; * EU IOELVs available*

Section 4 – First Aid Measures

4.1 Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ➢ Wash out immediately with fresh running water. ➢ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper ➢ and lower lids. ➢ Seek medical attention without delay; if pain persists or recurs seek medical attention. ➢ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ➢ Immediately remove all contaminated clothing, including footwear. ➢ Flush skin and hair with running water (and soap if available). ➢ Seek medical attention in event of irritation. ➢ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ➢ Other measures are usually unnecessary.
Inhalation	Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted.
Ingestion	➢ Wash out mouth with water. ➢ Do not induce vomiting unless directed to do so by medical personnel. ➢ Medical advice is required.

4.2 Indication of any immediate medical attention and special treatment needed:

For sub-chronic and chronic exposures to isocyanates:

- This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity.
- Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts.
- Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure.
- Pulmonary symptoms include cough, burning, substernal pain and dyspnoea.
- Some cross-sensitivity occurs between different isocyanates.
- Noncardiogenic pulmonary oedema and bronchospasm are the most serious consequences of exposure. Markedly symptomatic patients should receive oxygen, ventilatory
- support and an intravenous line.
- Treatment for asthma includes inhaled sympathomimetics (epinephrine [adrenalin], terbutaline) and steroids.
- Activated charcoal (1 g/kg) and a cathartic (sorbitol, magnesium citrate) may be useful for ingestion.
- Mydriatics, systemic analgesics and topical antibiotics (Sulamyd) may be used for corneal abrasions.
- There is no effective therapy for sensitised workers.

[Ellenhorn and Barceloux; Medical Toxicology]

NOTE: Isocyanates cause airway restriction in naive individuals with the degree of response dependant on the concentration and duration of exposure. They induce smooth muscle contraction which leads to bronchoconstrictive episodes. Acute changes in lung function, such as decreased FEV1, may not represent sensitivity.

[Karol & Jin, Frontiers in Molecular Toxicology, pp 56-61, 1992]
Personnel who work with isocyanates, isocyanate prepolymers or polyisocyanates should have a pre-placement medical examination and periodic examinations thereafter, including a pulmonary function test. Anyone with a medical history of chronic respiratory disease, asthmatic or bronchial attacks, indications of allergic responses, recurrent eczema or sensitisation conditions of the skin should not handle or work with isocyanates. Anyone who develops chronic respiratory distress when working with isocyanates should be removed from exposure and examined by a physician. Further exposure must be avoided if a sensitivity to isocyanates or polyisocyanates has developed.

Section 5 – Fire Fighting Measures

5.1 Extinguishing media:

- Small quantities of water in contact with hot liquid may react violently with generation of a large volume of rapidly expanding hot sticky semi-solid foam.
- Presents additional hazard when fire fighting in a confined space.
- Cooling with flooding quantities of water reduces this risk.
- Water spray or fog may cause frothing and should be used in large quantities.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

5.2 Special hazards arising from the substrate or mixture:

Fire Incompatibility	Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

5.3 Advice for firefighters:

Fire Fighting	➢ Alert Fire Brigade and tell them location and nature of hazard. ➢ Wear full body protective clothing with breathing apparatus. ➢ Prevent, by any means available, spillage from entering drains or water course. ➢ Use water delivered as a fine spray to control fire and cool adjacent area. ➢ Avoid spraying water onto liquid pools. ➢ **DO NOT** approach containers suspected to be hot. ➢ Cool fire exposed containers with water spray from a protected location. ➢ If safe to do so, remove containers from path of fire.
Fire/Explosion Hazard	➢ Combustible. ➢ Moderate fire hazard when exposed to heat or flame. ➢ When heated to high temperatures decomposes rapidly generating vapour which pressures and may then rupture containers with release ➢ of flammable and highly toxic isocyanate vapour. ➢ Burns with acrid black smoke and poisonous fumes. ➢ Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. ➢ Combustion yields traces of highly toxic hydrogen cyanide HCN, plus toxic nitrogen oxides NOx and carbon monoxide. Combustion products include: carbon dioxide (CO2) isocyanates hydrogen cyanide and minor amounts of

	nitrogen oxides (NOx) other pyrolysis products typical of burning organic material. May emit corrosive fumes. When heated at high temperatures many isocyanates decompose rapidly generating a vapour which pressurises containers, possibly to the point of rupture. Release of toxic and/or flammable isocyanate vapours may then occur
HAZCHEM	Not Applicable

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

See section 8.

6.2 Environmental precautions

See section 12

6.3 Methods and material for containment and cleaning up

Minor Spills	➢ Remove all ignition sources. ➢ Clean up all spills immediately. ➢ Avoid breathing vapours and contact with skin and eyes. ➢ Control personal contact with the substance, by using protective equipment. ➢ Contain and absorb spill with sand, earth, inert material or vermiculite. ➢ Wipe up. ➢ Place in a suitable, labelled container for waste disposal. nitrogen oxides (NOx)
Major Spills	➢ Liquid Isocyanates and high isocyanate vapour concentrations will penetrate seals on self contained breathing apparatus - SCBA should be used inside encapsulating suit where this exposure may occur. For isocyanate spills of less than 40 litres (2 m2): ➢ Evacuate area from everybody not dealing with the emergency, keep them upwind and prevent further access, remove ignition sources and, if inside building, ventilate area as well as possible. ➢ Notify supervision and others as necessary. ➢ Put on personal protective equipment (suitable respiratory protection, face and eye protection, protective suit, gloves and impermeable boots). ➢ Control source of leakage (where applicable). ➢ Dike the spill to prevent spreading and to contain additions of decontaminating solution. ➢ Prevent the material from entering drains. ➢ Estimate spill pool volume or area. ➢ Absorb and decontaminate. - Completely cover the spill with wet sand, wet earth, vermiculite or other similar absorbent. - Add neutraliser (for suitable formulations: see below) to the adsorbent materials (equal to that of estimated spill pool volume). Intensify contact between spill, absorbent and neutraliser by carefully mixing with a rake and allow to react for 15 minutes. ➢ Shovel absorbent/decontaminant solution mixture into a steel drum. ➢ Decontaminate surface. - Pour an equal amount of neutraliser solution over contaminated surface. - Scrub area with a stiff bristle brush, using moderate pressure. - Completely cover decontaminant with vermiculite or other similar absorbent. - After 5 minutes, shovel absorbent/decontamination solution mixture into the same steel drum used above.

- Monitor for residual isocyanate. If surface is decontaminated, proceed to next step. If contamination persists, repeat decontaminate procedure immediately above.
- Place loosely covered drum (release of carbon dioxide) outside for at least 72 hours. Label waste-containing drum appropriately. Remove waste materials for incineration.
- Decontaminate and remove personal protective equipment. Return to normal operation.
- Conduct accident investigation and consider measures to prevent reoccurrence.

Decontamination:
Treat isocyanate spills with sufficient amounts of isocyanate decontaminant preparation ('neutralising fluid'). Isocyanates and polyisocyanates are generally not miscible with water. Liquid surfactants are necessary to allow better dispersion of isocyanate and neutralising fluids/ preparations. Alkaline neutralisers react faster than water/surfactant mixtures alone.
Typically, such a preparation may consist of: Sawdust: 20 parts by weight Kieselguhr 40 parts by weight plus a mixture of {ammonia (s.g. 0.880) 8% v/v non-ionic surfactant 2% v/v water 90% v/v}. Let stand for 24 hours
Three commonly used neutralising fluids each exhibit advantages in different situations.

Formulation A:
liquid surfactant……0.2-2%
sodium carbonate……..5-10%
water to……100%

Formulation B:
liquid surfactant…… 0.2-2%
concentrated ammonia……3-8%
water to……100%

Formulation C:
ethanol, isopropanol or butanol……..50%
concentrated ammonia……..5%
water to……100%

After application of any of these formulae, let stand for 24 hours.
Formulation B reacts faster than Formulation A. However, ammonia-based neutralisers should be used only under well-ventilated conditions to avoid overexposure to ammonia or if members of the emergency team wear suitable respiratory protection. Formulation C is especially suitable for cleaning of equipment from unreacted isocyanate and neutralizing under freezing conditions. Regard has to be taken to the flammability of the alcoholic solution.

- Avoid contamination with water, alkalies and detergent solutions.
- Material reacts with water and generates gas, pressurises containers with even drum rupture resulting.
- **DO NOT** reseal container if contamination is suspected.
- Open all containers with care.
- **DO NOT** touch the spill material

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.

- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, eat or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

Section 7 – Handling and Storage

7.1 Safe handling:

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- **DO NOT** enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, **DO NOT** eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
- **DO NOT** allow clothing wet with material to stay in contact with skin

7.2 Other information:

Consider storage under inert gas.

for commercial quantities of isocyanates:

- Isocyanates should be stored in adequately bunded areas. Nothing else should be kept within the same bunding. Pre-polymers need not be segregated. Drums of isocyanates should be stored under cover, out of direct sunlight, protected from rain, protected from physical damage and well away from moisture, acids and alkalis.
- Where isocyanates are stored at elevated temperatures to prevent solidifying, adequate controls should be installed to prevent the high temperatures and precautions against fire should be taken.
- Where stored in tanks, the more reactive isocyanates should be blanketed with a non-reactive gas such as nitrogen and equipped with absorptive type breather valve (to prevent vapour emissions).
- Transfer systems for isocyanates in bulk storage should be fully enclosed and use pump or vacuum systems. Warning signs, in appropriate languages, should be posted where necessary.
- Areas in which polyurethane foam products are stored should be supplied with good general ventilation. Residual amounts of unreacted isocyanate may be present in the finished foam, resulting in hazardous atmospheric concentrations.
- Ideal storage temperature range is dependent on the specific polymer due to viscosity and melting point differences between the polymers. Use 25 deg C (77 deg F) to 30 deg C (86 deg F) as a guideline to most liquid isocyanates for optimum storage temperature. If some isocyanates are stored at or below a temperature of 25 deg C

(77 deg F), crystallization and settling of the isocyanate may occur. Storage in a cold warehouse can cause crystals to form. These crystals can settle to the bottom of the container. If crystals do form, they can be melted easily with moderate heat. It is suggested that a container the size of a drum be warmed for 16-24 hours at sufficient temperature to melt the crystals. When the crystals are melted, the container should be agitated by rolling or stirring, until the contents are homogenous. Since heated isocyanate will generate vapors more rapidly than product stored at 25 deg C (77 deg F), be sure to follow the precautions under the Personal Protection.

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this SDS.

7.3 Conditions for safe storage, including any incompatibilities

Suitable container

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Storage incompatibility

- Segregate from alcohol, water.
  - Avoid reaction with water, alcohols and detergent solutions. Isocyanates are electrophiles, and as such they are reactive toward a variety of nucleophiles including alcohols, amines, and even water. Upon treatment with an alcohol, an isocyanate forms a urethane linkage. If a di-isocyanate is treated with a compound containing two or more hydroxyl groups, such as a diol or a polyol, polymer chains are formed, which are known as polyurethanes. Reaction between a di-isocyanate and a compound containing two or more amine groups, produces long polymer chains known as polyureas.
  - Isocyanates and thioisocyanates are incompatible with many classes of compounds, reacting exothermically to release toxic gases. Reactions with amines, strong bases, aldehydes, alcohols, alkali metals, ketones, mercaptans, strong oxidisers, hydrides, phenols, and peroxides can cause vigorous releases of heat. Acids and bases initiate polymerisation reactions in these materials.
  - Isocyanates also can react with themselves. Aliphatic di-isocyanates can form trimers, which are structurally related to cyanuric acid. Isocyanates participate in Diels-Alder reactions, functioning as dienophiles
  - Isocyanates easily form adducts with carbodiimides, isothiocyanates, ketenes, or with substrates containing activated CC or CN bonds.
  - Some isocyanates react with water to form amines and liberate carbon dioxide. This reaction may also generate large volumes of foam and heat. Foaming spaces may produce pressure in confined spaces or containers. Gas generation may pressurise drums to the point of rupture.
  - Do NOT reseal container if contamination is expected.
  - Open all containers with care.
  - Base-catalysed reactions of isocyanates with alcohols should be carried out in inert solvents. Such reactions in the absence of solvents often occur with explosive violence,
  - Isocyanates will attack and embrittle some plastics and rubbers.
  - The isocyanate anion is a pseudohalide (syn pseudohalogen) whose chemistry, resembling that of the true halogens, allows it to substitute for halogens in several

classes of chemical compounds. The behavior and chemical properties of the several pseudohalides are identical to that of the true halide ions.

- A range of exothermic decomposition energies for isocyanates is given as 20-30 kJ/mol.
- The relationship between energy decomposition and processing hazards has been the subject of discussion; it is suggested that values of energy released per unit of mass, rather than on molar basis (J/g) be used in the assessment.
- For example, in 'open vessel processes' (with ma-hole size openings, in an industrial setting) substances with exothermic decomposition energies below 500 J/g unlikely to present a danger, whilst those in 'closed vessel processes' (opening is a safety valve or bursting disk) present some danger where the decomposition energy exceeds 150 J/g.

BRETHERICK: Handbook of Reactive Chemical Hazards, 4th Edition

Section 8 – Exposure Controls and Personal Protection

8.1 Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	polymeric diphenylmethane diisocyanate	Isocyanates, all (as-NCO)	0.02 mg/m3	0.07 mg/m3	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
polymeric diphenylmethane diisocyanate	0.15 mg/m3	3.6 mg/m3	22 mg/m3

Ingredient	Original IDLH	Revised IDLH
polymeric diphenylmethane diisocyanate	Not Available	Not Available
MDI homopolymer	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
MDI homopolymer	E	≤ 0.1 ppm
Notes	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

8.2 Exposure controls

Appropriate engineering controls

- All processes in which isocyanates are used should be enclosed wherever possible.
- Total enclosure, accompanied by good general ventilation, should be used to keep atmospheric concentrations below the relevant exposure
- standards.
- If total enclosure of the process is not feasible, local exhaust ventilation may be necessary. Local exhaust ventilation is essential where lower
- molecular weight isocyanates (such as TDI or HDI) is used or where isocyanate or polyurethane is sprayed.
- Where other isocyanates or pre-polymers are used and aerosol formation cannot occur, local exhaust ventilation may not be necessary if the
- atmospheric concentration can be kept below the relevant exposure standards.
- Where local exhaust ventilation is installed, exhaust vapours should not be vented to the exterior in such a manner as to create a hazard.

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the

risk. Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.

- Spraying of material or material in admixture with other components must be carried out in conditions conforming to local state regulations (AS/NZS 4114, UNI EN 12215:2010, ANSI/AIHA Z9.3–2007 or national equivalent).
- Local exhaust ventilation with full face positive-pressure air supplied breathing apparatus (hood or helmet type) is required.
- Spraying should be performed in a spray booth fitted with an effective exhaust system which complies with local environmental legislation.
- The spray booth area must be isolated from unprotected personnel whilst spraying is in progress and until all spraying mist has cleared.

NOTE: Isocyanate vapours will not be adequately absorbed by organic vapour respirators. Air contaminants generated in the workplace possess varying 'escape' velocities which, in turn, determine the 'capture velocities' of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 4-10 m/s (800-2000 f/min.) for extraction of solvents generated by spraying at a point 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Personal protection



Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be

	created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]
Skin protection	See Hand protection below
Hands/feet protection	**NOTE:** ➢ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ➢ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: · frequency and duration of contact · chemical resistance of glove material, · glove thickness and · dexterity Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent). · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. · Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are rated as: · Excellent when breakthrough time > 480 min · Good when breakthrough time > 20 min · Fair when breakthrough time < 20 min · Poor when glove material degrades For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on

	consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. ➢ Do NOT wear natural rubber (latex gloves). ➢ Isocyanate resistant materials include Teflon, Viton, nitrile rubber and some PVA gloves. ➢ Protective gloves and overalls should be worn as specified in the appropriate national standard. ➢ Contaminated garments should be removed promptly and should not be re-used until they have been decontaminated. ➢ NOTE: Natural rubber, neoprene, PVC can be affected by isocyanates ➢ **DO NOT** use skin cream unless necessary and then use only minimum amount. ➢ Isocyanate vapour may be absorbed into skin cream and this increases hazard. Avoid contact with moisture.
Body protection	See Other protection below
Other protection	All employees working with isocyanates must be informed of the hazards from exposure to the contaminant and the precautions necessary to prevent damage to their health. They should be made aware of the need to carry out their work so that as little contamination as possible is produced, and of the importance of the proper use of all safeguards against exposure to themselves and their fellow workers. Adequate training, both in the proper execution of the task and in the use of all associated engineering controls, as well as of any personal protective equipment, is essential. Employees exposed to contamination hazards should be educated in the need for, and proper use of, facilities, clothing and equipment and thereby maintain a high standard of personal cleanliness. Special attention should be given to ensuring that all personnel understand instructions, especially newly recruited employees and those with local-language difficulties, where they are known. Overalls. ➢ P.V.C apron. ➢ Barrier cream. ➢ Skin cleansing cream. ➢ Eye wash unit. Full face respirator with supplied air. ➢ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. ➢ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of

cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

For spraying or operations which might generate aerosols:
Full face respirator with supplied air.
- In certain circumstances, personal protection of the individual employee is necessary. Personal protective devices should be regarded as being supplementary to substitution and engineering control and should not be used in preference to them as they do nothing to eliminate the hazard.
- However, in some situations, minimising exposure to isocyanates by enclosure and ventilation is not possible, and occupational exposure standards may be exceeded, particularly during on-site mixing of paints, spray-painting, foaming and maintenance of machine and ventilation systems. In these situations, air-line respirators or self-contained breathing apparatus complying with the appropriate nationals standard must be used.
- Organic vapour respirators with particulate pre- filters and powered, air-purifying respirators are NOT suitable.
- Personal protective equipment must be appropriately selected, individually fitted and workers trained in their correct use and maintenance. Personal protective equipment must be regularly checked and maintained to ensure that the worker is being protected.
- Air- line respirators or self-contained breathing apparatus complying with the appropriate national standard should be used during the clean-up of spills and the repair or clean-up of contaminated equipment and similar situations which cause emergency exposures to hazardous atmospheric concentrations of isocyanate.

Section 9 – Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Brown liquid		
Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	Not Available	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Not Available	**pH as a solution (%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

Section 10 – Stability and Reactivity

10.1 Reactivity:
See section 7

10.2 Chemical stability:

- Unstable in the presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.
- Presence of elevated temperatures.

10.3 Possibility of hazardous reactions:
See section 7

10.4 Conditions to avoid:
See section 7

10.5 Incompatible materials:
See section 7

10.6 Hazardous decomposition products:
See section 7

Section 11 – Toxicological Information

11.1 Information on toxicological effects

Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. The vapour/mist may be highly irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia. Gastrointestinal disturbances are characterised by nausea and vomiting. Pulmonary sensitisation may produce asthmatic reactions ranging from minor breathing difficulties to severe allergic attacks; this may occur following a single acute exposure or may develop without warning for several hours after exposure. Sensitized people can react to very low doses, and should not be allowed to work in situations allowing exposure to this material. Continued exposure of sensitised persons may lead to possible long term respiratory impairment. Inhalation hazard is increased at higher temperatures.
Ingestion	The material has **NOT** been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.
Body protection	See Other protection below
Chronic	There has been concern that this material can cause cancer or mutations,

but there is not enough data to make an assessment.
Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.
Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.
This product contains a polymer with a functional group considered to be of high concern. Isothiocyanates may cause hypersensitivity of the skin and airways.
Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates.
The chemistry of reaction of isocyanates, as evidenced by MDI, in biological milieu is such that in the event of a true exposure of small MDI doses to the mouth, reactions will commence at once with biological macromolecules in the buccal region and will continue along the digestive tract prior to reaching the stomach. Reaction products will be a variety of polyureas and macromolecular conjugates with for example mucus, proteins and cell components.
This is corroborated by the results from an MDI inhalation study. Following an inhalation exposure of rats to radiolabelled MDI, 79% of the dose was excreted in faeces. The faecal excretion in these animals was considered entirely due to ingestion of radioactivity from grooming and ingestion of deposited material from the nasopharangeal region via the mucociliary escalator, i.e. not following systemic absorption. The faecal radioactivity was tentatively identified as mixed molecular weight polyureas derived from MDI. Diamine was not present. Thus, for MDI and diisocyanates in general the oral gavage dosing route is inappropriate for toxicological studies and risk assessment.
It is expected that oral gavage dosing will result in a similar outcome to that produced by TDI or MDI, that is (1) reaction with stomach contents and (2) polymerization to solid polyureas.

- Reaction with stomach contents is very plausibly described in case reports of accidental ingestion of polymeric MDI based glue in domestic animals. Extensive polymerization and CO2 liberation resulting in an expansion of the gastric content is described in the stomach, without apparent acute chemical toxicity
- Polyurea formation in organic and aqueous phases has been described. In this generally accepted chemistry of hydrolysis of an isocyanate the initially produced carbamate decarboxylates to an amine which. The amine, as a reactive intermediate, then reacts very readily with the present isocyanate to produce a solid and inert polyurea. This urea formation acts as a pH buffer in the stomach, thus promoting transformation of the diisocyanate into polyurea, even under the acidic conditions.

At the resorbtive tissues in the small intestine, these high molecular reaction products are likely to be of very low bioavailability, which is substantiated by the absence of systemic toxicity in acute oral bioassays with rats at the OECD limit dose (LC50>2 g/kg bw).
The respiratory tract may be regarded as the main entry for systemically available isocyanates as evidenced following MDI.exposures.
A detailed summary on urinary, plasma and in vitro metabolite studies is provided below. Taken together, all available studies provide convincing evidence that MDI-protein adduct and MDI-metabolite formation proceeds:

- via formation of a labile isocyanate glutathione (GSH)-adduct,
- then transfer to a more stable adduct with larger proteins, and
- without formation of free MDA. MDA reported as a metabolite is actually formed by analytical workup procedures (strong acid or base hydrolysis) and is not an identified metabolite in urine or blood

Animal testing shows that polymeric MDI can damage the nasal cavities and lungs, causing inflammation.and increased cell growth.

	Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing and gasping. Isocyanate vapours are irritating to the airways and can cause their inflammation, wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia.

11.2 Moisture Barrier PU

TOXICITY	IRRITATION
Not Available	Not Available

11.3 polymeric diphenylmethane diisocyanate

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >9400 mg/kg [2]	Eye (rabbit): 100 mg - mild
Inhalation(Rat) LC50; 0.49 mg/L4h [2]	
Oral(Rat) LD50; 43000 mg/kg [2]	

11.4 MDI homopolymer

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >9400 mg/kg [1]	Eye: no adverse effect observed (not irritating) [1]
Inhalation(Rat) LC50; 0.368 mg/L4h [1]	Skin: adverse effect observed (irritating) [1]
Oral(Rat) LD50; 43000 mg/kg [2]	

Legend: *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity*
2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

POLYMERIC DIPHENYLMETHANE DIISOCYANATE	product The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Aromatic and aliphatic diisocyanates may cause airway toxicity and skin sensitization. Monomers and prepolymers exhibit similar respiratory effects. Of the several members of diisocyanates tested on experimental animals by inhalation and oral exposure, some caused cancer while others produced a harmless outcome. This group of compounds has therefore been classified as cancer-causing.
MDI HOMOPOLYMER	as polymethylene polyphenyl isocyanate
MOISTURE BARRIER PU & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & MDI HOMOPOLYMER	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are

	equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested. Isocyanate vapours are irritating to the airways and can cause their inflammation, wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia.
POLYMERIC DIPHENYLMETHANE DIISOCYANATE & MDI HOMOPOLYMER	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production. The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.

Acute Toxicity	✓	**Carcinogenicity**	✓
Skin Irritation/Corrosion	✓	**Reproductivity**	✗
Serious Eye Damage/Irritation	✓	**STOT - Single Exposure**	✓
Respiratory or Skin sensitisation	✓	**STOT - Repeated Exposure**	✓
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

Section 12 – Ecological Information

12.1 Toxicity

MOISTURE BARRIER PU

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

polymeric diphenylmethane diisocyanate

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

MDI homopolymer

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>1640mg/l	2
LC50	96h	Fish	>1000mg/l	2
NOEC(ECx)	504h	Crustacea	>=10mg/l	2

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances – Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

12.2 For polyisocyanates:
Polyisocyanates are not readily biodegradable. However, due to other elimination mechanisms (hydrolysis, adsorption), long retention times in water are not to be expected. The resulting polyurea is more or less inert and, due to its molecular size, not bioavailable. Within the limits of water solubility, polyisocyanates have a low to moderate toxicity for aquatic organisms.

12.3 For Isocyanate Monomers:
Environmental Fate: Isocyanates, (di- and polyfunctional isocyanates), are commonly used to make various polymers, such as polyurethanes. Polyurethanes find significant application in the manufacture of rigid and flexible foams. They are also used in the production of adhesives, elastomers, and coatings.

12.4 Atmospheric Fate:
These substances are not expected to be removed from the air via precipitation washout or dry deposition.

12.5 Terrestrial Fate:
These substances are expected to sorb strongly to soil. Migration to groundwater and surface waters is not expected to occur.

12.6 Aquatic Fate:
Breakdown by water, (hydrolysis), is the primary fate mechanism for the majority of commercial isocyanate monomers, however; the low solubility of these substances will generally lessen the effectiveness of hydrolysis as a fate pathway. But hydrolysis should be considered one of the two major fate processes for the isocyanates. These substances strongly sorb to suspended particulates in water. In the absence of hydrolysis, sorption to solids, (e.g., sludge and sediments), will be the primary mechanism of removal. Biological breakdown is minimal for most compounds and evaporation is negligible. Evaporation from surface water is expected to take years. In wastewater treatment this process is not expected to be significant. Isocyanates will react with water producing carbon dioxide and forming a solid mass, which is insoluble.

12.7 Biodegradation:
Breakdown of these substances in oxygenated and low oxygen environments is not expected to occur. Most of the substances take several months to degrade. Degradation of the hydrolysis products will occur at varying rates.

12.8 Ecotoxicity:
These substances are not expected to accumulate/biomagnify in the environment. These substances are toxic if inhaled. These substances are harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

DO NOT discharge into sewer or waterways.

12.9 Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

12.10 Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

12.11 Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

Section 13 – Disposal Considerations

Product / Packaging disposal

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same
- product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- Where possible retain label warnings and SDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as 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. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- **DO NOT** allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- **DO NOT** recycle spilled material.
- Consult State Land Waste Management Authority for disposal.
- Neutralise spill material carefully and decontaminate empty containers and spill residues with 10% ammonia solution plus detergent or a
- proprietary decontaminant prior to disposal.
- **DO NOT** seal or stopper drums being decontaminated as CO_2 gas is generated and may pressurise containers.
- Puncture containers to prevent re-use.
- Bury or incinerate residues at an approved site.

Section 14 – Transport Information

14.1 Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

14.2 Land transport (ADG)
NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.3 Air transport (ICAO-IATA / DGR)
NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.4 Sea transport (IMDG-Code / GGVSee)
NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.5 Transport in bulk according to Annex II of MARPOL and the IBC code
Not Applicable

14.6 Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
polymeric diphenylmethane diisocyanate	Not Available
MDI homopolymer	Not Available
All other substances - non-hazardous	Not Available

14.7 Transport in bulk in accordance with the ICG Code

Product name	Ship type
polymeric diphenylmethane diisocyanate	Not Available
MDI homopolymer	Not Available
All other substances - non-hazardous	Not Available

Section 15 – Regulatory Information

15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture

polymeric diphenylmethane diisocyanate is found on the following regulatory lists

- Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
- Australia Model Work Health and Safety Regulations - Hazardous chemicals (other than lead) requiring health monitoring
- Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
- Australian Inventory of Industrial Chemicals (AIIC)
- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

MDI homopolymer is found on the following regulatory lists

- Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
- Australian Inventory of Industrial Chemicals (AIIC)

15.2 National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
China - IECSC	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes

Legend: *Yes = All CAS declared ingredients are on the inventory*
No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

Section 16 – Other Information

16.1 Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

16.2 Definitions and abbreviations

PC—TWA	*Permissible Concentration-Time Weighted Average PC*
PC—STEL	*Permissible Concentration-Short Term Exposure Limit*
IARC	*International Agency for Research on Cancer*
ACGIH	*American Conference of Governmental Industrial Hygienists*
STEL	*Short Term Exposure Limit*
TEEL	*Temporary Emergency Exposure Limit*
IDLH	*Immediately Dangerous to Life or Health Concentrations*
ES	*Exposure Standard*
OSF	*Odour Safety Factor*
NOAEL	*No Observed Adverse Effect Level*
LOAEL	*Lowest Observed Adverse Effect Level*
TLV	*Threshold Limit Value*
LOD	*Limit Of Detection*
OTV	*Odour Threshold Value*
BCF	*BioConcentration Factors*
BEI	*Biological Exposure Index*
AIIC	*Australian Inventory of Industrial Chemicals*
DSL	*Domestic Substances List*

SiegelProof P12

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)

---

www.siegeladhesives.com

Siegel Adhesives
Phone: 1300 729 863
+61 2 4858 1771
Fax: +61 2 4869 3031
technical@siegeladhesives.com

Australian Head Office
Lv.6 / 10 Herb Elliott Ave
Sydney Olympic Park
NSW 2127
Australia

New Zealand Head Office
40 Onehunga Mall
Onehunga
Auckland 1061
New Zealand