Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **SUPRASEC 7112**

Recommended Use of the Chemical and Restrictions on Use Component of a polyurethane system.

Supplier: Ixom Operations Pty Ltd
ABN: 51 600 546 512
Street Address: Level 8, 1 Nicholson Street
East Melbourne Victoria 3002
Australia

Telephone Number: +61 3 9906 3000
Emergency Telephone: **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:
Skin Irritation - Category 2
Skin Sensitisation - Category 1
Eye Irritation - Category 2A
Acute Inhalation Toxicity - Category 4
Respiratory Sensitisation - Category 1
Specific target organ toxicity (single exposure) - Category 3
Carcinogenicity - Category 2
Specific target organ toxicity (repeated exposure) - Category 2

SIGNAL WORD: DANGER

Hazard Statement(s):
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist, vapours, spray.
P264 Wash hands 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 / face protection.
P281 Use personal protective equipment as required.
P285 In case of inadequate ventilation wear respiratory protection.

Response:
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before re-use.
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P304+P341 IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P308+P313 IF exposed or concerned: Get medical advice/attention.

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

Disposal:
P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): None allocated.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Methylenediphenylene diisocyanate, polypropylene glycol polymer	39420-98-9	>=60%	H315 H317 H319 H332 H334 H335 H351 H373
Diphenylmethane-4,4-diisocyanate	101-68-8	10-30%	H315 H317 H319 H332 H334 H335 H351 H373
Diphenylmethane diisocyanate homopolymer	25686-28-6	<10%	H315 H317 H319 H330 H334 H335 H372
Diphenylmethanediisocyanate, mixture of 2,4 and 4,4 isomers	5873-54-1	<10%	H351 H332 H373 H319 H335 H315 H334 H317

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:
If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye Contact:
If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Ingestion:
Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Never give anything by the mouth to an unconscious patient. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:
Treat symptomatically. Effects may be delayed. Following severe exposure, the patient should be kept under medical supervision for at least 48 hours.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Extinguishing media appropriate to surrounding fire conditions.

Unsuitable Extinguishing Media:
Water jet.

Specific hazards arising from the chemical:
Combustible liquid. Due to reaction with water producing carbon dioxide gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.

Special protective equipment and precautions for fire-fighters:
On burning will emit toxic fumes, including those of oxides of carbon , oxides of nitrogen , hydrocarbons , hydrogen cyanide . Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:
Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:
Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Let the material react for at least 30 minutes. Collect in properly labelled containers, with loose fitting lids, for disposal. Do not absorb with sawdust, woodchips or other cellulose materials. Wash area down with excess water. Neutralise small spillages with decontaminant. Decontaminant: sodium carbonate 5-10%, liquid detergent 0.2-2%, water to 100%. Test the atmosphere for MDI vapour to ensure safe-working conditions prevail prior to re-entry into contaminated area.

7. HANDLING AND STORAGE

Classified as a C2 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

Precautions for safe handling:
Avoid skin and eye contact and breathing in vapour. Do not ingest. Do not reuse container. When using do not eat, drink or smoke. Wash hands before breaks and at the end of the work day.

Conditions for safe storage, including any incompatibilities:
Store in a cool, dry, well ventilated place. Store away from foodstuffs. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep dry - reacts with water, may lead to drum rupture. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Isocyanates, all (as -NCO): 8hr TWA = 0.02 mg/m^3, 15 min STEL = 0.07 mg/m^3, Sen

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

`Sen' Notice - sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to exposure to minute levels of that substance and should not be further exposed to the substance.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:
Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, SAFETY SHOES, FACE SHIELD OR AIR MASK, GLOVES (Long).
* Not required if wearing air supplied mask.

Wear overalls, chemical goggles, full face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Not specified
Odour:	Not specified
Odour Threshold:	Not available
Specific Gravity:	1.08 @25°C
Relative Vapour Density (air=1):	Not available
Vapour Pressure (20 °C):	Not available
Flash Point (°C):	>100 (Closed cup)
Flammability Limits (%):	Not available
Autoignition Temperature (°C):	Not available
Solubility in water (g/L):	Not available
Boiling Point/Range (°C):	Not available
Decomposition Point (°C):	Not available
pH:	Not applicable
Viscosity:	3500 mPa.s @25°C (Dynamic)

10. STABILITY AND REACTIVITY

Reactivity:	Reacts with water liberating carbon dioxide gas.
Chemical stability:	Stable.

Possibility of hazardous reactions:	Reacts exothermically with water and organic compounds containing active hydrogen groups .
Conditions to avoid:	None known.
Incompatible materials:	Incompatible with water , alcohols , amines , acids , bases , organic compounds containing active hydrogen groups .
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Hydrocarbons. Hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing may result in irritation of the gastrointestinal tract.
Eye contact:	An eye irritant.
Skin contact:	Contact with skin will result in irritation. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.
Inhalation:	Material is irritant to the mucous membranes of the respiratory tract (airways). A respiratory sensitiser. Can cause possible allergic reactions, producing asthma-like symptoms.

Acute toxicity: Average Toxicity Estimate (ATE mix, inhalation): 1.38 mg/L/4h (calculation method)
No LD50 data available for the product. However, for the major constituent:
Oral LD50 (rat): >5000 mg/kg

Respiratory or skin sensitisation:	A respiratory sensitiser. A skin sensitiser.

Chronic effects: Available evidence from animal studies indicate that repeated or prolonged exposure to this material could result in effects on the lungs.

Mutagenicity:	No evidence of mutagenic effects.
Carcinogenicity:	Suspected of causing cancer.
Reproductive toxicity:	No indications of a developmental toxic/teratogenic effect were seen in animal studies.
Specific Target Organ Toxicity (STOT) - single exposure:	May cause respiratory irritation.
Specific Target Organ Toxicity (STOT) - repeated exposure:	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard:	No information available.

EYES(rabbit): 100ug - Draize - MILD

Rats were exposed for two years to a respirable aerosol of polymeric MDI which resulted in chronic pulmonary irritation at high concentrations. Only at the top exposure level (6 mg/m^3) was there a significant incidence of a benign lung tumour (adenoma) and one malignant tumour (adenocarcinoma). There were no lung tumours at 1 mg/m^3 and no effects at 0.2 mg/m^3. The tumour incidence, both benign and malignant, and the number of animals with tumours were no different from the controls. The increased incidence of lung tumours is associated with prolonged respiratory irritation and the concurrent accumulation of a yellow material in the lung, which occurred throughout the study. In the absence of prolonged high exposure leading to chronic irritation and lung damage, it is highly unlikely that tumour formation could occur. Industrial experience with humans has not shown any links between MDI exposure and cancer development.

No birth defects were seen in two independent animal (rat) studies.

Fetotoxicity was observed at doses that were highly toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were maternally toxic. The doses used in these studies were maximal, respirable concentrations, which were well in excess of defined ocupational exposure limits.

There is no substantial evidence of mutagenic potential.
Respiratory hypersensitivity in guinea pigs has resulted from dermal exposure to MDI.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

Persistence/degradability: The material is not biodegradable.

Bioaccumulative potential: Not expected to bioaccumulate.

Mobility in soil: No information available.

48hr EC50 (Daphnia magna): >100 mg/L
96hr LC50 (fish): >100 mg/L

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport
Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Marine Transport
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Air Transport
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

15. REGULATORY INFORMATION

Classification:
This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:
Skin Irritation - Category 2
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H351 Suspected of causing cancer.
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Poisons Schedule (SUSMP): None allocated.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Supplier Safety Data Sheet; 10/ 2015.
SUPRASEC is a registered trademark of Huntsman Corporation or an affiliate thereof in one or more countries, but not all countries.

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

Reason(s) for Issue:
5 Yearly Revised Primary SDS
Change in Fire Management Requirements
Update in Toxicological Information
Update in Ecological Information

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.