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MATERIAL SAFETY DATA SHEET

MSDS 603B

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1. Product and Company Identification

- 1.1 PRODUCT NAME:** GARDTEX R: UNIT B
- 1.2 USE OF PRODUCT** Curing compound for Gardtex R unit A.
- 1.3 SUPPLIER:** Equus Industries Ltd
Sheffield Street
Riverlands Industrial Estate
Blenheim, Marlborough, New Zealand
Telephone: +64 3 578 0214
Fax: +64 3 57 80919
- 1.4 EMERGENCY CONTACT:** **National Poison Centre**
Telephone: 0800 764 766

Information about Safety Data Sheet: Telephone: +64 3 578 0214 8:00am – 6:00pm Mon – Fri

2. Hazards Identification

- 2.1 Classification:**
Dangerous Goods – classification according to New Zealand Dangerous Goods Code.
- 2.2 Risk & Safety Phrases:**
R20,36,37,38,42,43
S2,23,36,37,45

The full text of each R & S phrases are listed in Section 16.

3. Composition/Information on Ingredients

- 3.1 Chemical Characterization (Preparation):**
This product is a preparation.
- 3.2 Hazardous Ingredients:**

CAS NO.	COMPONENT	CONCENTRATION %	CLASSIFICATION
26447-40-5	Diphenylmethane diisocyanate	-	R20/36/37/38/42/43



- 3.3 Only ingredients, additives and impurities which are classified and contribute to the classification of the product are included in this section.

4. First Aid Measures

- 4.1 **After Inhalation:**
Remove person to fresh air. If not breathing, give artificial respiration, preferable mouth to mouth. If breathing is labored, give oxygen. Get medical attention immediately. Do not give any food or fluids to an unconscious person.
- 4.2 **After Skin Contact:**
Wash material off the skin with plenty of soap and water. If redness, itching or burning develops, seek medical attention immediately.
- 4.3 **After Eye Contact:**
Immediately flush eyes with plenty of water for at least 15 minutes. Keep eyelids wide open. Seek medical attention immediately to have eyes examined and treated accordingly.
- 4.4 **After Ingestion:**
Give 1 to 2 glasses of water to drink. If gastrointestinal symptoms develop, seek medical attention immediately. Never give anything by mouth to an unconscious person.
- 4.5 **Advice to Doctor:**
Treat symptomatically.

5. Fire Fighting Measures

- 5.1 **Suitable Extinguishing Media:**
Use dry chemical, carbon dioxide, foam, halogenated agents.
- 5.2 **Protective Equipment:**
Use positive pressure self-contained breathing apparatus and wear full body protective clothing.
- 5.3 **Specific Hazards:**
The reaction between water and hot isocyanate may be vigorous. Water contamination will product carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture them.
- 5.4 **Combustion Products:**
Carbon monoxide, carbon dioxide, fumes, smoke, nitrogen oxides and trace amounts of hydrogen cyanide.
- 5.5 **Precaution in Connection with Fire:**
Water usage will help cool down the containers.

6. Accidental Release Measures

- 6.1 **Preliminary Action and Precautions:**
- 6.1.1 Extinguish or remove all sources of ignition.



- 6.1.2 Wear appropriate protective equipment to protect eyes, skin and to avoid inhalation of gases, or vapours.
- 6.1.3 Avoid spill/leak from entering sewers, storm water drains and open bodies of water by containing the spill/leak with sand or earth.
- 6.1.4 Collect material in a waste container using inert absorbent material. Cover the lid but do not seal if contaminated with water.
- 6.1.5 The collected spilled material could be solidified using the A component and disposed of as solid waste.
- 6.1.6 Dispose of as detailed in Section 13.

7. Handling and Storage

7.1 Handling:

- 7.1.1 Ensure adequate ventilation at all times.
- 7.1.2 Avoid contact with eyes, skin and clothing.
- 7.1.3 Avoid inhaling vapours or mist.
- 7.1.4 Wash hands thoroughly after handling. Especially before eating, drinking, smoking or using the toilet.
- 7.1.5 A person allergic to polyurethane products should avoid working with the product.
- 7.1.6 Do not eat, drink or smoke while working with the product.
- 7.1.7 Keep away from ignition sources such as fire, flame, sparks etc.
- 7.1.8 Avoid moisture/water contamination in the containers. Do not reseal contaminated containers as pressure buildup may rupture them.

7.2 Storage:

- 7.2.1 Store only in tightly closed containers.
- 7.2.2 Store away from heat, sparks, open flames.
- 7.2.3 Store away from materials containing active hydrogen group such as water, alcohols, ammonia, amines, alkalis and acids.
- 7.2.4 Store in a cool, dry, well ventilated space.



8. Exposure Controls and Personal Protection Equipment

8.1 Exposure Limits:

Diphenylmethane diisocyanate Cas – 26447-40-5 TLV/TWA (ACGIH): 0.02ppm
STEL (ACGIH): 0.02ppm

8.2 Exposure Controls:

8.2.1 Exposure Controls in the Work Place:

Local and/or mechanical exhaust ventilation recommended.

8.2.1 Personal Protection Equipment:

Respiratory Protection - Not required under normal conditions after mixing with the A-Component. However if required, wear NIOSH/MSHA approved organic vapour or charcoal filtered cartridge respirator to avoid and inhalation.

Hand Protection – Wear chemically resistant gloves such as neoprene, nitrile or butyl rubber.

Eye Protection – Wear chemical splash goggles and full face shield in addition if splashing of product is possible.

Body Protection - Tyvek, neoprene, butyl, nitrile rubber based clothing can be worn to protect against contact.

Work/Hygiene Practices- Do not drink, eat or smoke while working with the product. Wash before breaks and at end of day.

8.2.2 Additional Remarks:

Individuals with existing respiratory disease such as chronic bronchitis, emphysema or asthma like conditions should not be exposed to isocyanates or related products. A person allergic to polyurethane products should avoid working with the product.

9. Physical and Chemical Properties

9.1 General Information:

Physical State/Form	Liquid
Colour	Pale yellow
Odour	Mild
Vapour Pressure	<0.0001 @ 20°C (MDI)
Vapour Density	8.5 (MDI) (air = 1)
Boiling Point/Range	>204°C
Water Solubility/Miscibility	Will react slowly with water
Flash Point	219°C (COC)
Lower Explosion Limit	Not available
Upper Explosion Limit	Not available
Evaporation Rate	Not applicable
Specific Gravity	1.12 – 1.15

10. Stability and Reaction

10.1 General Information:

This material is stable when properly handled and stored.



10.2 Conditions to Avoid:

Avoid water contact, alcohol, amines, acids and alkalis.

10.3 Material to Avoid:

This material will react with any materials containing active hydrogen group such as water, alcohols, ammonia, amines, alkalis and acids.

10.4 Hazardous Decomposition Products:

Hazardous polymerization may occur in the presence of high temperatures, alkalis, amines and metal compounds. These will accelerate polymerization. Possible evolution of carbon dioxide gas may rupture closed containers. For combustion decomposition products refer Section 5.

11. Toxicological Information

11.1 General Information:

No toxicity data is available for this product.

11.2 Skin Contact:

May cause irritation to the skin resulting in redness and itching.

11.3 Eye Contact:

May cause irritation if not washed immediately. May result in tear development, redness and/or burning effect of eyes.

11.4 Ingestion:

May cause irritation to mouth, pharynx, oesophagus and stomach tissues.

11.5 Inhalation:

May cause coughing, nausea, tightness of chest with difficulty in breathing and headache.

11.6 Chronic Effects:

Prolonged and repeated exposure may result to respiratory sensitization, asthma like conditions, central nervous depression (dizziness, nausea, headache etc), skin sensitization and allergic skin reactions (rashes, hive-like, acme's, itching etc).

12. Ecological Information

12.1 Environment Protection:

Prevent from entering sewers, drains and waterways.

12.2 Ecotoxicity:

Data not available.

12.3 Persistence and degradability:

Data not available.

12.4 Bioaccumulative Potential:

Data not available.



13. Disposal Consideration

13.1 Material

Dispose of according to regulation by incineration in a special waste incinerator or landfill at a permitted facility in accordance with local/national regulations.

14. Transport Information

14.1 Land Transport:

Road: Not regulated (not dangerous for transport)

Rail: Not regulated (not dangerous for transport)

14.2 Sea Transport: Not regulated (not dangerous for transport)

14.3 Air Transport: Not regulated (not dangerous for transport)

14.4 Postal and Courier Service: This product can be transported by courier.

15. Regulatory Information

This product is hazardous.

16. Other Information

16.1 Full Text of R-Phrases Contained in Section 2:

R20 Harmful by inhalation
R36/37/38 Irritating to the eyes, respiratory system and skin.
R42/43 May cause sensitization by inhalation and skin contact.

16.2 Full Text of S-Phrases Contained in Section 2:

S2 Keep out of the reach of children
S23 Do not breathe gas/fumes/vapour/spray.
S36/37 Wear suitable protective clothing and gloves
S45 In case of accident or if you feel unwell, seek medical advice immediately

16.3 The information contained in this Data Sheet relates only to the specific material identified. Equus Industries Ltd believes the information to be accurate and reliable as at the date of this Data Sheet. No Warranty, Guarantee or representation is expressed or implied by the Company as to the absolute correctness or completeness of any representation contained in this Data and assumes no legal responsibility in connection therewith. It can not be assumed that all acceptable safety measures are contained in this Data Sheet, or that additional measures may not be required under particular or exceptional circumstances or conditions.