

Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Duroproof™ PU Exterior

Issue Date: 27/11/2009

Revision Date:27/11/2009

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Classified as Hazardous according to criteria of ASCC¹ and not Dangerous Goods according to the ADG² Code

UN NO.....:	None allocated	D.G. Class.:	None allocated	Pack. Group...:	None allocated
HAZCHEM:	N/A	SUB. RISK.:	None allocated	SUSDP.....:	6

PROPER SHIPPING NAME: Paint

PRODUCT USE: Polyurethane Coating Compound.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Polyurethane Prepolymer	9048-37-1	20-50
Toluene Diisocyanate	26471-62-5	1-5
Non Hazardous ingredients	-	To 100

3. HAZARDS IDENTIFICATION

Hazard category: Toxic (T), Irritant (Xi)

Poisons Schedule: the material is scheduled **S6 Poison**

Hazard Classification: HAZARDOUS SUBSTANCE, NON DANGEROUS GOODS

Risk phrases:

R23 Toxic by inhalation

R42/43 May cause sensitisation by inhalation and in contact with skin.

R36/37/38 Irritating to eyes, respiratory system and skin.

R40 Limited evidence of carcinogenic effect.

Safety phrases:

S26 In case of contact with eyes rinse immediately with water and contact a doctor

S23 Do not breath fumes/vapour

S36/37 Wear suitable protective clothing and gloves.

S38 In case of insufficient ventilation wear suitable respiratory protection.

4. FIRST AID MEASURES

Eyes:	Immediately flush with water for 15 minutes. Get medical attention if irritation persists.
Skin:	Take off all contaminated clothing. Wash contaminated area with soapy warm water. Get medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
Inhalation:	Remove to fresh air. Apply resuscitation if victim is not breathing. Give oxygen if breathing is difficult. Get medical attention if required. The onset of symptoms may occur several hours after exposure.
Ingestion:	Consult a doctor immediately. DO NOT induce vomiting. Aspiration into lungs via vomiting can be fatal. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. A decision to induce vomiting should only be made by a physician.
Advise to doctor	Treat symptomatically. Asthmatics are susceptible to an attack if exposed to isocyanates. There may be up to a 12 hour delayed response.

5. FIRE FIGHTING MEASURES

Flash Point	190°C (COC)
Auto-ignition Temperature	Not available
Lower Explosive Limit	Not available
Upper Explosive Limit	Not available

Suitable Extinguishing Media:

Foam, carbon dioxide or dry chemical. If water is used, use in very large quantities. The reaction between water and hot isocyanate may be vigorous.

Protective Equipment for Fire Fighting:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Fire Fighting Procedures:

Use water spray to cool exposed containers. Avoid spreading burning liquid with water spray. Stay upwind and fight fire from a safe distance. Use self contained breathing apparatus in confined spaces or if exposed to decomposition products. Prevent spillage from entering drains or watercourses.

Fire and/or Explosion Hazards:

Containers exposed to heat may explode. If safe to do so move containers from fire area. Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure build-up may result in rupturing of the container.

Decomposition Products:

Decomposes with fire to give off toxic fumes including oxides of carbon, nitrogen, hydrogen cyanide and isocyanates.

6. ACCIDENTAL RELEASE MEASURES

Caution: floor may be slippery. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas. Shut off leaks, if possible without personal risks. Ensure adequate ventilation. Wear appropriate personal protective equipment including gloves and safety glasses. Do not breathe vapour. Contain spill. Do not allow into drains or waterways.

Small Spills: Take up with wet inert absorbent material (e.g. wet sand, wet dirt, wet sawdust or vermiculite). Fill into marked containers for disposal. Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure build-up may result in rupturing of the container. Dispose of empty containers in accordance with federal, state and local laws

Additional Advice: Notify authorities if any exposure to the general public or the environment occurs, or is likely to occur. Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

Storage: Store in a cool, dry area away from combustible materials, sunlight, excessive heat and sources of ignition. Store away from strong oxidizers. Use in a well-ventilated area. Keep containers tightly closed and store in a cool, well-ventilated area.

Handling – Individuals with existing respiratory disease such as chronic bronchitis, emphysema or asthma like conditions should not be exposed to isocyanates or related products during application and curing time. Avoid inhaling vapour and/or mists. Avoid contact with skin, eyes, and clothing. Do not smoke.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Information

Component	NOHSC ¹			
	TWA		STEL	
	(ppm)	(mg/m ³)	(ppm)	(mg/m ³)
Polyurethane Prepolymer	-	-	-	-
Toluene Diisocyanate, TDI Mixed isomers	0.02*	0.02	0.005*	0.07

a = not listed

TWA = Time Weighted Average

STEL= Short term Exposure Limit

¹National Occupational Health and Safety Commission (Australia)

*ACGIH

Respiratory Protection

In case of vapours or mist, a respiratory protection program meeting Australian and New Zealand Standards AS/NZS-1716 and AS/NZS -1715 requirements must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in "Exposure Limit Information"

Eye Protection

Use chemical splash goggles (Australian and New Zealand Standards AS/NZS-1337) or approved equivalent. Eye protection worn must be compatible with respiratory protection system employed.

Hand Protection

Chemical resistant gloves and protective clothing as necessary to prevent skin contact.

Engineering Controls (Ventilation)

Use explosion proof, local exhaust ventilation sufficient to maintain exposure levels below exposure limit concentrations. Refer to Australian Standard AS-1668.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour	Grey-green
State	Liquid
Odour Characteristic	Aromatic
pH	Not Applicable
Viscosity	20,000cps@25°C
Specific Gravity (Water = 1)	1.35 @25°C
Vapour Density (Air = 1)	Not specified
Vapour Pressure	Not specified
Melting Point	Not applicable
Boiling Point	Not applicable
Solubility	Toluene, xylene, acetic acid
Flash Point	190°C

10. STABILITY AND REACTIVITY

Hazardous Decomposition:

Oxides of carbon and nitrogen. Decomposition by heat may give off toxic and irritating fumes.

Materials to avoid:

Strong oxidising agents, water, alcohols, amines and acids.

Conditions to avoid:

Heat, flame and other sources of ignition.

Hazardous Polymerisation:

May occur in the presence of heat and water, alcohols, amines, acids etc.

11. TOXICOLOGICAL INFORMATION

Acute Health Effects:

Inhalation: Toxic if inhaled. Effects may be immediate or delayed. May cause sensitisation by inhalation. Harmful by inhalation. Mild cases may be slight irritation of nose and throat, dryness, wheezing and tightness of chest, coughing or shortness of breath. Severe cases may suffer acute bronchial irritation with difficulty in breathing.

Ingestion: Ingestion may result in irritation of gastrointestinal tract, leading to abdominal pain, nausea and vomiting.

Skin: May cause sensitisation by skin contact. Irritating to skin resulting in redness, dryness and itching.

Eye: Vapour and liquid may cause irritation to the eye, resulting in reddening, tearing pain, stinging and blurred vision.

Chronic Effects: Prolonged or repeated contact will cause sensitization by inhalation. Overexposure to toluene diisocyanate can lead to asthma. Once sensitized to a diisocyanate concentrations below the permitted level may trigger an asthmatic attack.

Prolonged or repeated contact may lead to irreversible damage to health.

Prolonged or repeated contact may lead to dermatitis.

Carcinogenicity: Toluene diisocyanate is a material that may reasonably be anticipated to be a carcinogen, based on NTP technical report. In the cited study, laboratory animals gavaged TDI in corn oil developed cancer.

12. ECOLOGICAL INFORMATION

Harmful to aquatic organisms. Keep out of waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Do not reuse empty drums. Do not weld, cut or drill on or near empty containers. Dispose of empty containers in accordance with federal, state and local laws.

14. TRANSPORT INFORMATION

Not classified as Dangerous Goods according to the Australian Code For The Transport Of Dangerous Goods By Road And Rail (Seventh Edition). See Section 1.

15. REGULATORY INFORMATION

Poisons Schedule 6

Workplace Labelling Requirements: According to Criteria of the Australian Safety and Compensation Council: See 3. HAZARDS IDENTIFICATION

16. OTHER INFORMATION

- 1 Australian Safety and Compensation Council
- 2 Australian Dangerous Goods Code – Seventh Edition
- 3 National Occupational Health and Safety Commission
- 4 Standard for the Uniform Scheduling of Drugs and Poisons No 23

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