

# Material Safety Data Sheet

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### Duroproof™ PU-5001

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Classified as **Hazardous** according to criteria of ASCC<sup>1</sup> and **Dangerous Goods** according to the ADG<sup>2</sup> Code

UN NO.....:	1263	D.G. Class.:	3	Pack. Group...:	III
HAZCHEM:	3[Y]	SUB. RISK.:	None allocated	SUSDP.....:	6

**PROPER SHIPPING NAME:** PAINT

**PRODUCT USE:** Coating material.

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Aromatic polyurethane polymer	Proprietary	55-65
Talc	14807-96-6	<20
Pigment mixture	mixture	<10
White spirits	8052-41-3	<10
Solvent naptha, light aromatic	64742-95-6	<5
Toluene diisocyanate	26471-62-5	<0.16

See Section 8, Exposure Controls / Personal Protection

## 3. HAZARDS IDENTIFICATION

**Flammable.**  
**Harmful by inhalation and if swallowed.**  
**May cause sensitisation by inhalation and in contact with skin.**  
**Irritating to eyes, respiratory system and skin.**  
**Harmful: may cause lung damage if swallowed.**

## 4. FIRST AID MEASURES

- Eyes:** Immediately flush with water for 15 minutes. Get medical attention if irritation develops or 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.
- 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. Decision to induce vomiting should only be made by a physician.

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## 5. FIRE FIGHTING MEASURES

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Flash Point .....	48.9°C (COC)
Auto-ignition Temperature .....	Not available
Lower Explosive Limit .....	Not available
Upper Explosive Limit .....	Not available

### Suitable Extinguishing Media:

Foam, carbon dioxide, dry chemical. If water is used, use 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:

Vapours may form explosive mixtures with air. Use water spray to cool exposed containers. Avoid spreading burning liquid with water spray. Stay up-wind and fight fire from a safe distance. Prevent spillage from entering drains or watercourses.

### Fire and/or Explosion Hazards:

Vapours are heavier than air and may travel back to source of ignition (electrical equipment, sparks, pilot lights etc.). Containers exposed to heat may explode. Vapours may form explosive mixtures with air.

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 and irritating fumes.

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## 6. ACCIDENTAL RELEASE MEASURES

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**CAUTION: Flammable liquid.** 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. Eliminate all sources of ignition. Vapours may travel long distances to source of ignition (electrical equipment, sparks, pilot lights etc.). 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 precautions against static discharge. Use non-sparking tools. Take up with **dry**, inert absorbent material (e.g. sand, dirt, or vermiculite). DO NOT use sawdust. 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.

**Large Spills:** Notify Emergency Services and advise nature of spill and material hazard. Isolate area. Eliminate all sources of ignition. Vapours may travel long distances to source of ignition (electrical equipment, sparks, pilot lights etc.). Ensure adequate ventilation.

**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.

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## 7. HANDLING AND STORAGE

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**Class 3 Flammable Liquid** – Transport and store in accordance with Dangerous Goods requirements.

Store in a cool, dry area away from combustible materials, excessive heat and sources of ignition. Store away from incompatible materials. All equipment and containers must be earthed to avoid static discharge. Use in a well-ventilated area. Avoid breathing vapour and contact with skin and eyes. Wear gloves, long sleeved shirt, and eye protection. 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. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Handling Temperature: Ambient.

**Storage** - Must be stored in a dry, well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from oxidizing agents. The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Storage Temperature: Ambient.

**Empty container warning** – Do not reuse empty drums or containers. Do not cut, drill, grind or weld on or near empty containers.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### Exposure Limit Information

Component	NOHSC <sup>1</sup>			
	TWA		STEL	
	(ppm)	(mg/m <sup>3</sup> )	(ppm)	(mg/m <sup>3</sup> )
Aromatic polyurethane polymer (as NCO)	-	0.02	-	0.07
Talc (as free dust)	-	2.5	-	a
Pigment mixture	a	-	a	-
White spirits	-	790	-	a
Solvent naphtha, light aromatic	a	-	a	-
Toluene diisocyanate (as NCO)	-	0.02	-	0.07

a = not listed

TWA = Time Weighted Average

STEL= Short term Exposure Limit

<sup>1</sup> National Occupational Health and Safety Commission (Australia)

### 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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance and colour ..... Viscous

State ..... Liquid

Odour Characteristic .....	Aromatic hydrocarbon
pH .....	Not applicable
Viscosity .....	3,500 cps (minimum) @ 23.9°C
Specific Gravity (Water = 1) .....	1.15-1.17
Vapour Density (Air = 1) .....	>1
Vapour Pressure .....	Not specified
Melting Point .....	Not specified
Boiling Point .....	148.8°C to 287.8°C
Solubility in Water .....	Insoluble
Flash Point .....	48.9°C (COC)

## 10. STABILITY AND REACTIVITY

Reacts and crosslinks in the presence of water and other hydrogen donating compounds.

### **Hazardous decomposition products**

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 Toxicity:**

Toluene Diisocyanate (Mixer Isomer) CAS # 26471-62-5 →LD50: >2g/kg (rat, dermal); LD50: 5.8g/kg (oral, rat); LC50: 10ppm/4hrs (mouse)

Aromatic 100 CAS # 64742-95-6 → LD50: 4.7g/kg (rat, dermal) ; LC50: >3370 ppm/8hrs (rat)

White Spirits: CAS# 8052-41-3 / 64742-47-8 →LD50 (dermal)(rabbit): 3g/kg; LD50 (oral): 5g/kg (rat)

### **Inhalation:**

May cause sensitisation by inhalation. Harmful by inhalation. It will cause irritation of nose and throat; and overexposure can cause headache, nausea, vomiting, dizziness, fatigue, light-headedness, loss of appetite, reduced coordination, and unconsciousness. Intentional misuse by deliberately concentrating and inhaling vapours may be harmful or fatal.

### **Ingestion:**

Ingestion may result in irritation of gastrointestinal tract, leading to abdominal pain, nausea and vomiting. Severe lung damage can occur if solvent is aspirated, during ingestion or 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, swelling and possible corneal inflammation.

### **Chronic Effects:**

Chronic absorption may result in injury to liver, kidneys, blood and/or bone marrow, with possible damage to brain and nervous system.

## 12. ECOLOGICAL INFORMATION

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

## 13. DISPOSAL CONSIDERATIONS

Containers hazardous when emptied. Flammable vapour remains in containers until professionally cleaned. Do not weld, cut or drill on or near empty containers. Dispose of empty containers in accordance with federal, state and local laws.

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## 14. TRANSPORT INFORMATION

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Classified as **Class 3 Dangerous Goods** according to the Australian Code For The Transport Of Dangerous Goods By Road And Rail (Seventh Edition). See Section 1.

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## 15. REGULATORY INFORMATION

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### Workplace Labelling Requirements:

According to Criteria of the Australian Safety and Compensation Council

### Risk Phrases:

R10	Flammable.
R20/22	Harmful by inhalation and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and in contact with skin.
R65	Harmful: may cause lung damage if swallowed.

### Safety Phrases:

S16	Keep away from sources of ignition – no smoking.
S23	Do not breathe vapour.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S62	If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label

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## 16. OTHER INFORMATION

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<sup>1</sup> Australian Safety and Compensation Council

<sup>2</sup> Australian Dangerous Goods Code – Seventh Edition

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