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## IDENTIFICATION of the SUBSTANCE(S) and COMPOSITION

<b>Product Name</b>	2 PACK POLYURETHANE HARDENER	<b>Code</b>	2PPUH
<b>Product Use</b>	The hardener component of sprayable 2 Pack Polyurethane Coatings.		
<b>Ingredients</b>	<b>Name</b>	<b>CAS Number</b>	<b>Proportion w/w</b>
	Monomeric Hexamethylene 1,6 Di Isocyanate	822 – 06 – 0	< 0.5%
	n Butyl Acetate	123 – 86 – 4	10 – <30 %
	Solvent Naphtha Petroleum – Heavy Aromatic	64742 – 94 – 5	1 – <10 %
	Polymeric Isocyanate Resin	28182 – 81 – 2	60 – 100 %

## HAZARD IDENTIFICATION

The product is classified both as **Hazardous Substance** and **Dangerous Goods** in accordance to ASCC

**Risk Phrases R**

- 10 Flammable Liquid  
21/22 Harmful by skin contact and if swallowed.  
23 Toxic by inhalation  
36/37/38 Irritating to eyes, the respiratory system and skin.  
40 Limited evidence of a carcinogenic effect.  
42/43 May cause sensitization by inhalation and skin contact.  
48/23 Danger of serious damage to health by prolonged exposure through inhalation.  
52/53 Harmful to aquatic systems and may cause long term adverse effects in the aquatic environment.  
63 Possible risk of harm of unborn child.  
65/66/67 Harmful. May cause lung damage if swallowed. Repeated or prolonged exposure may cause skin dryness and cracking. Vapours may cause headaches, drowsiness and dizziness.

**Safety Phrases S**

- 2 Keep out of reach of children.  
7/9 Keep containers tightly closed when not in use and also in a well ventilated area.  
15 Keep away from heat.  
16/33 Keep away from sources of ignition. Take precautionary measures against static electricity.  
20/21 When using, do not eat, drink or smoke.  
23.5 Do not breathe the vapours and spray mists  
24/25 Avoid skin contact and with the eyes.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
27 Take off immediately all contaminated clothing.  
28.1 In contact with the skin, wash immediately soap and plenty of water.  
36/37/38/39 Wear protective clothing, including knee high boots, elbow length gloves, positive pressure air supplied full face respirator including eye and face protection. Wear hearing protection when applied by conventional spray  
45 In case of accident, or if you feel unwell, seek medical advice immediately. Show the label where possible.  
62 If swallowed, do not induce vomiting: seek medical advice immediately. Show the label where possible.

**ADG** RESIN SOLUTION – immiscible in water, UN 1866, Class 3, Packing Group III,  
**Classification** HAZCHEM 3[Y].  
**SUSDP** Classified as a Schedule S 6 poison.

## FIRST AID MEASURES

<b><i>Inhalation</i></b>	If the applicator feels drowsy, dizzy, tired or experiencing headaches, remove the victim to the fresh air. Keep the victim warm and quiet until all symptoms subside.
<b><i>Ingestion</i></b>	If swallowed and only if the person is conscious, give water to drink. <b>DO NOT</b> induce vomiting; seek URGENT medical attention if frothing from the mouth occurs.
<b><i>Eyes</i></b>	If splashed into eyes, hold eyes open, irrigate copiously with clean water for at least 15 minutes. Seek immediate medical attention if any irritation occurs.
<b><i>Skin</i></b>	If skin contact occurs, remove contaminated clothing, and wash thoroughly with soap and plenty of water. Seek medical attention if any irritation occurs.
<b><i>First Aid Facilities</i></b>	Clean Water Supply, soap or skin cleaner, barrier cream, emergency showers and eye wash stations.
<b><i>Advice to Doctor</i></b>	If poisoning occurs, consult with the Poisons Information Centre {Telephone <b>13 11 26</b> }. Have a copy of this material safety data sheet or label available. Treat symptomatically as symptoms may be delayed for several hours after exposure.



## FIRE FIGHTING MEASURES

<b><i>Extinguishing Media and Requirements</i></b>	Carbon Dioxide {CO <sub>2</sub> }, alcohol resistant foam, dry chemical or water spray. <b>DO NOT</b> use water jets. Bund area with sand to prevent run – off entering waterways and drains.
<b><i>Fire Fighting Procedures &amp; Precautions</i></b>	Fire – fighters should wear Chemical Splash Suit with attached Self – Contained Breathing Apparatus and gloves. Evacuate all non fire–fighting personnel away from the area. Turn off all electricity and power supplies. Keep containers cool with water spray or water to prevent rupture or burning. Move away all containers and equipment from the direction of the fire, if safe to do so. Keep upwind.
<b><i>Flammability</i></b>	Flammable Liquid. Flash Point = 23 °C
<b><i>Hazardous Decomposition Products</i></b>	On heating, containers may rupture and explode: contents may burn rapidly forming toxic gases including carbon monoxide, cyanides and oxides of nitrogen.



## ACCIDENTAL RELEASE MEASURES

<b><i>Spills and Leaks</i></b>	Contain all spills and leaks. Avoid contamination with spilt material on surfaces. Remove all sources of ignition and <b>NO SMOKING</b> . Wear the recommended full body impervious clothing, gloves and breathing apparatus as per AS– NZ 1715/16. Keep upwind. Absorb all spilt contents onto sand or earth.
<b><i>Disposal</i></b>	Collect all residues into labelled and sealed containers for disposal via special waste collection services as per local Statutory Authority requirements.
<b><i>Other Precautions</i></b>	Avoid contaminating waterways, drains, water courses and sewage.



## HANDLING and STORAGE

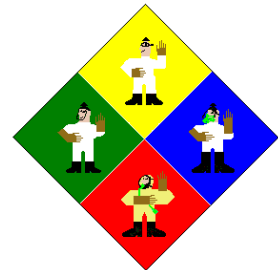
<b>Handling</b>	Keep out of reach of children. Avoid unnecessary contact with the material. After use before eating, drinking or smoking wash all exposed skin with soap and water.
<b>Storage</b>	Containers must be clearly labelled, rigid and strong. Store upright in a cool, dry, well ventilated area from heat, ignition sources and direct sunlight e.g. Flammable Goods Store as per AS 1940 requirements.

## EXPOSURE CONTROLS

<b>Exposure Standards TWA</b>	All Isocyanates = 0.02 mg/m <sup>3</sup> . Solvent Naphtha = 100 mg/m <sup>3</sup> .	Butyl Acetate = 713 mg/m <sup>3</sup> .
<b>Exposure Standards STEL</b>	All Isocyanates = 0.07 mg/m <sup>3</sup> (Sensitiser)	Butyl Acetate = 950 mg/m <sup>3</sup> .
<b>Engineering Controls</b>	When mixing and spraying of both 2 Pack Finishes and this Isocyanate Hardener, all work must be performed out in approved spray booth in accordance with Australian Standards.	

## PERSONAL PROTECTION

<b>Inhalation AS -NZS 1715/16</b>	Positive Pressure Air Supplied Full Face Respirator <b>must</b> be worn at all times during the mixing and spray application period; until all spray mists are efficiently dispersed from the spray booth atmosphere before exiting.
<b>Eye AS -NZS 1337</b>	Safety glasses fitted with side shields <b>must</b> be worn at all times during the mixing and spray application period. Do not wear contact lenses.
<b>Gloves AS -NZS 2161</b>	Viton or PVC gloves <b>must</b> be worn at all times during the mixing and spray application period.
<b>Footwear AS -NZS 2210</b>	Enclosed footwear <b>must</b> be worn at all times during the mixing and spray application period
<b>Clothing AS -NZS 2919</b>	Anti-static clothing made on natural or synthetic high temperature fibre <b>must</b> be worn at all times during the mixing and spray application period
<b>Hearing AS -NZS 1270</b>	The wearing of hearing protection is recommended during the spraying application period
<b>Other Requirements</b>	Avoid contact with eyes and skin. Avoid inhaling spray mists and vapours.



## PHYSICAL – CHEMICAL PROPERTIES

<b>Appearance</b>	A colourless liquid with a strong odour.	
<b>pH</b>	Not required.	
<b>Vapour Pressure</b> (Butyl Acetate = 1)	Equal to 1.	
<b>Boiling Point °C</b>	125 – 210 °C { literature value }	
<b>Density</b>	0.96 { calculated value }	
<b>Solubility in water</b>	Immiscible	
<b>Flash Point °C</b>	23 °C { literature value }	
<b>Flammability</b>	Lower Explosive Limit = 1.0 %	Upper Explosive Limit = 7.5 %
<b>Limits</b>		
<b>Auto Ignition °C</b>	370 °C { literature value }	
<b>Volatile</b>	Organic Solvents	
<b>Components</b>		

## STABILITY and REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions of use.
<b>Conditions to avoid</b>	Avoid contact with heat and all ignition sources.
<b>Hazardous decomposition products</b>	On heating, containers may rupture and explode: contents may burn rapidly forming toxic gases including carbon monoxide, cyanides and oxides of nitrogen.
<b>Incompatible materials</b>	Incompatible with strong oxidizing agents
<b>Hazardous Reactions</b>	Will not polymerize.

## TOXICOLOGICAL INFORMATION

<i>Health Effects</i>	<i>Risk Phrase</i>	<i>Butyl Acetate</i>	<i>Solvent Naphtha</i>	<i>Hexamethylene Diisocyanate</i>
Inhalation LC <sub>50</sub> rat 4 hours	20	Not Known	>20mgm/L	Not Known
Dermal LD <sub>50</sub> rabbit	21	3200 mgm/kg	> 2000 mgm/kg	593mgm/kg
Oral LD <sub>50</sub> rat	22	>13100 mgm/kg	> 2000 mgm/kg	738mgm/kg

### Note

Risk phrases R23, R20/21/22 has been assigned by the EEC Council Directive 67/548/EEC. .

Risk Phrase R23 – Toxic by inhalation.

Risk Phrases R20/21/22 – Harmful by inhalation, skin contact or if swallowed.

Acute Oral Toxicity (Xylene) rat      Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Acute Dermal

Toxicity (Isocyanate) rabbit      Moderately toxic

Acute Inhalation Toxicity (Xylene) rat      High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

## TOXICOLOGICAL INFORMATION (CONTINUED)

### Health Effects

Inhalation	The inhalation of vapours and spray mist may cause acute irritation and sensitisation to the respiratory system leading to an asthmatic condition, wheeziness and tightness of the chest. When sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the Occupational Exposure Limit (OEL). Repeated or prolonged exposure may lead to permanent disability. Other symptoms may cause central nervous system depression resulting in headaches, dizziness, nausea, loss of co-ordination and impaired judgement. Delayed reactions possible (breathing difficulties, coughs, asthma) for Isocyanate.
Ingestion	Large quantities may cause nausea and vomiting for Isocyanate.
Eyes	Irritating to the eyes, including burning sensation, redness, swelling and/or blurred vision.
Skin	Will have degreasing effect on the skin may result in contact dermatitis.
Other Data	Solvent Naphtha contains trimethyl benzene, which has shown limited evidence of a carcinogenic effect. Not mutagenic in animal studies Causes foetotoxicity in animals at doses which are maternally toxic (Xylene). Does not impair fertility.

## ECOLOGICAL INFORMATION

<b>Environment</b>	Harmful to aquatic environment (R52). May cause long – term adverse effects in the aquatic environment (R53).
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## DISPOSAL CONSIDERATIONS

Collect all residues and placed into labelled and sealed containers. Do not incinerate empty containers after use. Dampen all unwanted cloths and rags in water prior to disposal. Do not recycle contents or spent containers. Crush all small empty containers. Larger containers and drums may be sent to an approved drum recycler. Ensure all contents do not pollute waterways, drains and other water courses.

## TRANSPORT INFORMATION

<b>UN number</b>	1866		
<b>Proper Shipping Name</b>	RESIN SOLUTION – immiscible in water		
<b>Class</b>	3	<b>Subsidiary Risk</b>	Not Required
<b>Packing Group</b>	III		
<b>Emergency Procedures</b>	EP 3305	<b>Initial Emergency Response Guide</b>	14
<b>HAZCHEM</b>	3[Y]		
<b>IMDG</b>			



**REGULATORY INFORMATION**

**SUSDP**  
**Classification**

Classified as a Schedule S 6 Poison.

**OTHER INFORMATION**

**Emergency**  
**Contact**  
**Disclaimer**

**Poisons Information Centre 13 11 26**

**HiChem Paint Technologies**  
**(03) 9796 3400**

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