

# permafex cs hardener

Material Safety Datasheet Issue 1.0  
24/01/2012

## 1. Identification of the substance and company

Product name – Permafex CS Hardener

Permaban Ltd, Mill Close, Lee Mill Industrial Estate, Ivybridge, Devon PL21 9GL  
Tel: +44 1752 895288 | Fax: +44 1752 690535

## 2. Composition / Information on Ingredients

Hazardous Ingredients	Conc.	CAS No	EINECS	Symbols	R Phrases
Diphenylmethane diisocyanate, isomers and homologues	90 - 100%	9016-87-9		Xn, Xi	R20-40-42/43-48/20, R36/37/38

## 3. Hazards Identification

### Main hazards:

Harmful by inhalation. Irritating to eyes, respiratory system and skin. Limited evidence of a carcinogenic effect. May cause sensitisation by inhalation and skin contact. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

## 4. First Aid Measures

### Skin contact:

Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.

### Eye contact:

Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

### Inhalation:

Move the exposed person to fresh air. Seek medical attention. If breathing stops, provide artificial respiration.

### Ingestion:

If swallowed, seek medical advice immediately and show this container or label. Drink 1 to 2 glasses of water. Ingest 300ml of activated charcoal. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person.

### General information:

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## 5. Fire Fighting Measures

### Extinguishing Media:

Dry chemical. Sand. Alcohol resistant foam. Carbon dioxide (CO2). Do NOT use ... Water jet.

### Fire Hazards:

Highly toxic or corrosive fumes may be formed in fire conditions..

### Protective Equipment:

Wear self-contained breathing apparatus.

## 6. Accidental Release Measures

### Personal precautions:

Wear suitable protective equipment. Evacuate personnel to a safe area. Ensure adequate ventilation of the working area. Surfaces contaminated with the product will become slippery.

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**Environmental:**

Do not let product contaminate subsoil. Do not allow product to enter drains. Prevent further spillage if safe. Do not flush into surface water.

**Clean up methods:**

Absorb with inert, absorbent material. Clean spillage area thoroughly with plenty of water.

## 7. Handling & Storage

**Handling:**

Avoid contact with eyes and skin. Do not breathe gas/fumes/vapour/spray. Do not eat, drink or smoke in areas where this product is used or stored. Open container carefully. Avoid sparks, flames, heat and sources of ignition. Ensure adequate ventilation of the working area. Wear suitable protective equipment. Take precautionary measures against static discharges.

**Storage:**

Keep in a cool, dry, well ventilated area. Keep containers tightly closed.

**Suitable Packaging:**

Stainless steel containers. Mild steel containers.

## 8. Exposure Controls & Personal Protection

Hazardous Ingredients	WorkPlace Exposure Limits				Notations
	8 Hour		15 Min		
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Diphenylmethane diisocyanate, isomers and homologues		0.02		0.07	

**Engineering measures:**

Ensure adequate ventilation of the working area.

**Occupational exposure controls:**

Keep away from food, drink and animal feedingstuffs.

**Respiratory protection:**

Wear suitable respiratory equipment when necessary.

**Hand protection:**

Chemical resistant gloves (plastic)

**Eye protection:**

Face shield. Safety glasses. Approved safety goggles.

**Protective equipment:**

Avoid contact with eyes and skin. Adopt best Manual Handling considerations when handling, carrying and dispensing. Wash all contaminated clothing before reuse. Apron (Plastic or rubber)

## 9. Physical and Chemical Properties

<b>Description</b>	Liquid
<b>Colour</b>	Brown

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<b>Odour</b>	Characteristic
<b>Flash Point</b>	200°C
<b>Vapour Pressure</b>	0.000004 (MDI) at 20°C
<b>Relative Density</b>	1.24

## 10. Stability and Reactivity

**Stability:**

Stable under normal conditions.

**Conditions to avoid:**

Heat, sparks and open flames.

**Materials to avoid:**

Acids. Oxidising agents. Bases.

**Hazardous decomposition products:**

Carbon oxides. Isocyanides. Ammonia. Hydrogen cyanide. Nitrogen oxides.

## 11. Toxicological Information

**Acute toxicity:**

Harmful by inhalation, in contact with skin and if swallowed. Asthma sufferers should not work with isocyanates. May cause dizziness and headache.

**Corrosivity:**

Irritating to respiratory system and skin.

**Sensitization:**

May cause sensitisation by inhalation and skin contact.

**Repeated or prolonged exposure:**

Prolonged or repeated exposure may cause irritation to skin and mucous membranes.

**Carcinogenic effects:**

Carcinogenic effects

## 12. Ecological Information

**Ecotoxicity:**

No data available on this product

**Degradability:**

Not readily biodegradable.

## 13. Disposal Considerations

**General information:**

Can be incinerated if in compliance with local and national regulations. Dispose of in compliance with all local and national regulations.

## 14. Transport Information

**Further information:**

The product is not classified as dangerous for carriage.

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## 15. Regularity Information

### Symbols:

Xn - Harmful

### Risk Phrases:

R20 - Harmful by inhalation.

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

R40 - Limited evidence of a carcinogenic effect.

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

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.

### Safety Phrases:

S22 - Do not breathe dust.

S23 - Do not breathe gas/fumes/vapour/spray.

S24 - Avoid contact with skin.

S36/37 - Wear suitable protective clothing and gloves.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S63 - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

## 16. Other Information

### Risk phrases:

R20 - Harmful by inhalation.

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

R40 - Limited evidence of a carcinogenic effect.

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

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.