

1. IDENTIFICATION OF PREPARATION & OF COMPANY

Product: Epoxy Hardener
Manufacturer: Chemco International Ltd
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2. COMPOSITION INFORMATION ON INGREDIENTS

Epoxy cross-linking agent.

Chemicals	Classification	Risk phrases	Cas No	%
Aromatic amine	N, T	R20/21/22, R43, R48, R51/53	101-77-9	25 - 35
Dibutylphthalate	N, Xn	R51./53, R62/63	84-72-2	30 - 40

The remaining 35% of the composition is a blend of proprietary, non-hazardous chemicals that are trade secret.

3. HAZARDS IDENTIFICATION

Harmful: May cause cancer. Danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. May cause sensitisation by skin contact. Possible risk of impaired fertility. Possible risk of harm to unborn child. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Inhalation: Move to fresh air if effects occur. Seek medical attention.
Ingestion: Immediately give plenty of water (if possible charcoal slurry). Seek medical attention immediately. Do not induce vomiting. Fully trained personnel can use oxygen or artificial respiration if required.
Eyes: Rinse with flowing water immediately for at least 15 minutes. Seek medical attention.
Skin: Remove contaminated clothing. Flush with flowing water for at least 15 minutes. Wash affected area with soap and water. Seek medical attention if irritation persists.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Water spray, carbon dioxide, dry powder and foam.
Unsuitable extinguishing media: High volume water jet.
Hazardous decomposition products: Burning produces obnoxious and toxic fumes. Carbon oxides, nitrogen oxides (NOx).
Special fire-fighting protection: In the case of hazardous fumes, wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Do not breathe vapours/dust. Ensure adequate ventilation. In case of vapour formation use a respirator with filter model AX (according to DIN 3181, 1980). Keep away from sources of ignition. No smoking. Avoid contact with skin, eyes and clothing.
Environmental precautions:	Avoid subsoil penetration. Prevent product from entering drains. Do not contaminate surface water.
Methods for cleaning up:	Soak up with inert absorbent material (such as sand, silica gel, acid binder, universal binder, sawdust). Collect into suitable containers as hazardous waste.

7. HANDLING & STORAGE

Handling:	Avoid formation of aerosol. Use only in area provided with appropriate exhaust ventilation. Handle and open container with care.
Storage:	Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Store at room temperature in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Technical measures/controls:	Avoid formation of aerosol. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.
Exposure limits:	Aromatic amine: 0.08mg/m ³ or 0.01ppm (can be absorbed through skin). Dibutyl phthalate: 5mg/m ³ STEL: 10mg/m ³
Respiratory protection:	In case of insufficient ventilation wear suitable respiratory equipment.
Eye protection:	Tightly fitting safety goggles. Face-shield.
Hand protection:	Rubber or plastic gloves.
Skin/body protection:	Protective suit. Safety shoes.
Additional information:	Avoid formation of aerosol. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.
General personal protection:	Do not breathe vapours/dust. Keep away from sources of ignition. No smoking. Avoid contact with skin, eyes and clothing. This substance is subjected to the requirements of EEC-directive 90/394/EEC "on the protection of workers from the risks related to exposure to carcinogens at work". Local regulations concerning exposure limits and monitoring should be observed. For hand protection use gloves on PVC or chloroprene latex approx. 0.7mm thick.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical state:	Liquid.
Colour:	Brown clear.
Odour:	Slight.
pH:	---
Boiling point:	> 200°C
Melting point:	---
Flash point:	> 150 - 180°C (DIN 51758).
Solubility @ 20°C:	Insoluble in/with water.
Relative density @ 25°C :	1.12g/cm ³
Viscosity @ 25°C:	3000 - 5000mPa.s

10. STABILITY & REACTIVITY

Chemical stability:	Stable under normal storage conditions.
Conditions to avoid:	Take necessary action to avoid static electricity discharge.
Materials to avoid:	Strong acids, bases and oxidising agents.
Hazardous decomposition products:	Carbon oxides, nitrogen oxides. Burning produces obnoxious and toxic fumes.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	
Lethal oral doses LD50:	Approx 1800 - 1900mg/kg (rat).
Irritation	
Eye:	None. (rabbit).
Skin:	None. (dermal rabbit).
Sensitisation:	Causes sensitisation. (dermal guinea pig).
General information about acute or other toxicities:	No carcinogenic effect on human based of experiments through 30 years. However, studies in experimental animal (rodents) shown that this aromatic amine compound has been an animal carcinogen. If absorbed into the body by ingestion, inhalation or by contact with the skin or eyes, it may cause damage to the liver, kidney and eyes, especially from excessive exposure by accident or misuse. It can also cause skin sensitisation. This substance has proved to have a weak mutagenic effect on bacterial.

12. ECOLOGICAL INFORMATION

Degradability:	Avoid sub soil penetration. Do not let product enter drains. Do not contaminate surface water.
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13. DISPOSAL CONSIDERATIONS

Product:	Can be disposed of or incinerated when in compliance with local regulations.
Container:	Empty containers can be land filled after cleaning, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

14. TRANSPORT INFORMATION

Proper shipping name:	Amines, liquid, corrosive, n.o.s. (aromatic amine)		
Road/rail			
ADR/RID Class:	8	ADR/RID Item No:	53c
Hazard No:	80	Trem Card:	80G15
UN No:	UN 2735		
Sea			
Class:	8	IMO/IMDG Code:	8109-2
UN No:	UN 2735	Packing Group:	III
Air			
IATA/ICAO Class:	8	Packing Group:	III
UN No:	UN 2735		
Packing Instruction (Pass & Cargo)	818	Packing Instruction (Cargo):	820

15. REGULATORY INFORMATION

Chemical name:	Contains a mixture of aromatic amine and dibutylphthalate.
Labelling:	According to EEC directives relating to packaging and labelling of dangerous substances and UK Chemicals Hazard Information and Packaging for Supply (CHIPS) legislation.
Symbols:	(N) Dangerous for the environment. (T) Toxic. (Xn) Harmful.
Risk phrases:	R20/21/22, Harmful by inhalation, in contact with skin and if swallowed. R43, May cause sensitisation by skin contact. R48, Harmful: danger of serious damage to health by prolonged exposure through inhalation. R51/53, Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62/63, Possible risk of impaired fertility and Possible risk of harm to the unborn child.
Safety phrases:	S45, In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible.) S53, Avoid exposure - obtain special instructions before use.

16. OTHER INFORMATION

The information contained in this data sheet is based on present state of knowledge and current national legislation (CHIPS). It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for the particular applications.