

1. IDENTIFICATION OF PREPARATION & OF COMPANY

Product: Isophthalic Polyester Resin
Manufacturer: Chemco International Ltd
East Shawhead Industrial Estate
Coatbridge ML5 4XD
Scotland United Kingdom
Telephone: +44 (0) 1236 606060
Emergency Telephone No: +44 (0) 7973 553361
Email: sales@chemcoint.com
Web Site: www.chemcoint.com

2. COMPOSITION INFORMATION ON INGREDIENTS

Unsaturated polyester resin in monomer.

Chemicals	Classification	Risk phrases
Styrene monomer	Xi, Xn	R10, R20, R36/38

3. HAZARDS IDENTIFICATION

Acute effects: Flammable. Harmful by inhalation. Irritating to eyes and skin.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air if effects occur. Seek medical attention.
Ingestion: Do not induce vomiting. If conscious, drink plenty of water. Seek medical attention.
Eyes: Rinse immediately with flowing water and continuously for at least 15 minutes. Seek medical attention.
Skin: Wash affected skin thoroughly with soap and water.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Water spray, foam, carbon dioxide and dry chemical powders.
Unusual fire and explosion hazards: Closed containers may rupture violently at elevated temperatures, such as in a fire.
Special protective equipment: Wear suitable protective equipment and positive pressure, self-contained breathing apparatus.
Other information: Cool closed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal protection: Avoid contact with skin and eyes in case of fire do not breathe fumes and protect personnel from styrene vapours.
Environmental precautions: If product enters drains or sewers contact the local water authority immediately. For large spills, evacuate upwind of spills and contain with dike.

6. ACCIDENTAL RELEASE MEASURES (cont'd)

Methods for cleaning up: Soak up spills with absorbent material such as sand or vermiculite and collect as much as possible in a clean container. Residue resin may be removed using trisodium phosphate and water.

7. HANDLING & STORAGE

Handling: Practice good care and caution to avoid skin and eye contact. Keep product and emptied container away from heat and sources of ignition.

Storage: Avoid direct sunlight and keep resin temperature below 20°C in closed containers in a well ventilated, flame-proof area. Polymerisation may be initiated at a resin temperature of >28°C. Keep catalyst away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, dryers, metal soaps).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Provide general and/or local exhaust ventilation to control airborne concentrations below the recommended exposure guideline.

Exposure limits: Base - Maximum Exposure Limits (LTEL 100ppm) (STEL 250ppm).

Respiratory: Do not breathe vapours. Ensure atmospheric levels are maintained below exposure guidelines. Use an approved air-purifying respirator when required for specific operations.

Eye protection: Use goggles. If vapour exposure causes eye irritation, use a full-face respirator.

Protective clothing: For prolonged or frequently repeated contact, use protective clothing impervious to this material.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical state: Viscous liquid.

Odour: Pungent styrene.

Boiling point: 146°C (styrene).

Flash point: 31°C (tag closed cup).

Specific gravity: 1.04 - 1.10

Flammability: LFL 1.1 UFL 6.1

Vapour pressure: 3.6 Pa

Density: 1.2 - 1.3g/cm³

Auto-ignition temperature: 490°C (styrene).

10. STABILITY & REACTIVITY

Stability: Stable under the recommended storage and handling conditions.

Materials to avoid: Sources of ignition, sunlight and oxidising materials.

Hazardous decomposition products: Pyrolysis products such as CO. Hazardous polymerisation may occur. Avoid contact with metal salts (ferric and aluminium chlorides) unintended contact with peroxides and depletion of inhibitor levels.

11. TOXICOLOGICAL INFORMATION

The base resin is expected to be relatively stable in the environment. The following information is applicable to the styrene component:

Ecotoxicity:	Material slightly toxic to fish on a static acute basis. Material is practically non-toxic to aquatic invertebrates on an acute basis.
Partitioning:	Bio-concentration is expected to be low to moderate.
Degradation:	Biodegradation under aerobic static laboratory conditions is high. Degradation is expected in the atmospheric environment.

12. ECOLOGICAL INFORMATION

Aquatic toxicity:	Material is harmful to aquatic organisms (LC50/EC50/IC50 10-100mg/l ⁻¹)
Degradation:	Expected to pass closed bottle test after 28 days.
Bioaccumulation potential:	Bioconcentration factor (fish) 13.5

13. DISPOSAL CONSIDERATIONS

Product:	Resin may be disposed of through burning in an adequate incinerator or burying in an approved landfill in accordance with local regulations. Disposal of catalyst similar to resin but prior to burning, dilute with organic solvents and absorb remainder with vermiculite.
Other information:	Burn in small portions on a remote place using a torch with long rod to ignite material.

14. TRANSPORT INFORMATION

Proper shipping name:	Resin solution		
Road, Rail & Barge			
ADR/RID Loaded:	3-31(C)	Empty: 3-41	Label : 3
Barge ADNR Loaded:	3-3	Empty: 3-6	Label : 2A
Kemler Code:	30	PENOS Code: S	Trem Card No: 677B
UN No:	UN 1866		
Sea			
IMO/IMDG Class:	3.3	Label:	3
EMS:	3-05	MFAG:	310
UN No:	UN 1866	Packing Group:	III
Air			
IATA/ICAO Class:	3	Packing Group:	III
UN No:	UN 1866		
Packaging Instruction (Pass & Cargo):	309	Packaging Instruction (Cargo):	310

15. REGULATORY INFORMATION

Chemical name:	Contains styrene.
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:	(Xn) Harmful.
Risk phrases:	R10, Flammable. R20, Harmful by inhalation. R36/38, Irritating to eyes and skin.
Safety phrases:	S23, Do not breathe vapours. S51, Use only in well ventilated areas.

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.