

Material Safety Data Sheet

Freeman 1085 Resin

Date of Preparation: January 3, 2007

Revision:

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Freeman 1085 Resin

Chemical Family: Isocyanate

CAS Number: N/A

Other Designations: N/A

Intended Use or Product Type: Unfilled polyurethane casting system

Manufacturer: Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011,
Phone (440)934-1902, FAX (440)934-7200, Hours of Operation 8-5, Emergency Phone Number 800-424-9300.

HMIS

H 2

F 1

R 1

PPE†

†Sec. 8

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Can cause skin irritation, eye irritation, allergic respiratory reaction,
and allergic skin reaction. Can be harmful if inhaled.

Section 2 - Composition / Information on Ingredients

| Chemical Identity | CAS # | % |
|---|------------|-------|
| * 1,1'-Methylenebis[4-Isocyanatobenzene | 101-68-8 | 25-35 |
| *Heavy aromatic naphtha | 64742-94-5 | < 35 |
| *Light aromatic naphtha | 64742-95-6 | <35 |
| *Stoddard Solvent | 8052-41-3 | <35 |
| *Polymethylene polyphenyl isocyanate | 9016-87-9 | 25-45 |
| *Pseudocumene | 95-63-6 | <5 |

* = OSHA Hazardous Ingredient

| Ingredient | OSHA | | ACGIH | | MFG |
|---|-------------|-------------|-------------|-------------|-------------|
| | PEL | STEL | TWA | STEL | TWA |
| * 1,1'-Methylenebis[4-Isocyanatobenzene | 0.02 ppm | none estab. | 0.005 ppm | none estab. | none estab. |
| *Heavy aromatic naphtha | none estab. | none estab. | none estab. | none estab. | none estab. |
| *Light aromatic naphtha | none estab. | none estab. | none estab. | none estab. | 50 ppm |
| *Stoddard Solvent | 500 ppm | none estab. | 100 ppm | none estab. | none estab. |
| *Polymethylene polyphenyl isocyanate | none estab. | none estab. | none estab. | none estab. | none estab. |
| *Pseudocumene | none estab. | none estab. | none estab. | none estab. | none estab. |

Section 3 - Physical and Chemical Properties

Physical State: Liquid

Color: Brown

Vapor Pressure: Not determined

Vapor Density (Air=1): > 1

Specific Gravity (H₂O=1, at 4 °C): 1.01

Water Solubility: Reacts with water

Boiling Point: Not determined

% Volatile: Negligible

Evaporation Rate: Not determined

pH: Not determined

Section 4 - Fire-Fighting Measures

Flash Point: >200 °F (>93 °C)

Flash Point Method: Estimated

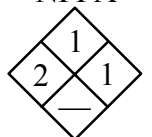
LEL: Not established

UEL: Not established

Extinguishing Media: Carbon dioxide, dry chemical, foam, water.

Unusual Fire or Explosion Hazards: Decomposition and combustion products may be toxic. Avoid water contamination in closed containers or confined spaces. Carbon dioxide evolved.

NFPA



Fire-Fighting Equipment: Use self-contained breathing apparatus.

Section 5 - Stability and Reactivity

Stability: Stable.

Polymerization: Hazardous polymerization may occur.

Chemical Incompatibilities: Water, alcohols, strong oxidizing agents, strong bases, metal-organic compounds.

Conditions to Avoid: Contamination with moisture and other products that react with isocyanates. Avoid prolonged heating over 160F or storing below 75F. Avoid water contamination.

Hazardous Decomposition Products: Combustion may form toxic materials, such as carbon dioxide, carbon monoxide, benzene, toluene, oxides of nitrogen, hydrogen cyanide.

Section 6 - Health Hazard Information

Potential Health Effects

Primary Entry Routes: Dermal: heated product may produce inhalable vapors.

Overexposure Effects: Contact with liquid causes eye and skin irritation. If inhaled causes breathlessness, chest discomfort, and reduced pulmonary function. May cause allergic skin and respiratory reactions in some individuals, leading to asthma type spasms of the bronchial tubes and difficulty in breathing.

Medical Conditions Aggravated by Exposure: Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases, eye conditions or recurrent skin eczema or sensitization should be excluded from working with isocyanates

Emergency and First Aid Procedures

Inhalation: Remove to fresh air. Call a physician.

Eye Contact: Immediately flush with water for at least 15 minutes. Call a physician.

Skin Contact: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

Ingestion: If conscious, give 2-4 glasses of water to drink. Do not induce vomiting. Call a physician.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

Section 7 - Spill, Leak, and Disposal Procedures

Accidental Release Measures: Absorb with absorbent material and place in open top container. Under good ventilation, decontaminate absorbant and spill area with a mixture of 90% water, 8% ammonia and 2% detergent (exothermic reaction). Leave ventilated 24 hours before disposal. Avoid contact.

Waste Disposal Method: Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

Ecological Information: N/A

Toxicological Information:

Sensitization: Causes allergic skin and respiratory reactions.

Skin Irritation: Irritant.

Eye Irritation: Irritant.

Regulatory Information

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not specifically listed as a hazardous waste under RCRA (40 CFR 261). However, it is strongly recommended that compound be treated as a hazardous waste and disposed of accordingly.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under Section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Revision:**Freeman 1085 Resin**

Polymethylene polyphenyl Isocyanate (CAS # 9016-87-9) 35.64% by wt

Benzene, 1,1'-Methylenebis[4-Isocyanato- (CAS # 101-68-8) 29.16% by wt

Benzene, 1,2,4-trimethyl- (CAS # 95-63-6) 1.548% by wt

TSCA Section 8(b) - Inventory Status: Chemical components listed on TSCA Inventory.

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

State Regulations:

Benzene, 1,1'-Methylenebis[4-Isocyanato- (MDI) (CAS # 101-68-8) is on the New Jersey and Pennsylvania Right to Know Lists.

Stoddard Solvent (CAS # 8052-41-3) is on the New Jersey and Pennsylvania Right to Know Lists.

Benzene, 1,2,4-trimethyl- (Pseudocumene) (CAS # 95-63-6) is on the New Jersey, Pennsylvania and Massachusetts Right to Know Lists

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

Respiratory Protection: If a person is concerned with exposure to isocyanates, an organic respirator can provide protection at less than the TLV. It is not a requirement at an exposure level less than the TLV. For exposures in excess of the TLV, an air-supplied respirator would be required. Conditions that may create exposure above the TLV are spray applications, the material being strongly heated in excess of 125F before application, or the use of material in poorly ventilated areas.

Eye Protection: Wear splash-proof chemical goggles.

Skin Protection: Wear impermeable gloves.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Special Precautions and Comments

Handling and Storage

Signal Word: Warning!

Precautions: Can cause skin irritation, allergic respiratory reaction, and allergic skin reaction. Can be harmful if inhaled. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

DOT Transportation Data (49 CFR 172.101):

Shipping Name:

Liquid Plastic, N.O.I.

Shipping Symbols:

Hazard Class: Not Regulated

ID No.:**Packing Group:****Label:****Special Provisions (172.102):****Packaging Authorizations**

a) Exceptions:

b) Non-bulk Packaging: X

c) Bulk Packaging:

Department of Transportation:

Not regulated

Quantity Limitations

a) Passenger, Aircraft, or Railcar:

b) Cargo Aircraft Only:

Vessel Stowage Requirements

a) Vessel Stowage:

b) Other:

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