

Material Safety Data Sheet

Freeman 1090 SLOW Part A

MSDS No.

Date of Preparation: January 3, 2007

Revision:

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Freeman 1090 SLOW Part A

Chemical Family: Isocyanate

CAS Number: N/A

Other Designations: N/A

General Use: Polyurethane Elastomer

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

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†Sec. 8

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Irritant, sensitizer, Moisture sensitive

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt
Dicyclohexylmethane-4,4'-diisocyanate	5124-30-1	75 - 85

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Dicyclohexylmethane- 4,4'-diisocyanate	0.01 ppm	none estab	0.005 ppm	none estab

Section 3 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Colorless liquid

Odor: Musty odor

Viscosity: 200-300 cps

Vapor Pressure: <0.001 mm Hg at 25 °C

Vapor Density (Air=1): None Established

Specific Gravity (H₂O=1, at 4 °C): 1.08

pH: N/A

Water Solubility: Reacts with water

Boiling Point: None established

Freezing/Melting Point: None established

Refractive Index: N/A

% Volatile: Nil

Evaporation Rate: Not Applicable

Section 4 - Fire-Fighting Measures

Flash Point: 369 °F (187.2°C)

Flash Point Method: PMCC

Burning Rate: Not established

Autoignition Temperature: Not established

LEL: Not established

UEL: Not established

Flammability Classification: Non-Flammable

Extinguishing Media: Water Fog, Dry Chemical, and Carbon Dioxide Foam

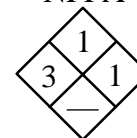
Unusual Fire or Explosion Hazards: Hazardous decomposition products may be formed. Avoid water contamination in closed containers or confined areas as exothermic heat and carbon dioxide can evolve.

Hazardous Combustion Products: N/A

Fire-Fighting Instructions: Fire fighters should wear self-contained breathing apparatus. Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.

NFPA



Section 5 - Stability and Reactivity

Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization can occur.

Chemical Incompatibilities: Strong bases, water, amines, alcohols

Conditions to Avoid: Avoid contamination with water and other materials that react with Isocyanates.

Hazardous Decomposition Products: Dicyclohexylmethane-4,4'-diisocyanate vapors, hydrogen cyanide gas, oxides of nitrogen, carbon monoxide and carbon dioxide.

Section 6 - Health Hazard Information

Potential Health Effects

Primary Entry Routes: Eye, Inhalation and Dermal

Target Organs: Lungs, skin

Acute Effects

Inhalation: Inhalation of vapors and mists of dicyclohexylmethane-4,4'-diisocyanate at concentrations above the TLV can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Exposure well above the intended TLV may lead to bronchitis, bronchial spasm edema (fluid in the lungs). These effects are usually reversible. Chemical hypersensitive pneumonitis, with flu symptoms has been reported.

Eye: May cause irritation, redness, tearing, and blur vision. Prolonged vapor contact may cause conjunctivitis.

Skin: Contact will cause irritation, reddening, swelling, rash, scaling, or blistering. Dicyclohexylmethane-4,4'-diisocyanate is also a potent skin sensitizer. Experience indicates that direct skin contact is the route of exposure most likely to cause sensitization. Once sensitized, an individual may react even to airborne levels below the TLV with the following symptoms: itching and tingling of the earlobes and neck, rash, hives, swelling of the arms and legs or other symptoms common to allergic dermatitis. These symptoms may be immediate or delayed several hours.

Ingestion: May have corrosive effects on the linings of the mouth and stomach: symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

Carcinogenicity: IARC, NTP, and OSHA do not list any components of this product as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: skin allergies and respiratory disorders

Chronic Effects

Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanates at levels well below the TLV. These symptoms, which include: chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to other irritants. Sensitization may be either temporary or permanent.

Eye: May cause irritation, redness, tearing, and blur vision. Prolonged vapor contact may cause conjunctivitis.

Skin: Contact will cause irritation, reddening, swelling, rash, scaling or blistering. These symptoms can result from contact with very small amounts of liquids or vapor exposure to individuals that have developed a skin sensitization.

Ingestion: None reported for this product.

Emergency and First Aid Procedures

Inhalation: Remove sources(s) of contamination and move victim to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact physician immediately.

Eye Contact: Flush eyes with plenty of water. If irritation persists, seek medical attention.

Skin Contact: In case of skin contact, wash thoroughly with soap and water; remove contaminated clothing and launder before reuse: seek medical attention if rash develops.

Ingestion: Do not induce vomiting unless instructed by a physician. Contact physician immediately.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 7 - Spill, Leak, and Disposal Procedures

Spill /Leak Procedures: Only properly protected personnel should remain in the spill area; dike and contain spill; absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution. Stop or reduce discharge if it can be done safely.

Small Spills:

Large Spills

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup:

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Disposal Regulatory Requirements: This material must be disposed of in accordance with applicable Federal, state and local regulations. Incineration is the best possible method of disposal.

Ecological Information: None established

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

CERCLA Hazardous Substance (40 CFR 302.4) listed specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112: None

SARA Toxic Chemical (40 CFR 372.65):

This product contains the following chemical that are subject to release reporting requirements under section 313 of SARA Title III.

Dicyclohexylmethane-4,4'-diisocyanate (CAS # 5124-30-1) 85% Max

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): None

TSCA Inventory Status (40 CFR710): All components of this formulation are listed in the TSCA Inventory.

State Regulations:

California Proposition 65: This product does not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects, or other reproductive harm.

Dicyclohexylmethane-4,4'-diisocyanate (CAS # 5124-30-1) is on the New Jersey and Pennsylvania Right to Know Lists.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. **Protective Clothing/Equipment:** Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

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

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

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 Precautions: Minimize breathing of vapors and avoid prolonged or repeated contact with skin. Wear proper protective equipment. If ventilation is not sufficient, wear proper respiratory equipment. Avoid moisture contamination. Reseal partial containers. Use good general housekeeping procedures.

Storage Requirements: Store in cool, dry, well-ventilated area.

DOT Transportation Data (49 CFR 172.101): Not Classified

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