

# Material Safety Data Sheet

Freeman 1030 Part A

MSDS No.

Date of Preparation: January 3, 2007

Revision:

## Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** Freeman 1030 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

**HMIS**

**H** 2

**F** 1

**R** 1

**PPE**†

†Sec. 8

### ☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Irritant, sensitizer,

Moisture sensitive

## Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt
Polymethylene polyphenylisocyanate	9016-87-9	60-70
4,4' Methylene bis(phenylisocyanate)	101-68-8	30-40

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Polymethylene polyphenylisocyanate	none estab.	none estab.	none estab.	none estab.
4,4' Methylene bis(phenylisocyanate)	0.02 ppm	none estab.	0.005 ppm	none estab.

## Section 3 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance and Odor:** Brown liquid, characteristic odor

**Odor Threshold:** N/A

**Viscosity:** 250-350 cps

**Vapor Pressure:** <0.00001 mm Hg at 25 °C

**Vapor Density (Air=1):** 8.6

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.16

**pH:** N/A

**Water Solubility:** Negligible

**Other Solubilities:** Not determined

**Boiling Point:** None Determined

**Freezing/Melting Point:** None Determined

**% Volatile:** Nil

**Evaporation Rate:** Not Applicable

## Section 4 - Fire-Fighting Measures

**Flash Point:** 390 °F (200°C)

**Flash Point Method:** COC

**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

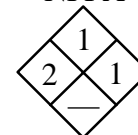
**Unusual Fire or Explosion Hazards:** Hazardous decomposition products may be formed. Avoid water contamination in closed containers or confined areas as exothermic heat and carbon dioxide can evolve.

**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:** MDI vapors, hydrogen cyanide gas, oxides of nitrogen, carbon monoxide and carbon dioxide.

## Section 6 - Health Hazard Information

### Potential Health Effects

**Primary Entry Routes:** Inhalation and Dermal

**Target Organs:** Lungs, skin

#### Acute Effects

**Inhalation:** Vapors are minimal due to low vapor pressure; if sprayed as an aerosol excessive concentrations are attainable that could be hazardous on single exposure. Excessive exposure can cause irritation to respiratory tract and irritation of the eyes. Effects may be delayed. Decreased ventilatory capacity has been associated with exposure to similar isocyanates.

**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. Prolonged or repeated contact can cause moderate dermatitis.

**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

### 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.

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

**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.

**Toxicological Information:** **Eye Effects:** Irritation  
**Skin Effects:** Irritation

**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

**Clean Air Act:** SOCOMI Chemical: 4,4' Methylene bis(phenylisocyanate)

Hap Code: XOV

**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.

Polymethylene polyphenylisocyanate (CAS # 9016-87-9) 70% by wt. Max

4,4' Methylene bis(phenylisocyanate) (CAS # 101-68-8) 40% by wt. 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.

4,4' Methylene bis(phenylisocyanate) (CAS # 101-68-8) 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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# Material Safety Data Sheet

Freeman 1030 Part B

MSDS No.

Date of Preparation: January 3, 2007

Revision:

## Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** Freeman 1030 Part B

**Chemical Family:** Polyol

**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

**HMIS**

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**R** 0

**PPE†**

†Sec. 8

### ☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Irritant

## Section 2 - Composition / Information on Ingredients

Ingredient	CAS Number	% wt or % vol
New Jersey #221290880-5005P	Proprietary	35 - 45
New Jersey #221290880-5011P	Proprietary	5 - 10
New Jersey #221290880-5051P	Proprietary	30 - 40

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
#221290880-5005P	none estab.	none estab.	none estab.	none estab.
#221290880-5011P	none estab.	none estab.	none estab.	none estab.
#221290880-5051P	none estab.	none estab.	none estab.	none estab.

## Section 3 - Physical and Chemical Properties

**Physical State:** Paste

**Appearance and Odor:** Tan, Mild odor

**Vapor Pressure:** None (Polymeric Resin)

**Vapor Density (Air=1):** >1

**Formula Weight:** N/A

**Density:** N/A

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 0.978

**pH:** N/A

**Water Solubility:** Negligible

**Boiling Point:** None (Polymeric Resin)

**Freezing/Melting Point:** None determined

**Viscosity:** N/A

**Refractive Index:** N/A

**Surface Tension:** N/A

**% Volatile:** Nil

**Evaporation Rate:** None (Polymeric Resin)

## Section 4 - Fire-Fighting Measures

**Flash Point:** >390 °F (199 °C)

**Flash Point Method:** COC

**Burning Rate:** N/A

**Autoignition Temperature:** N/A

**LEL:** Not established

**UEL:** Not established

**Flammability Classification:** Non-Flammable

**Extinguishing Media:** Water fog, dry chemical, and carbon dioxide foam.

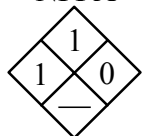
**Unusual Fire or Explosion Hazards:** None

**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 cannot occur.

**Chemical Incompatibilities:** Strong acids and oxidizers.

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

**Hazardous Decomposition Products:** Oxides of nitrogen, carbon monoxide and carbon dioxide.

## Section 6 - Health Hazard Information

### Potential Health Effects

**Primary Entry Routes:** Dermal

**Target Organs:** Skin and eyes

**Acute Effects**

**Inhalation:** Vapors, which are not significant unless heated or sprayed can cause irritation to respiratory tract.

**Eye:** May cause irritation, redness, tearing.

**Skin:** Contact will cause irritation, reddening, swelling.

**Ingestion:** Effects are unknown.

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

**Medical Conditions Aggravated by Long-Term Exposure:** Pre-existing skin disorders.

**Chronic Effects:** None known.

### Emergency and First Aid Procedures

**Inhalation:** Remove source(s) of contamination and move victim to fresh air.

**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.*

**Note to Physicians:** N/A

**Special Precautions/Procedures:** N/A

## Section 7 - Spill, Leak, and Disposal Procedures

**Spill /Leak Procedures:** Dike and contain spill; absorb or scrape up excess into suitable container for disposal. Stop or reduce discharge if it can be done safely. Do not release into sewers or waterways.

**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.

**Toxicological Information:** None established

**Ecological Information:** None established.

**EPA Regulations:**

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

**RCRA Hazardous Waste Classification** (40 CFR 261.??): Not classified

**CERCLA Hazardous Substance** (40 CFR 302.4) listed/unlisted 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): None

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

**TSCA Inventory Status** (40 CFR 710): All components of this product are listed in the TSCA inventory.

**State Regulations:**

**California Proposition 65:** None

**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.

**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. Use good general housekeeping procedures.

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

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**DOT Transportation Data (49 CFR 172.101): Not Classified**  
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**Prepared By:**

**Revision Notes:**

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