

**Section 1 Identification**

**Product Identifiers**

Freeman 5070 Part A (Resin)

**Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**

Resin component of two-part foundry board repair paste. For industrial/professional use only.

**Details of the Supplier of the Safety Data Sheet**

Freeman Manufacturing & Supply Company  
1101 Moore Road, Avon, OH 44011-4043 USA  
Telephone: +1 (440) 934-1902  
Email: contactus@freemansupply.com

**24 Hour emergency telephone number**  
**CHEMTREC (800) 424-9300**

**Section 2 Hazards Identification**

**GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)**

Acute Toxicity (Inhalation), Category 4  
Skin Irritation, Category 2  
Eye Irritation, Category 2B  
Respiratory Sensitization, Category 1  
Skin Sensitization, Category 1  
Specific Target Organ Toxicity, Single Exposure (Respiratory Tract), Category 3  
Specific Target Organ Toxicity, Repeated Exposure (Respiratory Tract), Category 2

**Label elements**



Danger

**Hazard Statements**

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H320 Causes eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H373 May cause damage to organs (lungs and respiratory system) through prolonged or repeated exposure.

**Precautionary Statements**

P260 Do not breathe fumes, vapors, mists or sprays.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves, eye protection, and face protection.  
P284 In case of inadequate ventilation, wear respiratory protection.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
P317 Get medical help.  
P319 Get medical help if you feel unwell.

### Section 2 Hazards Identification

P333+P317 If skin irritation or rash occurs: Get medical help.  
P337+P317 If eye irritation persists: Get medical help.  
P342+P316 If experiencing respiratory symptoms: Get emergency medical help immediately.  
P362+P364 Take off contaminated clothing and wash before reuse.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents and container in accordance with local, regional and national regulations.

#### Supplemental Information

Individuals sensitized to isocyanates should discontinue use. Long-term overexposure to isocyanates may cause lung damage. This is one part of a two-part system. Read and understand the hazard information on part B before using.

### Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Polymeric Isocyanates, Methylene Bisphenyl Isocyanate (MDI)	9016-87-9, 101-68-8	80-100

Amounts specified are typical and do not represent a specification. Additional components may not be listed if non-hazardous, and/or present at amounts below reportable limits.

### Section 4 First Aid Measures

#### Description of First Aid Measures

**Eye Contact:** Rinse thoroughly with water for at least 15 minutes, holding the eyelids open to be sure the material is washed out. Get medical attention if irritation develops or persists.

**Skin Contact:** Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation develops or persists. Launder clothing before re-use. Discard items that cannot be decontaminated.

**Inhalation:** Remove person to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

**Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if you feel unwell.

#### Most Important Symptoms/Effects:

Causes skin and eye irritation. Vapors or mists may cause respiratory irritation. May cause allergic skin and/or respiratory reaction in sensitized persons. Symptoms include skin rash, wheezing, shortness of breath and other asthma symptoms. Prolonged inhalation overexposure may damage the lungs and respiratory system.

#### Indication of Immediate Medical Attention/Special Treatment

Immediate medical attention is required for asthmatic symptoms or serious inhalation exposures. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Persons sensitized to isocyanates should consult a physician regarding working with respiratory irritants or sensitizers.

**Section 5 Fire-Fighting Measures**

**Extinguishing Media**

Use water fog, foam, carbon dioxide or dry chemical. Do not use solid water stream. Solid stream of water into hot product may cause violent steam generation or eruption.

**Specific Hazards**

Not classified as flammable or combustible. Product will burn under fire conditions.

**Special Protective Equipment & Precautions for Fire-Fighters**

Wear positive pressure, self-contained breathing apparatus and full-body protective clothing. Cool fire-exposed containers with water.

**Section 6 Accidental Release Measures**

**Personal Precautions, Protective Equipment, and Emergency Procedures**

Remove all ignition sources. Clear non-emergency personnel from the area. Wear appropriate protective clothing to prevent eye and skin contact and avoid breathing vapors. Ventilate area. Caution – spill area may be slippery.

**Methods and Materials for Containment and Cleanup**

Cover with an inert absorbent material and collect into an appropriate container for disposal. Do not seal the container since carbon dioxide is generated on contact with moisture and dangerous pressure buildup can occur. Decontaminate floor area with a mixture of water plus isopropyl alcohol (20%), household ammonia (10%), and detergent (2%).

**Section 7 Handling and Storage**

**Precautions for Safe Handling**

Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep container closed when not in use.

**Safe Storage**

Store indoors at temperatures between 60°F and 95°F. Store in original, unopened containers. Protect from atmospheric moisture and water since MDI reacts with water to form carbon dioxide leading to potentially dangerous pressure build up in sealed containers.

**Section 8 Exposure Controls/Personal Protection**

**Occupational Exposure Limits**

<b>Ingredient Name</b>	<b>Exposure Limits</b>
Methylenediphenyl Diisocyanate (MDI)	0.02 ppm (C) OSHA PEL 0.005 ppm TWA ACGIH TLV

**Appropriate Engineering Controls**

Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist, and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain air concentrations below occupational exposure standards. When necessary use mechanical handling to reduce human contact with materials.

**Personal Protective Equipment (PPE)**

**Respiratory Protection:** If needed, an approved respirator with organic vapor cartridges may be used. Respirator selection and use should be based on contaminant type, form and concentration. For higher exposures or in an emergency, use a supplied-air respirator.

### Section 8 Exposure Controls/Personal Protection

**Skin Protection:** Wear impervious gloves, such as butyl rubber or nitrile rubber.

**Eye Protection:** Wear chemical safety goggles.

#### Other Protective Measures

Wear impervious clothing to prevent skin contact and contamination of personal clothing. An eye wash facility and washing facility should be available in the work area. Follow applicable regulations and good Industrial Hygiene practice.

### Section 9 Physical and Chemical Properties

<b>Appearance</b>	Brown Liquid
<b>Odor</b>	Musty
<b>Odor Threshold</b>	0.4 ppm (MDI)
<b>pH</b>	No data available
<b>Melting/Freezing Point</b>	Forms crystals below 10°C
<b>Boiling Point</b>	No data available
<b>Flash Point</b>	>204°C (>°F)
<b>Evaporation Rate</b>	No data available
<b>Flammability Limits</b>	No data available
<b>Vapor Pressure</b>	≤ 0.0001 mm Hg at 25°C
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	1.18-1.24 at 25°C
<b>Solubility in Water</b>	Reacts with water
<b>Viscosity</b>	150-200 cP at 25°C
<b>% Volatile by Volume</b>	Negligible, <1%

### Section 10 Stability and Reactivity

**Reactivity:** Diisocyanates react with many materials and the rate of reaction increases with temperature. Reaction with water generates carbon dioxide and heat.

**Chemical Stability:** Stable under recommended conditions.

**Possibility of Hazardous Reactions:** Elevated temperatures can cause hazardous polymerization. Polymerization can be catalyzed by strong bases or water. Reaction with water generates carbon dioxide, and results in heat and pressure buildup in closed systems.

**Conditions to Avoid:** Avoid moisture and temperatures below 60°F and above 95°F to protect product integrity and prevent pressure build up in closed containers.

**Incompatible Materials:** Avoid contact with water, acids, bases, alcohols, strong oxidizers, and some metals (e.g., aluminum, zinc, brass, tin copper).

**Hazardous Decomposition Products:** Possibly isocyanate vapor, carbon monoxide, nitrogen oxides, and traces of hydrogen cyanide. Gases are released during decomposition.

### Section 11 Toxicological Information

#### Acute Toxicity Values

Ingredient Name	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
MDI (9016-87-9):	>10,000 mg/kg	>2,000 mg/kg	0.49 mg/L 4 hr. (aerosol)

### Section 11 Toxicological Information

#### Acute Health Effects

**Eye Contact:** Causes eye irritation.

**Skin Contact:** Causes skin irritation. May cause an allergic skin reaction.

**Inhalation:** At room temperature, vapors are minimal due to low volatility. Vapors or aerosols (e.g., generated during heating or spraying) may cause respiratory irritation and possibly pulmonary edema. May cause respiratory sensitization. For individuals sensitized to isocyanates, exposure may result in allergic respiratory reactions (e.g., coughing, wheezing, difficulty breathing).

**Ingestion:** No data available.

#### Chronic Health Effects

**Skin Sensitization:** Repeated overexposure to isocyanates has been associated with decreased lung function. Repeated or prolonged dermal contact with this product may cause allergic skin sensitization in some individuals.

**Respiratory Sensitization:** Repeated or prolonged exposure to isocyanates above exposure limits may cause an allergic sensitization of the respiratory tract causing an asthma-like response upon re-exposure.

**Germ Cell Mutagenicity:** Components are not classified as mutagens.

**Carcinogenicity:** Components are not classified as carcinogens.

**Reproductive Toxicity:** Components are not classified as reproductive toxins.

**Specific Target Organ Toxicity:** Causes respiratory irritation, drowsiness or dizziness from prolonged or repeated exposure.

### Section 12 Ecological Information

**Ecotoxicity:** No data available. Avoid release to the environment.

**Persistence and Degradability:** Diisocyanates are not readily biodegradable.

**Bioaccumulative Potential:** Diisocyanates are not expected to bioaccumulate.

**Mobility in Soil:** In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

### Section 13 Disposal Considerations

Dispose according to local, state and federal regulations. Upon exposure to moisture, product forms an inert, non-hazardous solid.

### Section 14 Transport Information

#### DOT/IMDG/IATA

Not regulated for transport in any mode.

### Section 15 Regulatory Information

#### U.S. Federal Regulations

**CERCLA 103 Reportable Quantity:** Not subject to reporting under CERCLA. Some states have more stringent reporting requirements. Report all spills in accordance with local, state, and federal regulations.

**SARA TITLE III, Section 311/312:** See Section 2

**Section 313 Toxic Chemicals:** Contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: Diisocyanates Category (N120) 85-100%

**Section 302 Extremely Hazardous Substances (TPQ):** None

**Section 15 Regulatory Information**

**EPA Toxic Substances Control Act (TSCA) Status:** All of the chemical substances in this product are listed on TSCA.

**U.S. State Regulations**

**California Proposition 65:** This product does not contain substances known to the State of California to cause cancer, birth defect, or other reproductive harm. [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**Section 16 Other Information**

**Training Advice**

All personnel using/handling this product should be trained in proper chemical handling and the need for and use of engineering controls and protective equipment.

**Recommended Uses and Restrictions**

This product is intended for industrial or professional use only.

**Disclaimer**

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

Initial release date: January 7, 2022

Previous revision date: January 7, 2022

Current revision date: February 27, 2025

## Safety Data Sheet

### Freeman 5070 Part B

#### Section 1 Identification

**Product Identifiers**

Freeman 5070 Part B (Hardener)

**Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**

Resin component of two-part foundry board repair paste. For industrial/professional use only.

**Details of the Supplier of the Safety Data Sheet**

Freeman Manufacturing & Supply Company  
1101 Moore Road, Avon, OH 44011-4043 USA  
Telephone: +1 (440) 934-1902  
Email: contactus@freemansupply.com

**24 Hour emergency telephone number**  
**CHEMTREC (800) 424-9300**

#### Section 2 Hazards Identification

**GHS Classification in Accordance with 29 CFR 1910.1200 (OSHA HCS)**

Specific Target Organ Toxicity – Repeated Exposure (Endocrine System, Liver), Category 2

Hazardous to the Aquatic Environment – Acute Hazard, Category 2

Hazardous to the Aquatic Environment – Chronic Hazard, Category 2

**Label elements**



Warning

**Hazard Statements**

H373 May cause damage to organs through prolonged or repeated exposure.

H401 Toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

**Precautionary Phrases**

P260 Do not breathe fumes or vapors.

P273 Avoid release to the environment.

P319 Get medical help if you feel unwell.

P391 Collect spillage.

P501 Dispose of contents and container in accordance with local, regional and national regulations.

**Supplemental Information**

This is one part of a two-part system. Read and understand the hazard information on Part A before using.

#### Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Benzenediamine,ar,ar-diethyl-ar-methyl-	68479-98-1	0-10

Amounts specified are typical and do not represent a specification. Additional components may not be listed if non-hazardous, and/or present at amounts below reportable limits.

### Section 4 First Aid Measures

#### Description of First Aid Measures

**Eye Contact:** Rinse thoroughly with water, holding the eyelids open to be sure the material is washed out. Get medical attention if irritation develops or persists.

**Skin Contact:** Wash contact area thoroughly with soap and water. Get medical attention if irritation develops or persists.

**Inhalation:** If breathing is difficult, remove person to fresh air and keep comfortable. Get medical attention if you feel unwell.

**Ingestion:** Do not induce vomiting unless instructed to do so by a medical profession. Get medical attention if you feel unwell.

#### Most Important Symptoms/Effects

None known.

#### Indication of Immediate Medical Attention/Special Treatment

Not expected to be required.

### Section 5 Fire-Fighting Measures

#### Extinguishing Media

Use water fog, foam, carbon dioxide or dry chemical. Do not use solid water stream. Solid stream of water into hot product may cause violent steam generation or eruption.

#### Specific Hazards

Not classified as flammable or combustible. Product is ignitable.

#### Special Protective Equipment & Precautions for Fire-Fighters

Wear positive pressure, self-contained breathing apparatus and full-body protective clothing. Cool fire-exposed containers with water.

### Section 6 Accidental Release Measures

#### Personal Precautions, Protective Equipment, and Emergency Procedures

Clear non-emergency personnel from the area. Wear appropriate protective clothing to prevent eye and skin contact. See Section 8 for recommendations on the use of personal protective equipment. Eliminate sources of ignition. Ventilate spill area. Keep unauthorized persons away. Avoid release to the environment. Do not flush product into public sewer, water systems, or surface waters.

#### Methods and Materials for Containment and Cleanup

Contain spill and prevent/minimize release to the environment. Absorb spilled material with an inert absorbent. Collect and containerize material. Dispose of residue in accordance with state and local regulations.

### Section 7 Handling and Storage

#### Precautions for Safe Handling

Avoid breathing fumes or vapors. Use in well ventilated area. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke in work area. Wash hands after handling. Avoid release to the environment.

#### Safe Storage

Store indoors at temperatures between 60 and 95°F. Store in original containers. Avoid getting moisture into containers. Keep containers tightly closed.

#### Section 8 Exposure Controls/Personal Protection

**Occupational Exposure Limits**

None established.

**Appropriate Engineering Controls**

Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist, and vapor away from workers to prevent routine inhalation. Minimize airborne concentrations. When necessary use mechanical handling to reduce human contact with materials.

**Personal Protective Equipment (PPE)**

**Respiratory Protection:** If needed, an approved respirator with organic vapor cartridges may be used. Respirator selection and use should be based on contaminant type, form and concentration. For higher exposures or in an emergency, use a supplied-air respirator.

**Skin Protection:** Wear impervious gloves, such as butyl rubber or nitrile rubber.

**Eye Protection:** Wear chemical safety goggles.

**Other Protective Measures**

Wear impervious clothing to prevent skin contact and contamination of personal clothing. An eye wash facility and washing facility should be available in the work area. Follow applicable regulations and good Industrial Hygiene practice.

#### Section 9 Physical and Chemical Properties

<b>Appearance</b>	Red liquid
<b>Odor</b>	Mild
<b>Odor Threshold</b>	No data available
<b>pH</b>	Not applicable
<b>Melting/Freezing Point</b>	No data available
<b>Boiling Point</b>	No data available
<b>Flash Point</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability Limits</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	No data available
<b>Solubility</b>	Insoluble in water
<b>Viscosity</b>	1,500 cP
<b>% Volatile by Volume</b>	Negligible, <1%

#### Section 10 Stability and Reactivity

**Reactivity:** Not normally reactive.

**Chemical Stability:** Stable under recommended conditions.

**Possibility of Hazardous Reactions:** Reaction with strong oxidizers generates heat.

Conditions to Avoid: Excessive heat and exposure to air.

**Incompatible Materials:** Strong oxidizers and acids.

**Hazardous Decomposition Products:** Thermal decomposition will generate oxides of carbon.

#### Section 11 Toxicological Information

**Acute Toxicity Values**

Not established.

**Section 11 Toxicological Information**

**Acute Health Effects**

**Eye Contact:** May cause mild eye irritation.

**Skin Contact:** May cause mild skin irritation.

**Inhalation:** Vapors or mists may cause mild respiratory irritation.

**Ingestion:** No data available

**Chronic Health Effects**

**Skin Sensitization:** Components not classified as a skin sensitizer.

**Respiratory Sensitization:** Components not classified as a respiratory sensitizer

**Germ Cell Mutagenicity:** Components are not known mutagens.

**Carcinogenicity:** Components not classified as carcinogens.

**Reproductive Toxicity:** Components are not reproductive toxins.

**Specific Target Organ Toxicity:** May cause damage to organs through prolonged or repeated exposure.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Endocrine Effects: Signs/symptoms may include disruption of gonadal, thyroid, adrenal, or pancreatic function; changes in hormone production; alterations in circulating hormone levels; and/or changes in tissue response to hormones.

**Section 12 Ecological Information**

**Ecotoxicity:** Toxic to aquatic life with long lasting effects. Do not release into waterways.

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** No data available.

**Section 13 Disposal Considerations**

Dispose according to local, state and federal regulations.

**Section 14 Transport Information**

**DOT/IMDG/IATA**

UN3082, Environmentally hazardous substance, liquid, n.o.s. (diethyltoluenediamine), 9, III,  
MARINE POLLUTANT

**Section 15 Regulatory Information**

**U.S. Federal Regulations**

**CERCLA 103 Reportable Quantity:** Not subject to reporting under CERCLA. Some states have more stringent reporting requirements. Report all spills in accordance with local, state, and federal regulations.

**SARA TITLE III, Section 311/312:** See Section 2

**Section 313 Toxic Chemicals:** Contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: Diisocyanates Category (N120) 85-100%

**Section 302 Extremely Hazardous Substances (TPQ):** None

**EPA Toxic Substances Control Act (TSCA) Status:** All of the chemical substances in this product are listed on TSCA.

**U.S. State Regulations**

**California Proposition 65:** This product does not contain substances known to the State of California to cause cancer, birth defect, or other reproductive harm. [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**Section 16 Other Information**

**Training Advice**

All personnel using/handling this product should be trained in proper chemical handling and the need for and use of engineering controls and protective equipment.

**Recommended Uses and Restrictions**

This product is intended for industrial or professional use only.

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