

**Section 1 Identification**

**Product Identifiers**

Freeman 50FX Flexible Polyurethane Elastomer Part A (Resin)

**Relevant Identified Uses of the Substance or Mixture**

Component for Polyurethane Casting/Mold Rubber. 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 3  
Skin Irritation – Category 2  
Eye Irritation – Category 2A  
Respiratory Sensitization – Category 1  
Skin Sensitization – Category 1  
Specific Target Organ Toxicity – Single Exposure Category 3 (respiratory tract)

**Label Elements**



Danger

**Hazard Statements**

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H331 Toxic 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.

**Precautionary Statements**

P261 Avoid breathing 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.  
P316 Get emergency medical help immediately.  
P319 Get medical help if you feel unwell.  
P333+P317 If skin irritation or rash occurs: Get medical help.  
P337+P317 If eye irritation persists: Get medical help.

## Safety Data Sheet

### Freeman 50FX Part A

#### Section 2 Hazards Identification continued

P342+P316 If experiencing respiratory symptom: 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 (%)
4,4'-Methylene di(cyclohexyl isocyanate)	5124-30-1	20-30

Other ingredients are either not classified as health/physical hazards under GHS, or are present below cut-offs/concentration 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 medical attention immediately.

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

#### Most Important Symptoms/Effects

Toxic if inhaled. 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

Get medical attention immediate if inhaled. 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 not work with this product.

#### 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.

#### Special 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.

## Safety Data Sheet

### Freeman 50FX Part A

#### Section 6 Accidental Release Measures

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

Remove ignition sources. Clear non-emergency personnel from the area. Ventilate area. Wear appropriate protective clothing to prevent eye and skin contact and respiratory protection. 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 CO<sub>2</sub> 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

##### 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.

##### Safe Storage

Store indoors at temperatures between 60°F and 95°F. Store in original, unopened containers. Protect from atmospheric moisture and water since isocyanates react with water to form carbon dioxide leading to potentially dangerous pressure build up in sealed containers. Keep container closed when not in use.

#### Section 8 Exposure Controls/Personal Protection

##### Occupational Exposure Limits

Chemical Name	CAS Number	TWA-ACGIH-TLV	NIOSH
4,4'-Methylene di(cyclohexyl isocyanate)	5124-30-1	0.005 ppm	0.01 ppm

##### Ventilation

Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

##### 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 glasses or 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

Appearance	Translucent liquid
Odor	Mild acrid
Odor Threshold	No data available
pH	Not applicable

**Section 9 Physical and Chemical Properties**

<b>Melting/Freezing Point</b>	No data available
<b>Boiling Point</b>	No data available
<b>Flash Point</b>	>149°C (>300°F)
<b>Evaporation Rate</b>	No data available
<b>Flammability Limits</b>	No data available
<b>Vapor Pressure</b>	≤ 0.001 mm Hg at 20°C
<b>Vapor Density</b>	No data available
<b>Relative Density</b>	1.0 at 25°C
<b>Solubility</b>	No data available
<b>Coefficient: n-Octanol/Water</b>	Reacts with water
<b>Auto-Ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	3200 cP at 25°C

**Section 10 Stability and Reactivity**

**Reactivity**

Diisocyanates react with many chemicals, including alcohols and amines, 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 buildup in closed containers.

**Incompatible Materials**

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

Chemical Name	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
4,4'-methylene di(cyclohexyl isocyanate) (CAS 5124-30-1)	9,900 mg/kg	<10,000 mg/kg	0.295 mg/L, 4hr

**Acute Health Effects**

**Eye Contact:** Causes serious eye irritation.

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

### Section 11 Toxicological Information

**Inhalation:** Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. 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

**Respiratory Sensitization:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin Sensitization:** May cause an allergic skin reaction.

**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

**Single Exposure:** May cause respiratory irritation, drowsiness or dizziness.

**Repeated Exposure:** May cause lung damage.

### 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.

For U.S.: As supplied, this product is not a RCRA hazardous waste (per 40 CFR 261).

### Section 14 Transport Information

**DOT:** Not regulated for transport.

**IMDG:** Not regulated for transport.

**IATA:** Not regulated for transport.

### Section 15 Regulatory Information

#### US Federal Regulations

**CERCLA 103 Reportable Quantity:** This product is not subject to reporting und 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:** This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: Diisocyanates Category (N120) 20-30%

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

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

**Safety Data Sheet**  
**Freeman 50FX Part A**

**Section 15 Regulatory Information**

**US State Regulations**

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

**Section 16 Other Information**

**Training Advice**

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

**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.

Issue Date: April 22, 2022

Previous Revision Date: October 14, 2022

Current Revision Date: December 13, 2024

## Safety Data Sheet

### Freeman 50FX Part B

Section 1 Identification	
<p><b>Product Identifiers</b> Freeman 50FX Flexible Polyurethane Elastomer Part B (Hardener)</p> <p><b>Relevant Identified Uses of the Substance or Mixture</b> Component for Polyurethane Casting/Mold Rubber. For industrial/professional use only.</p> <p><b>Details of the Supplier of the Safety Data Sheet</b>  Freeman Manufacturing &amp; Supply Company  1101 Moore Road, Avon, OH 44011-4043 USA  Telephone: +1 (440) 934-1902  Email: contactus@freemansupply.com </p> <p style="text-align: right;"><b>24 Hour emergency telephone number:</b> <b>CHEMTREC (800) 424-9300</b></p>	
Section 2 Hazards Identification	
<p><b>GHS Classification in Accordance with 29 CFR 1910.1200 (OSHA HCS)</b> Not classified as hazardous.</p> <p><b>Label Elements</b> None</p> <p><b>Supplemental Information</b> This is one part of a two-part system. Read and understand the hazard information on Part A before using.</p>	
Section 3 Composition/Information on Ingredients	
All ingredients are either not classified as health/physical hazards under GHS, or are present below cut-offs/concentration limits.	
Section 4 First-Aid Measures	
<p><b>Description of First Aid Measures</b>  <b>Eye Contact:</b> Rinse thoroughly with water, holding the eyelids open to be sure the material is washed out. Get medical attention if irritation develops or persists.  <b>Skin Contact:</b> Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation develops or persists.  <b>Inhalation:</b> If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms develop or persist.  <b>Ingestion:</b> If swallowed, rinse mouth. Drink water. Induce vomiting only with medical supervision. Get medical attention if you feel unwell. </p> <p><b>Most Important Symptoms/Effects</b> None known</p> <p><b>Indication of Immediate Medical Attention/Special Treatment</b> Not expected to be required.</p>	
Section 5 Fire-Fighting Measures	
<p><b>Extinguishing Media</b> 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.</p> <p><b>Special Hazards</b> Not classified as flammable or combustible. May generate toxic/irritating compounds and dense smoke in fire conditions.</p>	



### Section 5 Fire-Fighting Measures

#### 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.

#### Methods and Materials for Containment and Cleanup

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

### Section 7 Handling and Storage

#### 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.

#### Safe Storage

Store indoors at temperatures between 60°F and 95°F. Store in original containers. Avoid getting moisture into containers. Keep container closed when not in use.

### Section 8 Exposure Controls/Personal Protection

#### Occupational Exposure Limits

No OSHA or ACGIH exposure limits apply.

#### Ventilation

Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

#### 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 glasses or 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>	Clear, pale-green liquid
<b>Odor</b>	Mild
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting/Freezing Point</b>	No data available
<b>Boiling Point</b>	No data available



**Section 9 Physical and Chemical Properties**

<b>Flash Point</b>	>128°C (262°F)
<b>Evaporation Rate</b>	No data available
<b>Flammability Limits</b>	No data available
<b>Vapor Pressure</b>	< 0.1 mm Hg @ 20°C
<b>Vapor Density</b>	No data available
<b>Relative Density</b>	1.0 at 25°C
<b>Solubility</b>	Slightly soluble in water
<b>Coefficient: n-Octanol/Water</b>	No data available
<b>Auto-Ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	400 cP at 25°C

**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 sunlight.

**Incompatible Materials**

Strong oxidizers.

**Hazardous Decomposition Products**

Thermal decomposition will generate oxides of carbon, phosphorous, and chlorine compounds.

**Section 11 Toxicological Information**

**Acute Toxicity Values**

No data available

**Acute Health Effects**

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

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

**Inhalation:** Mists may cause mild respiratory irritation.

**Ingestion:** Single oral dose toxicity is low. Large amounts may cause gastrointestinal effects.

**Chronic Health Effects**

**Respiratory Sensitization:** None known

**Skin Sensitization:** None known

**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**

**Single Exposure:** None known

**Repeated Exposure:** None known

**Section 12 Ecological Information**

**Ecotoxicity:** No data available

## Safety Data Sheet

### Freeman 50FX Part B

#### Section 12 Ecological Information

**Persistence and Degradability:** Not readily biodegradable.  
**Bioaccumulative Potential:** No data available.  
**Mobility in Soil:** No data available.

#### Section 13 Disposal Considerations

Dispose according to local, state, and federal regulations. Upon exposure to moisture, product forms an inert, non-hazardous solid.  
 For U.S.: As supplied, this product is not a RCRA hazardous waste (per 40 CFR 261).

#### Section 14 Transport Information

**DOT:** Not regulated for transport.  
**IMDG:** Not regulated for transport.  
**IATA:** Not regulated for transport.

#### Section 15 Regulatory Information

##### US Federal Regulations

**CERCLA 103 Reportable Quantity:** This product is not subject to reporting und 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:** This product contains no chemicals subject to SARA Title III Section 313 Reporting requirements.

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

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

##### US State Regulations

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

#### Section 16 Other Information

##### Training Advice

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

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**Section 16 Other Information**

Issue Date: April 22, 2022  
Previous Revision Date: October 14, 2022  
Current Revision Date: December 13, 2024