

**Section 1 Identification**

**Product Identifiers**

Product name: Freeman 850 Part A (Resin)

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

High-Temperature Epoxy Casting Resin, For Professional Use Only

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

Freeman Manufacturing & Supply Company

1101 Moore Road, Avon, OH 44011

Phone (440) 934-1902

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, Oral, Category 4

Acute Toxicity, Dermal, Category 4

Acute Toxicity, Inhalation, Category 4

Skin Irritation, Category 2

Eye Irritation, Category 2

Skin Sensitizer, Category 1

Hazardous to the Aquatic Environment Chronic Hazard, Category 2

**GHS Label Elements, Including Precautionary Statements**



Signal word

Warning

**Hazard statements**

Harmful if swallowed.

Harmful in contact with skin.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Harmful if inhaled

Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**

Avoid breathing fumes, mist, vapors, and spray.

Wash hands thoroughly after handling.

Do not eat, drink, or smoke when using this product.

Use only outdoors or in well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves, clothing, and eye/face protection.

**Response**

IF SWALLOWED: Rinse mouth. Get medical attention.

Freeman 850 Part A (Resin)

**Section 2 Hazards Identification continued**

IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Collect spillage.

**Storage**

Store in a well-ventilated place. Store locked up.

**Disposal**

Dispose of contents and containers to an appropriate waste site in accordance with local, regional, and national regulation.

**Supplemental Information**

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

**Section 3 Composition/Information on Ingredients**

Ingredient Name	CAS Number	Concentration (%)
Epoxy Phenol Novolac Resin	28064-14-4	10-25
Bisphenol A Epoxy Resin	25068-38-6	20-35
Aliphatic Epoxy Resin	2425-79-8	0-10
Exact concentrations are withheld as trade secret. Other ingredients are not listed because they are either not hazardous or are below cut-off/concentration thresholds.		

**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. Remove contact lenses if safe and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.

**Skin Contact:** Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water. Wash contaminated clothing before reuse. Discard clothing that cannot be decontaminated. Get medical attention if irritation develops or persists.

**Inhalation:** Remove person to fresh air. Get medical attention if symptoms develop or persist.

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

**Most Important Symptoms/Effects**

May cause an allergic skin reaction.

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

Treat symptomatically.

**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 spread fire.

**Special Hazards**

Not classified as flammable or combustible. Product will burn under fire conditions. Combustion products include oxides of carbon, phenolics, aldehydes, and other toxic organic compounds.

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

Wear positive pressure, self-contained breathing apparatus, and full-body protective clothing.

**Section 6 Accidental Release Measures**

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

Clear unnecessary, unprotected personnel from the area. Wear appropriate protective clothing to prevent eye and skin contact. Avoid breathing vapors.

**Environmental Precautions**

Avoid releases to the environment.

**Methods and Materials for Containment and Cleanup**

Cover with an inert absorbent material and collect into an appropriate container for disposal.

**Section 7 Handling and Storage**

**Safe Handling**

Use with adequate ventilation. Avoid contact with 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 below 120°F (49°C). Store in original containers. Avoid getting moisture into containers. Keep containers tightly closed. Store locked up.

**Section 8 Exposure Controls/Personal Protection**

**Occupational Exposure Limits**

None established.

**Ventilation**

Use with adequate general or local exhaust ventilation to minimize exposure levels.

**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. Use respirators in accordance with OSHA's Respiratory Protection Standard (29 CFR 1910.134)

**Skin Protection**

Wear impervious gloves, such as butyl rubber or nitrile rubber.

**Eye Protection**

Wear chemical safety glasses or goggles.

**Other Protective Measures**

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>	Viscous liquid
<b>Color</b>	Gray
<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
<b>Flash Point</b>	>110°C
<b>Evaporation Rate</b>	No data available
<b>Flammability Limits</b>	No data available
<b>Vapor Pressure</b>	<1 mm Hg at 20°C
<b>Vapor Density</b>	No data available.
<b>Relative Density</b>	1.71
<b>Solubility</b>	Nil to 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>	166,000 cP at 25°C
<b>Volatile Organic Content (VOC)</b>	1.62 g/L
<b>% Volatile</b>	0.10

**Section 10 Stability and Reactivity**

**Reactivity**

Not normally reactive.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

Masses of ≥1 lb. (0.5 kg) plus aliphatic amine will cause irreversible polymerization with considerable heat build-up. Material will polymerize with sodium hydroxide.

**Conditions to Avoid**

Excessive heat.

**Incompatible Materials**

Avoid contact with strong acids, bases, oxidizing agents, and amines.

**Hazardous Decomposition Products**

Carbon monoxide, carbon dioxide, and oxides of nitrogen.

**Section 11 Toxicological Information**

<b>Eye Contact:</b>	Causes serious eye damage.
<b>Skin Contact:</b>	Harmful in contact with skin. Causes severe skin burns. May cause allergic skin reaction.
<b>Inhalation:</b>	May cause respiratory irritation.
<b>Ingestion:</b>	Harmful if swallowed.
<b>Chronic Health Effects:</b>	Allergic skin reaction.

**Section 11 Toxicological Information continued**

**Acute Toxicity Values**

Chemical Name	LC <sub>50</sub> Inhalation (Rat)	LD <sub>50</sub> Oral (Rat)	LD <sub>50</sub> Dermal (Rabbit)
Epoxy Phenol Novolac Resin	Not available	>2,000 mg/kg	>2,000 mg/kg
Bisphenol A Epoxy Resin	Not available	>2,000 mg/kg	>2,000 mg/m <sup>3</sup>
Aliphatic Epoxy Resin	>250 ppm, 6hr	1,134 mg/kg	1,130 mg/kg

**Respiratory Sensitization:** Components are not respiratory sensitizers.  
**Skin Sensitization:** May cause an allergic skin reaction.  
**Germ Cell Mutagenicity:** Components are not mutagens.  
**Carcinogenicity:** Components are not carcinogens.  
**Reproductive Toxicity:** Components are not reproductive toxins.  
**Specific Target Organ Toxicity**  
**Single Exposure:** No data available.  
**Repeated Exposure:** No data available.  
**Aspiration Hazard:** No data available.

**Section 12 Ecological Information**

**Toxicity**

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**

**Disposal**

Dispose of according to local, state, and federal regulations. Do not release into drains or sewers.

**Section 14 Transport Information**

**DOT, TDG, IMDG, ICAO/IATA**

**UN Number:** UN3082

**UN Proper Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Epoxy Resin)

**Hazard Class:** 9

**Packing Group:** III

**Other Information**

U.S. DOT: Non-bulk Packaging (<882lb. or <119gal.): Not regulated transport by truck.

Canada TDG: Non-bulk Packaging (<882lb. or <119gal.): Not regulated transport by truck.

**Section 14 Transport Information continued**

**Environmental Hazards**

Marine Pollutant: Yes  
Hazardous Substance (USA): Yes

**Special Precautions for User**

Information is not available.

**Section 15 Regulatory Information**

**U.S. Federal Regulations**

**CERCLA 103 Reportable Quantity:** This product is not subject to reporting under CERCLA. Some states have more stringent reporting requirements.

**SARA Title III Section 311/312:** Acute Health, Chronic Health.

**Section 313 Toxic Chemicals:** This product does not contain 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 TSCA.

**Canadian Environmental Protection Act (CEPA) Status:** All components are listed on either the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

**State Regulations**

**California Proposition 65:** This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

**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.

**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: March 11, 2022

Revision Date: September 2, 2022

**Section 1 Identification**

**Product Identifiers**

Product name: Freeman 50 Part B (Hardener)

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

High-Temperature Epoxy Casting System Catalyst, For Professional Use Only

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

Freeman Manufacturing & Supply Company  
1101 Moore Road, Avon, OH 44011  
Phone (440) 934-1902  
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, Oral, Category 4  
Acute Toxicity, Dermal, Category 4  
Skin Corrosion, Category 1  
Serious Eye Damage, Category 1  
Skin Sensitizer, Category 1B  
Hazardous to the Aquatic Environment, Chronic, Category 3

**GHS Label Elements, Including Precautionary Statements**



Signal word

Danger

**Hazard statements**

Harmful if swallowed.  
Harmful in contact with skin.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
Harmful to the aquatic environment with long lasting effects.

**Precautionary statements**

**Prevention**

Do not breathe dusts or mists.  
Wash hands thoroughly after handling.  
Do not eat, drink, or smoke when using this product.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid release into the environment.  
Wear protective gloves, clothing, and eye/face protection.

**Response**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical help.  
IF ON SKIN: Immediately take off all contaminated clothing. Immediately rinse with water for several minutes. If skin irritation or rash occurs: Get medical attention.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Section 2 Hazards Identification continued**

**Storage**

Store in a well-ventilated place. Store locked up.

**Disposal**

Dispose of contents and containers to an appropriate waste site in accordance with local, state, and federal regulations.

**Supplemental Information**

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

**Section 3 Composition/Information on Ingredients**

Ingredient Name	CAS Number	Concentration (%)
Triethylenetetramine	112-24-3	75-90
2-Ethyl-4-methylimidazole	931-36-2	10-20
Exact concentrations are withheld as trade secret. Other ingredients are not listed because they are either not hazardous or are below cut-off/concentration thresholds.		

**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. Remove contact lenses, if safe and easy to do. Continue rinsing. Get medical attention immediately.

**Skin Contact:** Remove contaminated clothing. Wash contact area thoroughly with soap and water until no evidence of the chemical remains (at least 15-20 minutes. Get medical attention immediately. Wash contaminated clothing before reuse. Discard clothing that cannot be decontaminated.

**Inhalation:** Remove person to fresh air. Get medical attention if symptoms develop or persist.

**Ingestion:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

**Most Important Symptoms/Effects**

Causes severe skin burns and eye damage.

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

Get immediate medical attention if swallowed, on skin, or in eyes.

**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 spread fire.

**Special Hazards**

Not classified as flammable or combustible. Product will burn under fire conditions. Combustion products include oxides of carbon, phenolics, aldehydes, and other toxic organic compounds.

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

Wear positive pressure, self-contained breathing apparatus, and full-body protective clothing.



Freeman 50 Part B (Hardener)

**Section 6 Accidental Release Measures**

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

Clear unnecessary, unprotected personnel from the area. Wear appropriate protective clothing to prevent eye and skin contact and avoid breathing vapors.

**Environmental Precautions**

Avoid releases to the environment.

**Methods and Materials for Containment and Cleanup**

Cover with an inert absorbent material and collect into an appropriate container for disposal.

**Section 7 Handling and Storage**

**Safe Handling**

Use with adequate ventilation. Avoid contact with 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 below 120°F (49°C). Store in original containers. Avoid getting moisture into containers. Keep containers tightly closed. Store locked up.

**Section 8 Exposure Controls/Personal Protection**

**Occupational Exposure Limits**

Chemical Name	CAS Number	ACGIH - TLV
Trimethylenetetramine	112-24-3	1 ppm TWA

**Ventilation**

Use with adequate general or local exhaust ventilation to minimize exposure levels.

**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. Use respirators in accordance with OSHA's Respiratory Protection Standard (29 CFR 1910.134)

**Skin Protection**

Wear impervious gloves, such as butyl rubber or nitrile rubber.

**Eye Protection**

Wear chemical safety glasses or goggles.

**Other Protective Measures**

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.

**Freeman 50 Part B (Hardener)**

**Section 9 Physical and Chemical Properties**

<b>Appearance</b>	Liquid
<b>Color</b>	Yellow amber
<b>Odor</b>	Amine
<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
<b>Flash Point</b>	>129°F
<b>Evaporation Rate</b>	No data available
<b>Flammability Limits</b>	No data available
<b>Vapor Pressure</b>	<1 mm Hg at 25°C
<b>Vapor Density</b>	No data available
<b>Relative Density</b>	0.98
<b>Solubility</b>	Nil to 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>	27 cP at 25°C

**Section 10 Stability and Reactivity**

**Reactivity**

Not normally reactive.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

Masses of  $\geq 1$  lb. (0.5 kg) plus aliphatic amine will cause irreversible polymerization with considerable heat build-up. Material will polymerize with sodium hydroxide.

**Conditions to Avoid**

Excessive heat.

**Incompatible Materials**

Avoid contact with strong oxidizing agents, acids, bases, acid chlorides, acid anhydrides, and amines.

**Hazardous Decomposition Products**

Carbon monoxide, carbon dioxide, and oxides of nitrogen.

**Section 11 Toxicological Information**

<b>Eye Contact:</b>	Causes serious eye damage.
<b>Skin Contact:</b>	Harmful in contact with skin. Causes severe skin burns. May cause allergic skin reaction.
<b>Inhalation:</b>	May cause respiratory irritation.
<b>Ingestion:</b>	Harmful if swallowed.
<b>Chronic Health Effects:</b>	Allergic skin reaction.

**Section 11 Toxicological Information**

**Acute Toxicity Values**

Chemical Name	LC <sub>50</sub> Inhalation (Rat)	LD <sub>50</sub> Oral (Rat)	LD <sub>50</sub> Dermal (Rabbit)
Triethylenetetramine	Not available	2,500 mg/kg	550 mg/kg
2-Ethyl-4-methylimidazole	Not available	731 mg/kg	>400 mg/kg

<b>Respiratory Sensitization:</b>	Components are not respiratory sensitizers.
<b>Skin Sensitization:</b>	May cause an allergic skin reaction.
<b>Germ Cell Mutagenicity:</b>	Components are not mutagens.
<b>Carcinogenicity:</b>	Components are not carcinogens.
<b>Reproductive Toxicity:</b>	Components are not reproductive toxins.
<b>Specific Target Organ Toxicity</b>	
<b>Single Exposure:</b>	No data available.
<b>Repeated Exposure:</b>	No data available.
<b>Aspiration Hazard:</b>	No data available.

**Section 12 Ecological Information**

**Toxicity**

Harmful 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**

**Disposal**

Dispose of unused contents and container according to local, state, and federal regulations. Do not dump in drains or sewers.

**Section 14 Transport Information**

**DOT, TDG, IMDG, ICAO/IATA**

**UN Number:** UN2259  
**UN Proper Shipping Name:** Triethylenetetramine Solution  
**Hazard Class:** 8  
**Packing Group:** II

**Other Information**

LTD QTY if shipped in quantities of 1L (0.30 gal) or less.

**Section 15 Regulatory Information**

**U.S. Federal Regulations**

**CERCLA 103 Reportable Quantity:** This product is not subject to reporting under CERCLA. Some states have more stringent reporting requirements.

**SARA Title III Section 311/312:** Acute/Chronic Health Hazards.

**Section 313 Toxic Chemicals:** This product does not contain 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 TSCA.

**Canadian Environmental Protection Act (CEPA) Status:** All components are listed on either the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

**State Regulations**

**California Proposition 65:** This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

**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.

**Disclaimer**

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Issue Date: March 11, 2022

Revision Date: September 2, 2022