

Section 1 Identification

Product Identifiers

Freeman 821 Aluminum Filled Epoxy Resin (Part A)

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

Resin for aluminum-filled epoxy casting system. 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)

Skin Irritation, Category 2
Eye Irritation, Category 2A
Skin Sensitizer, Category 1
Specific Target Organ Toxicity, Single Exposure Category 3

Label Elements



Warning

Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
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 must not be allowed out of the workplace.
P280 Wear protective gloves, eye protection and face 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.
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.
P362+P364 Take off contaminated clothing and wash it 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

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 (%)
Bisphenol A Epoxy Resin	25068-38-6	20-30
Glycidyl Ether	2461-15-6	≤10

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: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation develops or persists. 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 unless instructed to do so by a medical professional. 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 spread fire.

Specific 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 and avoid breathing vapors. See Section 8 for recommendations on the use of personal protective equipment.

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

Appropriate Engineering Controls

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

Personal Protective Equipment

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

Appearance	Gray liquid
Odor	Strong
Odor Threshold	No data available
pH	No data available
Melting/Freezing Point	No data available
Boiling Point	No data available
Flash Point	>199°F (>93°C)
Evaporation Rate	No data available
Flammability Limits	No data available
Vapor Pressure	<5 mm Hg at 20°C
Vapor Density	No data available
Relative Density	1.98 at 25°C
Solubility	Nil to slightly soluble in water
Coefficient: n-Octanol/Water	No data available
Auto-Ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	7,800 cP at 25°C
VOC Content	0 g/L

Section 10 Stability and Reactivity

Reactivity: Not normally reactive.

Chemical Stability: Stable under recommended conditions.

Section 10 Stability and Reactivity

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: 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

Acute Toxicity Values

No data available

Acute Health Effects

Eye Contact: Causes serious eye irritation.

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

Inhalation: May cause respiratory irritation.

Ingestion: No data available.

Chronic Health Effects

Respiratory Sensitization: Components are not classified as respiratory sensitizers.

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 (STOT), Single Exposure: No data available.

STOT, Repeated Exposure: No data available.

Aspiration Hazard: No data available.

Section 12 Ecological Information

Ecotoxicity: No data available. 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 of in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

Section 14 Transport Information

DOT

UN3082, Environmentally hazardous substance, liquid, n.o.s. (epoxy resin), 9, III.

Non-bulk Packaging (<882lb or <119gal) not regulated transport by truck.

IATA/IMDG

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

Excepted for IATA and IMDG regulations if shipped in quantities of 5L (1.32 gal) or less

(See IATA SP A197 and IMDG 2.10.2.7)

Section 15 Regulatory Information

US 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: See Section 2

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 components in this product are listed on TSCA.

US State Regulations

California Proposition 65: ⚠️ **WARNING:** This product can expose you to chemicals including Oxirane, 2-(phenoxyethyl)-, which is known to the State of California to cause cancer. www.P65Warnings.ca.gov
Phenyl Glycidyl Ether, CAS 122-60-1, Safe Harbor Level (cancer): No Significant Risk Level (NSRL) = 5 µg/day

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: December 22, 2021

Previous Revision Date: December 22, 2021

Current Revision Date: January 9, 2025

Section 1 Identification

Product Identifiers

Freeman 821 Aluminum Filled Epoxy Hardener (Part B)

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

Hardener for aluminum-filled epoxy casting system. 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)

Skin Corrosion, Category 1B
Serious Eye Damage, Category 1
Skin Sensitization, Category 1

Label Elements



Danger

Hazard Statements

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

Precautionary Statements

P203 Obtain, read and follow all safety instructions before use.
P260 Do not breathe fumes, vapors, mists or sprays.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P302+P361+P354 IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P316 IF exposed or concerned: Get emergency medical help immediately.
P316 Get emergency medical help immediately.
P317 Get medical help.
P333+P317 If skin irritation or rash occurs: Get medical help.
P362+P364 Take off contaminated clothing and wash it before reuse.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local, regional, and national regulations.

Section 2 Hazards Identification

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 (%)
Tetraethylenepentamine	112-57-2	≤10
Triethylenetetramine	112-24-3	≤10

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. 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 unless instructed to do so by a medical professional. Get medical attention if you feel unwell.

Most Important Symptoms/Effects

Causes severe skin burns and eye damage.

Indication of Immediate Medical Attention/Special Treatment

Get immediate medical attention if in eyes or on skin.

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.

Specific 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 and avoid breathing vapors. See Section 8 for recommendations on the use of personal protective equipment.

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.

Freeman 821 Epoxy Hardener

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

Appropriate Engineering Controls

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

Personal Protective Equipment

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

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	Clear amber liquid
Odor	Amine
Odor Threshold	No data available
pH	No data available
Melting/Freezing Point	No data available
Boiling Point	No data available
Flash Point	>221°F (105°C)
Evaporation Rate	No data available
Flammability Limits	No data available
Flammability (Solid, Gas)	No data available
Vapor Pressure	<20.68 mm Hg at 20°C
Vapor Density	Heavier than air
Relative Density	0.96 at 25°C
Solubility	Nil to slightly soluble in water
Coefficient: n-Octanol/Water	No data available
Auto-Ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
VOC Content	0 g/L

Section 10 Stability and Reactivity

Reactivity: Not normally reactive.
Chemical Stability: Stable under recommended 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: 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

Acute Toxicity Values

Not established

Acute Health Effects

Eye Contact: Causes serious eye damage.
Skin Contact: Causes severe skin burns. May cause allergic skin reaction.
Inhalation: No data available
Ingestion: No data available

Chronic Health Effects

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

Section 12 Ecological Information

Ecotoxicity: No data available
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available

Section 13 Disposal Considerations

Dispose of in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

Section 14 Transport Information

DOT

UN2735, Amines, liquid, corrosive, n.o.s. (Polyamidoamine, aliphatic amine), 8, III.
 LTD QTY if shipped in quantities of 5L (1.32gal) or less.

IATA/IMDG

UN2735, Amines, liquid, corrosive, n.o.s. (Polyamidoamine, aliphatic amine), 8, III, MARINE POLLUTANT.

Section 15 Regulatory Information

US 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: See Section 2

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 components in this product are listed on TSCA.

US 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. For more information, visit 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.

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.

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