Safety Data Sheet

Freeman 9601 Epoxy Resin

Section 1 Identification

Product Identifiers

Freeman 9601 Epoxy Resin

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

Resin of two-component low viscosity epoxy infusion 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 Number
(800) 424-9300

Section 2 Hazards Identification

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

Acute Toxicity (Dermal), Category 4
Skin Irritation, Category 2
Serious Eye Damage, Category 1
Carcinogenicity, Category 2
Reproductive Toxin, Category 2
Skin Sensitizer, Category 1

Label elements

Warning

Hazard Statements

H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements

Prevention

P203 Obtain, read and follow all safety instructions before use.
P261 Avoid breathing fumes, vapors, mists or sprays.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P317 Get medical help.
P318 IF exposed or concerned, get medical advice.
P333+P317 If skin irritation or rash occurs: Get medical help.
P362+P364 Take off contaminated clothing and wash it 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 part B before using.

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Bisphenol A Epichlorohydrin Polymer	25068-38-6	80-90
Aliphatic Epoxy Resin	2425-79-8	10-20
Solvent naphtha, petroleum, light aromatic	64742-95-6	0-1

Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

Section 4 First Aid Measures

Description of First Aid Measures

Eye Contact: Immediately 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

Harmful in contact with skin.

Indication of Immediate Medical Attention/Special Treatment

Get immediate medical attention if 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.

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.

Methods and Materials for Containment and Cleanup

Cover with an inert absorbent material and collect into an appropriate container for disposal.
Avoid releases to the environment.

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

Engineering Controls

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

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. 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/goggles.

General Hygienic Practices

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	Amber liquid
Odor	Mild
Odor Threshold	No data available
pH	Not applicable
Melting Point	No data available
Boiling Point	No data available
Flash Point	>110°C
Evaporation Rate	No data available
Flammability Limits	No data available
Vapor Pressure	<1 mm Hg at 20°C
Vapor Density	No data available
Relative Density	1.15
Solubility	Negligible
Coefficient: n-Octanol/Water	No data available
Auto-Ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	1,000 cP at 25°C

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

Ingredient Name	LD_{50} Oral (Rat)	LD_{50} Dermal (Rabbit)
Epoxy Resin (CAS 25068-38-6):	11,400 mg/kg	2,000 mg/kg
2,2'-[1,4-Butanediylbis(oxymethylene)]bis[oxirane] (CAS 2425-79-8)	1,134 mg/kg	1,130 mg/kg
Solvent naphtha, petroleum, light aromatic (CAS 64742-95-6)	>5,000 mg/kg	Not available

Potential acute and chronic health effects

Eye Contact: Causes serious eye damage.
Skin Contact: Harmful in contact with skin. Causes skin irritation. May cause allergic skin reaction.
Inhalation: May cause mild respiratory irritation.
Ingestion: No data available.
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: Suspected of causing cancer.
Reproductive Toxicity: Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity: No data available.

Section 12 Ecological Information

Ecotoxicity

Ingredient Name	Test	Species	Result
Bisphenol A Epichlorohydrin Polymer	LC50 (96 hr) EC50 (24 hr)	Fish Daphnia	2.4 mg/L 3.6 mg/L
Aliphatic Epoxy Resin	LC50 (96 hr) EC50 (24 hr)	Fish Daphnia	24 mg/L 75 mg/L

Persistence and Degradability

Ingredient Name	Test / Result
Bisphenol A Epichlorohydrin Polymer	OECD Derived from OECD 301F (Biodegradation Test) / 5% (28 Days)
Aliphatic Epoxy Resin	Not readily biodegradable

Section 12 Ecological Information

Bioaccumulative Potential

Ingredient Name	Log P_{ow}	BCF	Potential
Bisphenol A Epichlorohydrin Polymer	3.242	31	Low
Aliphatic Epoxy Resin	-0.15	Not available	Not available

Mobility in Soil

Ingredient Name	Soil/Water Partition Coefficient (K_{OC})
Bisphenol A Epichlorohydrin Polymer	445
Aliphatic Epoxy Resin	Not available

Section 13 Disposal Considerations

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

Section 14 Transport Information

DOT

UN3082, Environmentally hazardous substance, liquid, n.o.s (epoxy resin), 9, III.
Non-bulk Packaging <882 lb. (<119 gal.) 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

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 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.

U.S. State Regulations

California Proposition 65: ⚠ **WARNING:** This product can expose you to chemicals including Epichlorohydrin, which is known to the State of California to cause cancer and/or reproductive harm. 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/professional use only.

Section 16 Other Information

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.

Date of initial issue: June 21, 2022
Date of previous revision: June 21, 2022
Date of current revision: March 27, 2025

Safety Data Sheet

Freeman 9602 Epoxy Hardener

Section 1 Identification

Product Identifiers

Freeman 9602 Epoxy Hardener

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

Hardener of two-component low viscosity epoxy infusion 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 Number
(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 Corrosion, Category 1A
Serious Eye Damage, Category 1
Skin Sensitizer, Category 1
Specific Target Organ Toxicity – Single Exposure, Category 3
Hazardous to the Aquatic Environment – Acute Hazard, Category 3
Hazardous to the Aquatic Environment – Chronic Hazard, Category 3

Label elements

Danger

Hazard Statements

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

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.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection, and face protection.
P301+P317 IF SWALLOWED: Get medical help.

Section 2 Hazards Identification

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.
Immediate 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.
P316 Get emergency medical help immediately.
P317 Get medical help.
P319 Get medical help if you feel unwell.
P330 Rinse mouth.
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.
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 part A before using.

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
1,2- Diaminocyclohexane	694-83-7	40-50
1,3-Benzenedimethanamine	1477-55-0	20-30
Benzyl Alcohol	100-51-6	10-20
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	0-10

Remaining components are proprietary, 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. 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 immediately.

Ingestion: Rinse mouth. Do NOT induce vomiting. Get medical attention immediately.

Most Important Symptoms/Effects

Harmful if swallowed, in contact with skin or inhaled.

Indication of Immediate Medical Attention/Special Treatment

Get immediate medical attention if swallowed, on skin, in eyes, or inhaled. **Most Important**

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.

Methods and Materials for Containment and Cleanup

Cover with an inert absorbent material and collect into an appropriate container for disposal. Avoid releases to the environment.

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

Engineering Controls

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

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. Fo r 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/goggles.

General Hygienic Practices

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	Amber liquid
Odor	Mild, ammonia, fishy
Odor Threshold	No data available
pH	Not applicable
Melting Point	No data available
Boiling Point	No data available
Flash Point	>93°C
Evaporation Rate	No data available
Flammability Limits	No data available
Vapor Pressure	<1 mm Hg at 20°C
Vapor Density	No data available
Relative Density	0.99
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	10 cP at 25°C

Section 10 Stability and Reactivity

Reactivity: Not normally reactive.
Chemical Stability: Stable under recommended conditions.
Possibility of Hazardous Reactions: Exothermic reactions including polymerization may occur in contact with strong acids, strong bases, alcohols, strong oxidizing agents, and excessive heat.
Conditions to Avoid: Avoid excessive heat and ignition sources.
Incompatible Materials: Avoid contact with strong oxidizing agents, acids, and bases.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, aldehydes, and oxides of nitrogen.

Section 11 Toxicological Information

Acute toxicity values

Ingredient Name	LC_{50} Inhalation (Rat)	LD_{50} Oral (Rat)	LD_{50} Dermal (Rabbit)
Proprietary Amine	1.23 mg/L, 4 hr.	1,170 mg/kg	1,870 mg/kg

Potential acute and chronic health effects

Eye Contact: Causes serious eye damage.
Skin Contact: Harmful in contact with skin. Causes severe skin burns. May cause allergic skin reaction.
Inhalation: Harmful if inhaled. May cause respiratory irritation.
Ingestion: Harmful if swallowed.
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: May cause respiratory irritation, drowsiness or dizziness.

Section 12 Ecological Information

Ecotoxicity

Ingredient Name	Test	Species	Result
1,3-Benzenedimethanamine	LC50 EC10	Golden Orfe Bacteria	130 mg/L 90 mg/L
Benzyl Alcohol	LC50 (96 hr) EC50 (48 hr)	Fish Daphnia	460 mg/L 230 mg/L
2,4,6-Tris(dimethylaminomethyl)phenol	LC50 (24 hr) EC50 (96 hr) EC50 (72 hr)	Grass Shrimp Rainbow Trout Scenedesmus Subspicatus	222 mg/L 718 mg/L 84 mg/L

Persistence and Degradability

Ingredient Name	Test	Result
1,3-Benzenedimethanamine	OECD 301 B: CO_2 Evolution (Modified Sturm Test)	49%
Benzyl Alcohol	OECD 301 A: DOC Die-Away	95-97% (21 Days)

Bioaccumulative Potential

Ingredient Name	Log P_{ow}	BCF	Potential
Benzyl Alcohol	1.1	Not available	Low

Mobility in Soil

No data available

Section 13 Disposal Considerations

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

Section 14 Transport Information

DOT

UN2735, Amines, liquid, corrosive, n.o.s (1,2-diaminocyclohexane, 1,3-Bis(aminomethyl)benzene), 8, III.
LTD QTY if shipped in quantities of 5L (1.32 gal.) or less.

IATA/IMDG

UN2735, Amines, liquid, corrosive, n.o.s (1,2-diaminocyclohexane, 1,3-Bis(aminomethyl)benzene), 8, III.

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 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.

Section 15 Regulatory Information

U.S. State Regulations

California Proposition 65: ⚠ **WARNING:** This product can expose you to chemicals including Epichlorohydrin, which is known to the State of California to cause cancer and/or reproductive harm. 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/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.

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