FREEMAN Manufacturing & Supply Company

Safety Data Sheet

Freeman 9600 Resin

Section 1 Identification

Product Identifiers

Freeman 9600 Epoxy Resin

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

Resin side of a 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
CHEMTREC (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
Skin Sensitizer – Category 1
Specific Target Organ Toxicity – Single Exposure Category 3

Label elements

Danger

Hazard Statements

H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
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, protective clothing, 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+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.
P319 Get medical help if you feel unwell.
P333+P317 If skin irritation or rash occurs: 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.

Section 2 Hazards Identification

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 the hardener before using.

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Epoxy resin	25068-38-6	80-90
2,2'-[1,4- Butanediylbis(oxymethyl)]bis[oxirane]	2425-79-8	10-20

Ingredients are not listed if 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

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 Material 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

Precautions for 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	Viscous amber liquid
Odor	Mild
Odor Threshold	No data available
pH	Not applicable
Melting Point	No data available
Boiling Point	>200°C
Flash Point	>110°C
Evaporation Rate	No data available
Flammability Limits	No data available
Vapor Pressure	<1 mm Hg at 20°C
Vapor Density	Heavier than air
Relative Density	1.15
Solubility	Negligible
Coefficient: n-Octanol/Water	No data available
Auto-Ignition Temperature	No data available
Decomposition Temperature	>200°C
Viscosity	1,200 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

Chemical Name	LD_{50} Oral (Rat)	LD_{50} Dermal (Rabbit)
Epoxy Resin (CAS 25068-38-6)	11,400 mg/kg	2,000 mg/kg
Aliphatic Epoxy Resin (Cas 2425-79-8)	1,134 mg/kg	1,130 mg/kg

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 respiratory irritation.
Ingestion: No data available.
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 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

Chemical Name	Test	Species	Result
4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer	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

Chemical Name	Test
4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer	OECD Derived from OECD 301F (Biodegradation Test)
Aliphatic Epoxy Resin	Not readily biodegradable

Bioaccumulative Potential

Chemical Name	Log P_{ow}	BCF	Potential
4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer	3.242	31	Low
Aliphatic Epoxy Resin	-0.15	Not available	Not available

Section 12 Ecological Information

Mobility in Soil

Chemical Name	Soil/Water Partition Coefficient (K_{OC})
4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer	445

Section 13 Disposal Considerations

Dispose of unused contents and container in accordance with federal, state, and local regulations.
Ensure the use of properly authorized waste management companies. Do not dump in drains or sewers.

Section 14 Transport Information

DOT

Non-bulk Packaging (<882lb or <119gal): Not regulated transport by truck.
Bulk Packaging: UN3082, Environmentally hazardous substance, liquid, n.o.s (epoxy resin), 9, III.

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 (1.32gal) or less
(See IATA SP A197 and IMDG 2.10.2.7)

Section 15 Regulatory Information

U.S. Federal Regulations

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

U. S. Toxic Substance Control Act (TSCA): All intentionally added components are either listed or are otherwise compliant with the regulation

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 16, 2022
Date of previous revision: June 16, 2022
Date of current revision: March 10, 2025

Safety Data Sheet

Freeman 9605 Epoxy Hardener

Section 1 Identification

Product Identifiers

Freeman 9605 Epoxy Hardener

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

Hardener side of a 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
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 3
Acute Toxicity (Inhalation) – Category 2
Skin Corrosion – Category 1A
Serious Eye Damage – Category 1

Label elements

Danger

Hazard Statements

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H330 Fatal if inhaled.

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.
P280 Wear protective gloves, protective clothing, eye protection, and face protection.
P284 In case of inadequate ventilation, wear respiratory protection.
P301+P317 IF SWALLOWED: Get medical help.
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.
P316 Get emergency medical help immediately.
P317 Get medical help.

Section 2 Hazards Identification

P330 Rinse mouth.
P361+P364 Take off immediately all 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 resin before using.

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
2,2'-Dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	90-100

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

Most Important Symptoms/Effects

Fatal if inhaled. Toxic in contact with skin. Harmful if swallowed.

Indication of Immediate Medical Attention/Special Treatment

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

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 Material 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

Precautions for 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-TWA
2,2'-Dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	0.025 mg/m^3 (vapor)

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	Light yellow liquid
Odor / Odor Threshold	Irritating / No data available
pH	11
Melting Point	No data available
Boiling Point	>100°C (>212°F)
Flash Point	140°C (285°F)
Evaporation Rate	No data available
Flammability Limits	No data available
Vapor Pressure	<0.1 mm Hg
Vapor Density	No data available
Relative Density	0.95
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

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 light 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 of product

LD_{50} Oral (Rat)	LD_{50} Dermal (Rabbit)	LC_{50} Dermal (Rat)
320-460 mg/kg	>200 mg/kg	0.42 mg/L, 4 hr.

Acute and chronic health effects

Eye Contact: Causes serious eye damage.
Skin Contact: Toxic in contact with skin. Causes severe skin burns.
Inhalation: Fatal if inhaled.
Ingestion: Harmful if swallowed.
Respiratory Sensitization: Components are not classified as respiratory sensitizers.
Skin Sensitization: Components are not classified as skin sensitizers.
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: No data available.

Section 12 Ecological Information

Ecotoxicity: No data available. Avoid release to the environment.
Persistence and Degradability: No data available.
Bioaccumulative Potential: No data available.
Mobility in Soil: No data available.

Section 13 Disposal Considerations

Dispose of unused contents (incineration) and container in accordance with federal, state, and local regulations. Ensure the use of properly authorized waste management companies.

Section 14 Transport Information

DOT

UN2927, Toxic liquid, corrosive, organic, n.o.s., (2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine), 6.1 (8), II. LTD QTY if shipped in quantities of 1L (0.30gal) or less

IATA/IMDG

UN2927, Toxic liquid, corrosive, organic, n.o.s., (2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine), 6.1 (8), II, MARINE POLLUTANT.

Section 15 Regulatory Information

U.S. Federal Regulations

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

U. S. Toxic Substance Control Act (TSCA): All intentionally added components are either listed or are otherwise compliant with the regulation

U.S. State Regulations

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer and/or reproductive harm. For more information go to 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.

Date of initial issue: June 16, 2022
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