

Section 1 Identification

Product identifiers

Product name: Freeman 917 Resin

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Epoxy constituent

Details of the supplier of the safety data sheet

Freeman Manufacturing and Supply Company
 1101 Moore Road, Avon, OH 44011
 Phone (440) 934-1902
 FAX (440) 934-7200

HMIS	
H	3
F	1
R	0
PPE Sec. 8	

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/Irritation, Category 2
- Serious Eye Damage/Eye Irritation, Category 1
- Skin Sensitization, Category 1
- Acute Aquatic Toxicity, Category 2
- Chronic Aquatic Toxicity, Category 2

GHS Label elements, including precautionary statements



Signal word

Danger

Hazard statements

- Causes serious eye irritation.
- Causes skin irritation.
- May cause an allergic skin reaction.
- Toxic to aquatic life with long lasting effect.

Precautionary statements

Prevention

- Avoid breathing dust/fume/gas/mist/vapour/spray.
- Wash skin thoroughly after handling
- Keep container tightly closed when not in use.
- Avoid release to the environment.
- Wear protective gloves/eye protection/face protection.
- Do not eat, drink or smoke when using this product.

Response

- If on skin: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.
- If in eyes: Rinse continuously with water for at least 15 minutes.
- Remove contact lenses, if present and easy to do.
- If eye irritation persists: Get medical advice/attention.

Section 2 Hazards Identification continued

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS

None known

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Bisphenol A Epoxy Resin	25068-38-6	30-50
Calcium carbonate	1317-65-3	10-20
Epoxy Phenol Novolac Resin	28064-14-4	10-20
Butanediol Diglycidyl Ether	2425-79-8	5-10
Butylphenyl Glycidyl Ether	3101-60-8	2.5-5
Talc	14807-96-6	1-5
Titanium dioxide	13463-67-7	0.1-1

Section 4 First-Aid Measures

Description of first aid measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water. Get medical attention if symptoms occur.

In case of eye contact

Flush eyes with water for at least 15 minutes. Get medical attention.

If swallowed

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water.

Get medical attention if symptoms appear.

Most important symptoms and effects, both acute and delayed

None known

Section 5 Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: High volume water jet

Special hazards arising from the substance or mixture

Decomposition products may include carbon dioxide, carbon monoxide and metal oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Do not allow run-off from firefighting to enter drains or water courses.

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible absorbent material such as sand, earth, and vermiculite. Sweep up and place in suitable containers for disposal.

Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

Precautions for safe handling

Do not breathe fumes or vapor. Do not allow material to contact skin and eyes. Provide appropriate exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers. Do not heat this material above the flash point.

Section 8 Exposure Controls/Personal Protection

Components with workplace control parameters

Ingredient Name	OSHA		ACGIH	
	PEL	STEL	TWA	STEL
Calcium carbonate	none established	none established	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)	none established
Titanium dioxide	none established	none established	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)	none established

Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the workstation.

Personal protective equipment

Eye/face protection

With product at ambient temperatures, use safety glasses equipped with side shields.

Skin protection

Hand Protection

With product at ambient temperatures, use disposable chemical resistant gloves. Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

Section 8 Exposure Controls/Personal Protection continued

Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

Appearance	Gray liquid
Odor	Epoxy-like
Odor Threshold	No data available
pH	No data available
Melting Point	No data available
VOC Content	No data available
Initial boiling point & boiling range	No data available
Flash Point(COC)	>143°C (>290°F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability	No data available
Vapor Pressure	No data available
Vapor density	No data available
Relative density (g/cc)	1.3
Water Solubility	No data available
Coefficient: n-octanol/ water	No data available
Auto-ignition temperature	No data available
Viscosity	No data available
Explosive Properties	No data available
Oxidizing Properties	No data available
% Volatile	No data available

Section 10 Stability and Reactivity

Reactivity

No specific test data related to reactivity available for this product or its ingredients

Chemical stability

Stable under recommended storage conditions

Possibility of hazardous reactions

None known

Conditions to avoid

Accidental mixing with curing agent, all sources of ignition

Incompatible materials

Oxidizing materials

Hazardous decomposition products

Thermal oxidative decomposition can produce carbon monoxide, carbon dioxide, and undetermined organic materials.

Section 11 Toxicological Information

Information on toxicological effects

Acute oral toxicity	>5,000 mg/kg (estimate)
Acute inhalation toxicity	142 mg/l, Exposure time: 4 h (estimate)
Acute dermal toxicity	>5,000 mg/kg (estimate)
Skin corrosion/irritation	Extremely corrosive and destructive to tissue
Serious eye damage/eye irritation	May cause irreversible eye damage
Respiratory or skin sensitization	Causes sensitization
Germ cell mutagenicity	No data available on product
Carcinogenicity	Product is not classifiable as a human carcinogen
IARC	Titanium dioxide, Group 2B: Possibly carcinogenic to humans by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	Talc, Known to be a human carcinogen by NTP. is identified as a known or anticipated carcinogen.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	No data available
Specific target organ toxicity	
- single exposure	No data available
Specific target organ toxicity	
- repeated exposure	No data available

Section 12 Ecological Information

Toxicity	Harmful to aquatic life
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT & vPvB assessment	No data available

Section 13 Disposal Considerations

Disposal

Use safety containers for disposal. Contact a licensed contractor for detailed recommendations. Follow applicable Federal, State, and local regulations.

Section 14 Transport Information

DOT Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy Resin, Epoxy Phenol Novolac Resin)
Hazard Class: 9
ID No.: UN 3082
Packing Group: III
Label: Marine Pollutant

Section 14 Transport Information

IATA Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy Resin, Epoxy Phenol Novolac Resin)
Hazard Class: 9
ID No.: UN 3082
Packing Group: III
Label: Marine Pollutant

IMDG: Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy Resin, Epoxy Phenol Novolac resin)
Hazard Class: 9
ID No.: UN 3082
Packing Group: III
Label: Marine Pollutant

Section 15 Regulatory Information

US Federal Regulations

SARA 311/312 Hazards: No SARA hazards listed

SARA 313 Toxic Chemical (40 CFR 372.65): This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels.

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

US State Regulations

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

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.

Section 1 Identification

Product identifiers

Product name: Freeman 917 Hardener

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Hardener

Details of the supplier of the safety data sheet

Freeman Manufacturing and Supply Company
 1101 Moore Road, Avon, OH 44011
 Phone (440) 934-1902
 FAX (440) 934-7200

HMIS	
H	3
F	1
R	0
PPE Sec. 8	

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 (Dermal), Category 4
- Skin Corrosion/Irritation, Category 1B
- Serious Eye Damage/Eye Irritation, Category 1
- Skin Sensitization, Category 1
- Acute Aquatic Toxicity, Category 3
- Chronic Aquatic Toxicity, Category 3

GHS Label elements, including precautionary statements



Signal word Danger

Hazard statements

- Causes severe skin burns and eye damage
- Harmful in contact with skin
- May cause an allergic skin reaction.
- Harmful to aquatic life with long lasting effect.

Precautionary statements

Prevention

- Avoid breathing dust/fume/gas/mist/vapour/spray.
- Wash skin thoroughly after handling
- Keep container tightly closed when not in use.
- Avoid release to the environment.
- Wear protective gloves/eye protection/face protection.
- Do not eat, drink or smoke when using this product.

Response

- If swallowed: Rinse mouth. Do not induce vomiting.
- If on skin: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.
- If in eyes: Rinse continuously with water for at least 15 minutes.

Section 2 Hazards Identification continued

Remove contact lenses, if present and easy to do.
 If eye irritation persists: Get medical advice/attention.
 If inhaled: Remove person to fresh air. Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS

None known

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Triethylene Tetramine	112-24-3	30-60
Metaxylenediamine	1477-55-0	13-30
1-Methylimidazole	616-47-7	3-7
Trimethylhexamethylenediamine	25513-64-8	0.1-1

Section 4 First-Aid Measures

Description of first aid measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration. If symptoms persist, seek medical attention.

In case of skin contact

Wash off with soap and plenty of water. Get medical attention.

In case of eye contact

Flush eyes with water for at least 15 minutes. Get medical attention. Continue rinsing during transport to hospital.

If swallowed

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.

Most important symptoms and effects, both acute and delayed

None known

Section 5 Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: High volume water jet

Special hazards arising from the substance or mixture

Decomposition products may include carbon dioxide, carbon monoxide and metal oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Do not allow run-off from firefighting to enter drains or water courses.

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible absorbent material such as sand, earth, and vermiculite. Sweep up and place in suitable containers for disposal.

Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

Precautions for safe handling

Do not breathe fumes or vapor. Do not allow material to contact skin and eyes. Provide appropriate exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers. Do not heat this material above the flash point.

Section 8 Exposure Controls/Personal Protection

Components with workplace control parameters

Ingredient Name	OSHA		ACGIH	
	PEL	STEL	TWA	STEL
Metaxylenediamine	none established	none established	0.1 mg/m ³	none established

Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the workstation.

Personal protective equipment

Eye/face protection

With product at ambient temperatures, use safety glasses equipped with side shields.

Skin protection

Hand Protection

With product at ambient temperatures, use disposable chemical resistant gloves. Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Section 8 Exposure Controls/Personal Protection continued

General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

Appearance	Blue liquid
Odor	Amine-like
Odor Threshold	No data available
pH	No data available
Melting Point	No data available
VOC Content	No data available
Boiling point	>204°C (>400°F)
Flash Point	>93°C (>200°F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability	No data available
Vapor Pressure	0.0011997 hPa (20°C)
Vapor density	No data available
Relative density (g/cc)	1.03-1.06
Water Solubility	No data available
Coefficient: n-octanol/ water	No data available
Auto-ignition temperature	No data available
Viscosity	No data available
Explosive Properties	No data available
Oxidizing Properties	No data available
% Volatile	No data available

Section 10 Stability and Reactivity

Reactivity

No specific test data related to reactivity available for this product or its ingredients

Chemical stability

Stable under recommended storage conditions

Possibility of hazardous reactions

None known

Conditions to avoid

Accidental mixing with curing agent, all sources of ignition

Incompatible materials

Oxidizing materials

Hazardous decomposition products

Thermal oxidative decomposition can produce carbon monoxide, carbon dioxide, and undetermined organic materials.

Section 11 Toxicological Information

Information on toxicological effects

Acute oral toxicity	2,043 mg/kg (estimate)
Acute inhalation toxicity	9.31 mg/l, Exposure time: 4 h (estimate)
Acute dermal toxicity	1,478 mg/kg (estimate)
Skin corrosion/irritation	Extremely corrosive and destructive to tissue
Serious eye damage/eye irritation	May cause irreversible eye damage
Respiratory or skin sensitization	Causes sensitization
Germ cell mutagenicity	No data available on product
Carcinogenicity	Product is not classifiable as a human carcinogen
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	No data available
Specific target organ toxicity	
- single exposure	No data available
Specific target organ toxicity	
- repeated exposure	No data available
Aspiration hazard	No data available

Section 12 Ecological Information

Toxicity	Harmful to aquatic life
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT & vPvB assessment	No data available

Section 13 Disposal Considerations

Disposal

Use safety containers for disposal. Contact a licensed contractor for detailed recommendations. Follow applicable Federal, State, and local regulations.

Section 14 Transport Information

DOT Shipping Name: Polyamines, liquid, corrosive, n.o.s. (Triethylene tetramine, m-xylene diamine)
Hazard Class: 8
ID No.: UN 2735
Packing Group: II
Label: Corrosive

Section 14 Transport Information

IMDG Shipping Name: Polyamines, liquid, corrosive, n.o.s. (Triethylene tetramine, m-xylene diamine)
Hazard Class: 8
ID No.: UN 2735
Packing Group: II
Labels: 8
Marine pollutant: No

IATA Shipping Name: Polyamines, liquid, corrosive, n.o.s. (Triethylene tetramine, m-xylene diamine)
Hazard Class: 8
ID No.: UN 2735
Packing Group: II

Section 15 Regulatory Information

US Federal Regulations

SARA 311/312 Hazards: Acute Health Hazard

SARA 313 Toxic Chemical (40 CFR 372.65): This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels.

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

US State Regulations

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

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.