



### **Section 1 Identification**

#### **Product identifiers**

Product name: Freeman 801 Resin

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

Identified uses: Epoxy resin solution **Details of the supplier of the safety data sheet** 

Freeman Manufacturing and Supply Company

1101 Moore Road, Avon, OH 44011

Telephone (440) 934-1902

<b>HMIS</b>			
Н	2		
F	2		
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)

Serious Eye Damage/Irritation, Category 2A

Skin Corrosion/Irritation, Category 2

Skin Sensitization, Category 1

Flammable Liquids, Category 4

Germ Cell Mutagenicity, Category 2

Carcinogenicity, Category 2

Acute Aquatic Toxicity, Category 2

Chronic Aquatic Hazard, Category 2

# GHS Label elements, including precautionary statements







Signal word Warning

# **Hazard Statements**

Combustible liquid

Causes serious eye irritation.

Causes skin irritation.

May cause an allergic skin reaction

Suspected of causing genetic defects

Suspected of causing cancer

Toxic to aquatic life with long lasting effects

### **Precautionary Statements**

### Prevention

Keep container tightly closed when not in use.

Wear protective gloves/eye protection/face protection.

Avoid breathing vapor. Wash hands thoroughly after handing.

Keep away from flames and hot surfaces

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

Contaminated clothing should not be allowed out of the workplace.

Avoid release to the environment



# Freeman 801 Resin

### Section 2 Hazards Identification continued

# Response

If exposed or concerned, get medical attention

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.

# 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 (%)
Aluminium	7429-90-5	30 - 50
Bisphenol A Diglycidyl Ether Resin	1675-54-3	30 - 50
Limestone	1317-65-3	10 - 20
Butyl Glycidyl Ether	2426-08-6	2.5 - 5

Both 25068-38-6 and 1675-54-3 can be used to describe the epoxy resin which is produced through the reaction of bisphenol A and epichlorohydrin.

### **Section 4 First Aid Measures**

#### **Description of first aid measures**

### If inhaled

Move person into fresh air. If unconscious, place in recovery position. If symptoms persist, get medical attention.

# In case of skin contact

Wash with plenty of soap and water. Wash contaminated clothes/shoes before reuse. If skin irritation persist, get medical attention.

# In case of eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Protect the unharmed eye. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.

### If swallowed

Induce vomiting immediately and get medical attention. Keep respiratory tract clear.

Do not give milk or alcoholic beverages. Take victim immediately to the hospital.

**Notes to physician:** Symptomatic treatment and supportive therapy as indicated. Treatment with ethyl alcohol is indicated if toxic ingestion is suspected or there is metabolic acidosis following ingestion of this product. Administer ethyl alcohol sufficient to maintain blood ethyl alcohol levels of above 100 mg/dL. 4-Methylpyrazole (Fomepizole, Antizole) is also a recognized antidote for this product.



# **Section 5 Fire-Fighting Measures**

# **Extinguishing media**

Suitable extinguishing media: Carbon dioxide.

Unsuitable extinguishing media: High volume water jet.

# Special hazards arising from the substance or mixture

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

# Hazardous thermal decomposition products

Carbon dioxide, carbon monoxide, halogenated compounds, metal oxides

# **Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

# **Section 6 Accidental Release Measures**

# Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

# **Environmental precautions**

Avoid contact with soil, waterways, drains, and sewers. Inform relevant authorities if the product has caused environmental pollution. May be harmful to the environment if released in large quantities. Collect spillage.

# Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see section 13). Keep in suitable, closed containers for disposal.

# **Section 7 Handling and Storage**

### Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

# Conditions for safe storage, including any incompatibilities

No smoking. Store at ambient temperatures in closed containers in a well-ventilated area, away from chemical incompatibilities. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working amterials must comply with the technological safety standards.

# Further information on storage stability

No decomposition if stored and applied as directed.



# **Section 8 Exposure Controls/Personal Protection**

# Components with workplace control parameters

Ingredient	OSHA		ACGIH	
	PEL	STEL	TWA	STEL
Aluminum	15 mg/m³ (total dust)	Not	15 mg/m³ (total dust)	Not
Alullillulli	established	established		established
Limestone	15 mg/m³ (total dust)	Not	Not established	Not
Lilliestolle	13 mg/m³ (total dust)	established	Not established	established
Butyl Glycidyl	E0 nnm	Not	2 nnm	Not
Ether	50 ppm	established	3 ppm	established

# 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.

# Personal protective equipment

# Eye/face protection

Use tightly fitting chemical splash goggles. Wear a face shield for abnormal processing problems. . If inhalation hazards exist, a full-face respirator may be required instead.

# **Hand protection**

Use impervious gloves. Discuss suitability with glove manufacturer.

Contaminated gloves should be replaced.

# **Body protection**

Prevent skin contact when handling material.

### **Respiratory protection**

No personal respiratory protective equipment required with normal use.

In case of vapor formation use a respirator with an approved filter.

# **Safety stations**

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

#### 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 Slight, ether-like Odor threshold No data available No data available pН **Boiling point** >93°C (>200°F) Flash point (Pensky-Martens) 77°C (>171°F) **Evaporation rate** No data available Flammability (solid, gas) No data available Upper/lower flammability No data available Vapor pressure 1.4663 hPa (25°C) Vapor density No data available Relative density (g/cc) 1.69 - 1.78



# Freeman 801 Resin

# Section 9 Physical and Chemical Properties continued

Water Solubility Negligible

Coefficient: n-octanol/waterNo data availableAuto-ignition temperatureNo data availableDecomposition temperatureNo data availableViscosityNo data availableExplosive propertiesNo data availableOxidizing propertiesNo data available

# **Section 10 Stability and Reactivity**

# Reactivity

Stable under recommended storage conditions.

# **Chemical stability**

No decomposition if stored and applied as directed.

# Possibility of hazardous reactions

Vapors may form explosive mixture with air.

# Conditions to avoid

Heat, flames, sparks.

# **Incompatible materials**

No specific data.

# Hazardous decomposition products

Thermal oxidative decomposition can produce carbon oxides, aluminium oxides, and halogenated compounds.

# **Section 11 Toxicological Information**

Information on toxicological effects

**Acute oral toxicity** LD50 >5000 mg/kg (Calculated) **Acute inhalation toxicity** LC50 34.34 mg/l, 4 h (Calculated)

**Acute dermal toxicity**No data available

**Skin corrosion/irritation** May cause skin irritation

**Serious eye damage/eye irritation** May cause irreversible eye damage

**Respiratory or skin sensitization** Sensitizer **Germ cell mutagenicity** No specific data

Carcinogenicity

**IARC** No component of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential carcinogen.

**OSHA** Quartz ( $SiO_2$ ) is a specifically regulated carcinogen.

NTP No component of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential carcinogen.

**Reproductive Toxicity** No data available

**STOT - single exposure** (Specific target organ toxicity) Respiratory irritation **STOT - repeated exposure** (Specific target organ toxicity) No data available

**Aspiration Hazard** No data available



# Freeman 801 Resin

# **Section 12 Ecological Information**

**Toxicity** Harmful to aquatic life with long lasting effects

Persistence and degradabilityNo data availableBioaccumulative potentialNo data availableMobility in soilNo data availableResults of PBT & vPvB assessmentNo data available

# **Section 13 Disposal Considerations**

The product should not be allowed to enter drains, water courses or the soil. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on empty drums. Send to a licensed waste management company. Disposal should be in accordance with applicable regional, national and local laws and regulations.

# **Section 14 Transport Information**

**DOT:** Not regulated if shipped in packages less than or equal to 119 gallons (450 liters)

IATA: Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy

Resin)

Hazard Class: 9 ID No.: UN 3082 Packing Group: III

**Label:** Class 9 – Miscellaneous dangerous substances and articles

Packing instruction (cargo aircraft): 964 Packing instruction (passenger aircraft): 964

Environmentally hazardous: Yes

**IMDG**: **Shipping Name**: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy

Resin)

Hazard Class: 9 ID No.: UN 3082 Packing Group: III

Label: 9

**EmS Code:** F-A, S-F **Marine pollutant:** Yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**DOT**: Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy

Resin)

Hazard Class: 9 ID No.: UN 3082 Packing Group: III

Label: 9

ERG Code: 171

Marine pollutant: Yes

**Remarks:** Above applies only to containers over 119 gallons (450 liters). Not regulated as

shipped.



# **Section 15 Regulatory Information**

# **US Federal Regulations**

SARA 311/312 Codes: Flammable, Skin corrosion or irritation, Serious eye damage or irritation, Respiratory or skin sensitization, Germ cell mutagenicity, Carcinogenicity
SARA 313 Toxic Chemical: This materialdoes not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established.
U.S. Clean Air Act Section 602: This product neither contains, nor was manufactured with a Class I or Class II ODS

U.S Clean Air Act Section 112: This product does not contain any hazardous air pollutants (HAP)

# **US State Regulations**

California Proposition 65: This product can expose you to chemicals including 4,4'-isopropylidenediphenol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

### **Inventories**

TSCA: On the inventory or in compliance with the inventory requirements TSCA – 5(a) Significant New Use Rule List of Chemicals: No substances are subject DSL: This product contains one or several components listed in the Canadian DSL

### **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 last issue: November 8, 2019 Date of revision: February 17, 2020



# Freeman 801 Hardener

#### **Section 1 Identification**

#### **Product identifiers**

Product name: Freeman 801 Hardener

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

Identified uses: Epoxy system hardener

Details of the supplier of the safety data sheet

Freeman Manufacturing and Supply Company

1101 Moore Road, Avon, OH 44011

Telephone (440) 934-1902

# 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 1C

Serious Eye Damage/Eye Irritation, Category 1

Skin Sensitization, Category 1

Acute Aquatic Environment, Category 3

Chronic Aquatic Environment, Category 2

# GHS Label elements, including precautionary statements





Signal word

Danger

### **Hazard Statements**

Causes severe skin burns and eye damage.

May cause an allergenic skin reaction.

Very toxic to aquatic life with long lasting effects.

### **Precautionary Statements**

Prevention

Keep container tightly closed when not in use.

Wear protective gloves/eye protection/face protection.

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

Avoid breathing vapor. Use in a well ventilated area.

Avoid release to the environment.

#### Response

Get medical attention if you feel unwell.

IF exposed or if you feel unwell: Call a POISON CENTER or physician.

IF SWALLOWED: Rinse mouth. Do not induce vomiting. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.

If skin irritation or rash occurs: Get medical attention.

**HMIS** 

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# Freeman 801 Hardener

#### Section 2 Hazards Identification continued

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

IF IN EYES: Rinse cautiously for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention immediately.

### Storage

Store in a well-ventilated place. Keep container tightly closed.

# Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

None known

# **Section 3 Composition/Information on Ingredients**

Ingredient Name	CAS Number	Concentration (%)
Tetraethylenepentamine	112-57-2	13 - 30
2,4,6-tris(dimethylaminomethyl)phenol	90-72-5	13 - 30
Triethylenetetramine	112-24-3	3 – 7
Bis[(dimethylamino)methyl]phenol	71074-89-0	1 - 3

#### **Section 4 First Aid Measures**

#### **Description of first aid measures**

#### If inhaled

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

### In case of skin contact

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

# In case of eye contact

Flush eyes with water for at least 15 minutes. Get medical attention immediately. Continue rinsing eyes 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. Get immediate medical attention.

# **Section 5 Fire-Fighting Measures**

#### **Extinguishing media**

Suitable extinguishing media: Use 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

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

## Hazardous thermal decomposition products

Carbon dioxide, carbon monoxide, nitrogen oxides

### **Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **Further information**

Collect contaminated fire extinguishing water separately. Do not discharge into drains.



# Freeman 801 Hardener

#### **Section 6 Accidental Release Measures**

### Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas. For personal protection see section 8.

# **Environmental precautions**

Do not let product enter drains. If product contaminates rivers and lakes or drains inform respective authorities.

# Methods and materials for containment and cleaning up

Dike and contain spill. Soak up with inert absorbent material (e.g. sand, silica gel, sawdust). Keep in suitable, closed containers for disposal.

# **Section 7 Handling and Storage**

# Precautions for safe handling

Do not breathe vapors/dust. Avoid exposure. Obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on a metaltray. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

# Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry and well-ventilated place. Carefully reseal opened containers after use. No known incompatible materials.

### **Section 8 Exposure Controls/Personal Protection**

# Components with workplace control parameters

None known

### **Appropriate engineering controls**

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

## Personal protective equipment

**Eye/face protection:** Use safety goggles.

**Hand protection:** Use impervious gloves. Discuss suitability with glove manufacturer. **Skin/body protection**: Prevent skin contact when handling material. Wear impervious clothing.

# **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.

# Safety stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

# **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.



Vapor pressure

# **Safety Data Sheet**

# Freeman 801 Hardener

# **Section 9 Physical and Chemical Properties**

AppearanceAmber liquidOdorAmine-like

Odor threshold No data available рН No data available VOC No data available Freezing point No data available **Boiling point** >148°C (>298°F) Flash point (Pensky-Martens) 107°C (225°F) **Evaporation rate** No data available Flammability (solid, gas) No data available Upper/lower flammability No data available

**Relative vapor density**No data available

**Relative density** 0.96

Water solubility
Coefficient: n-octanol/water
Auto-ignition temperature
Decomposition temperature
Viscosity
Explosive properties
No data available

# **Section 10 Stability and Reactivity**

0.001333 hPa (25°C)

### Reactivity

No known dangerous reaction if stored and applied as directed.

# **Chemical stability**

Stable under recommended storage conditions.

# Possibility of hazardous reactions

None known.

#### Conditions to avoid

None known.

## **Incompatible materials**

None known.

### **Hazardous decomposition products**

Thermal oxidative decomposition can produce carbon oxides, and nitrogen oxides.

## **Section 11 Toxicological Information**

## Information on toxicological effects

**Acute oral toxicity** 4,489 mg/kg (calculated)

**Acute inhalation toxicity**No data available

**Acute dermal toxicity** 2,850 mg/kg (calculated)

**Skin corrosion/irritation** Extremely corrosive and destructive to tissue

Serious eye damage/eye irritation May cause irreversible eye damage

**Respiratory or skin sensitization** Causes skin sensitization

**Germ cell mutagenicity** No data available



# Freeman 801 Hardener

# **Section 11 Toxicological Information**

Carcinogenicity

**IARC** No component of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential carcinogen.

**NTP** No component of this product present at levels greater than or

equal to 0.1% 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.

Reproductive toxicity No data available

STOT - single exposure (Specific Target Organ Toxicity) No data available STOT - repeated exposure (Specific Target Organ Toxicity) No data available

**Aspiration toxicity** 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**

Do not allow product to enter drains, water courses, or soil. Contact a licensed waste management company for detailed recommendations. Follow applicable Federal, State, and local regulations.

### **Section 14 Transport Information**

**DOT:** Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-TRIS(DIMETHYL

AMINOMETHYL) PHENOL)

Hazard Class: 8 **ID No.:** UN 2735 Packing Group: III Label: Corrosive **ERG Code:** 153

Marine pollutant: no

IATA: Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-TRIS(DIMETHYL

AMINOMETHYL) PHENOL)

Hazard Class: 8 ID No.: UN 2735 Packing Group: III Label: Corrosive

Packing instruction (cargo aircraft): 856 Packing instruction (passenger aircraft): 852



# Safety Data Sheet Freeman 801 Hardener

# Section 14 Transport Information continued

IMDG: Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-TRIS(DIMETHYL

AMINOMETHYL) PHENOL)

Hazard Class: 8 ID No.: UN 2735 Packing Group: III

Label: 8

**EmS Code:** F-A, S-B **Marine pollutant:** no

# **Section 15 Regulatory Information**

# **US Federal Regulations**

SARA 311/312 Codes: Skin corrosion, Serious eye damage, Skin sensitization, Aquatic toxicity SARA 313 Toxic Chemical: This materialdoes not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established. U.S. Clean Air Act Section 602: This product neither contains, nor was manufactured with a Class I or Class II ODS

U.S Clean Air Act Section 112: This product does not contain any hazardous air pollutants (HAP)

# **State Regulations**

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

### **Inventories**

TSCA: On the inventory or in compliance with the inventory requirements TSCA – 5(a) Significant New Use Rule List of Chemicals: No substances are subject DSL: This product contains one or several components listed in the Canadian DSL

### **Section 16 Other Information**

### Disclaimer

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