

Material Safety Data Sheet

Freeman 705 Resin

Date of Preparation: June 1, 2010

Section 1 Chemical Product and Company Identification

Product/Chemical Name: Freeman 705 Resin
Chemical Family: Epoxy Resin
CAS Number: N/A
Other Designations: N/A
General Use: N/A
Manufacturer: Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011
Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5,
Emergency phone number 1-800-424-9300

HMIS	
H	2
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PPE Sec.8.	

Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number
Bisphenol A Epoxy Resin	25068-38-6
Diglycidyl Ether	17557-23-2

Ingredient	OSHA		ACGIH	
	PEL	STEL	TLV	STEL
Bisphenol A Epoxy Resin	none estab.	none estab.	none estab.	none estab.
Diglycidyl Ether	none estab.	none estab.	none estab.	none estab.

Section 3 Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Causes eye, and skin irritation. May cause skin sensitization.

Potential Health Effects

Primary Entry Routes: Skin; Inhalation from heated vapors.

Acute Effects:

Inhalation: Because of its low volatility this product is not likely to be an inhalation hazard.

Eye: Causes irritation

Skin: Causes irritation May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

Ingestion: Swallowing may cause abdominal irritation, nausea, vomiting, and diarrhea.

Medical Conditions Aggravated by Long-Term Exposure: Skin and eye conditions.

Chronic Effects: N/A

Carcinogenicity: IARC, NTP, and OSHA do not list any of the components as carcinogenic.

Section 4 First Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen and/or artificial respiration.

Eye Contact: Flush with plenty of water for 15 minutes and get medical attention.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse.
Destroy contaminated shoes.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person, Get medical attention.

Freeman 705 Resin

Section 5 Fire Fighting Measures

Flash Point: > 260°F (>127 °C)

Flash Point Method: estimated

LEL: Not established

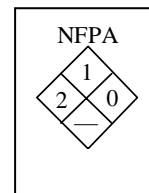
UEL: Not established

Extinguishing Media: CO₂, or dry chemical

Unsuitable Media: Water or foam may cause frothing.

Fire-Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.



Section 6 Accidental Release Measures

Spill /Leak Procedures: Stop spill at source. Dike area and contain. Clean up remainder with absorbent materials such as sand or vermiculite. Mop up and dispose of.

Section 7 Handling and Storage

Handling & Storage: Use with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin. Wear safety goggles or face shield. Wear gloves, apron and footwear impervious to this material. Wash clothing before reuse. Store at ambient temperatures. . Keep container tightly closed and upright when not in use to prevent leakage.

Section 8 Exposure Controls/Personal Protection

Ventilation: Local exhaust recommended. General mechanical is acceptable. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).

Respiratory Protection: Use a NIOSH approved respirator when vapor/mist exposure is likely.

Eye Protection: Wear splash-proof chemical goggles.

Skin Protection: Wear impermeable gloves.

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

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 Physical and Chemical Properties

Appearance and Odor: White soft paste, mild epoxy odor

Vapor Pressure: Not determined

Vapor Density (Air=1): > 1

Specific Gravity (H₂O=1, at 4 °C): 1.6

Water Solubility: Slight

Boiling Point: Not determined

% Volatile: Negligible

Evaporation Rate: Not determined

pH: Not determined

Section 10 Stability and Reactivity

Stability: Stable.

Conditions to Avoid: Excessive heat for prolonged period.

Chemical Incompatibilities: Strong oxidizing agents, acids and bases

Hazardous Decomposition Products: Combustion may form toxic materials, such as carbon dioxide, carbon monoxide.

Hazardous Polymerization: Will not occur. Avoid inadvertent mixture with epoxy curing agents.

Freeman 705 Resin

Section 11 Toxicological Information

Acute Inhalation Exposure Effects: Respiratory irritant.
Skin Irritation: Irritant.
Eye Irritation: Irritant.
Sensitization: Possible in susceptible individuals.
Carcinogenicity: IARC, NTP, and OSHA do not list any of the components as carcinogenic.

Section 12 Ecological Information

No Known evidence of adverse effects from available information

Section 13 Disposal Considerations

Disposal: Use safety containers for disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations

Section 14 Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Resin Compounds, N.O. I

Section 15 Regulatory Information

US Federal Regulations:

OSHA (Occupational Safety and Health Act): This Material Safety Data Sheet has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

RCRA (Resource Conservation and Recovery Act): Not a hazardous waste under RCRA (40 CFR 261).

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372.

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

State Regulations: This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

Section 16 Other Information

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Material Safety Data Sheet

Freeman 705-15 Hardener

Date of Preparation: February 9, 2010

Section 1 Chemical Product and Company Identification

Product/Chemical Name: Freeman 705-15 Hardener
Chemical Family: Amine
CAS Number: N/A
Other Designations: N/A
General Use: Epoxy Curing Agent
Manufacturer: Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011
Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5,
Emergency phone number 1-800-424-9300

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PPE Sec.8.	

Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number
Polyamine adduct	Proprietary
Imidazole	931-36-2

Ingredient	OSHA		ACGIH	
	PEL	STEL	TLV	STEL
Polyamine Adduct	none estab.	none estab.	none estab.	none estab.
Imidazole	none estab.	none estab.	none estab.	none estab.

Section 3 Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Irritant

Potential Health Effects

Primary Entry Routes: Skin; Inhalation from heated vapors.

Acute Effects:

Inhalation: Vapor is irritating to the upper respiratory system and mucous membranes.

Eye: Product can cause severe eye irritation, swelling and/or chemical burn. Contact lenses should not be worn when working with this material.

Skin: Skin contact may result in irritation or chemical burn.

Ingestion: Liquid causes damages to mucous membrane if swallowed.

Medical Conditions Aggravated by Long-Term Exposure: Skin and eye conditions.

Chronic Effects: N/A

Carcinogenicity: IARC, NTP, and OSHA do not list any components as carcinogens

Section 4 First Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen and/or artificial respiration.

Eye Contact: Flush with plenty of water for 15 minutes and get medical attention.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse.
Destroy contaminated shoes.

Ingestion: Do not induce vomiting. Get medical attention.

Freeman 705-15 Hardener

Section 5 Fire Fighting Measures

Flash Point: 220°F (104 °C)

Flash Point Method: PMCC

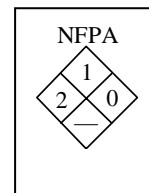
LEL: Not established

UEL: Not established

Extinguishing Media: Foam, water, CO₂, or dry chemical

Fire-Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.



Section 6 Accidental Release Measures

Spill /Leak Procedures: Stop spill at source. Dike area and contain. Clean up remainder with absorbent materials such as sand or vermiculite. Mop up and dispose of.

Section 7 Handling and Storage

Handling & Storage: Use with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin. Wear safety goggles or face shield. Wear gloves, apron and footwear impervious to this material. Wash clothing before reuse. Store at ambient temperatures. . Keep container tightly closed and upright when not in use to prevent leakage.

Section 8 Exposure Controls/Personal Protection

Ventilation: Local exhaust recommended. General mechanical is acceptable. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).

Respiratory Protection: Use a NIOSH approved respirator when vapor/mist exposure is likely.

Eye Protection: Wear splash-proof chemical goggles.

Skin Protection: Wear impermeable gloves.

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

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 Physical and Chemical Properties

Appearance and Odor: Amber liquid, amine odor

Vapor Pressure: < 1 mm Hg @ 70°F

Vapor Density (Air=1): Not determined

VOC Content: 0 lbs/gal

Specific Gravity (H₂O=1, at 4 °C): 1.06

Water Solubility: Moderate

Boiling Point: Not determined

% Volatile: Not determined

Evaporation Rate: Not determined

pH: Not determined

Section 10 Stability and Reactivity

Stability: Stable.

Conditions to Avoid: Excessive heat for prolonged period.

Chemical Incompatibilities: Strong oxidizing agents, acids and bases, secondary aliphatic amines and mercaptans.

Hazardous Decomposition Products: Combustion may form toxic materials, such as carbon dioxide, carbon monoxide and nitrogen oxides

Hazardous Polymerization: Will not occur. Avoid inadvertent mixing with epoxy resins

Freeman 705-15 Hardener

Section 11 Toxicological Information

Sensitization: Causes allergic skin and respiratory sensitivity in some people.

Skin: Irritation: . May cause burns.

Eye: Irritation: May cause burns.

Carcinogenicity: IARC, NTP, and OSHA do not list any components as carcinogens.

Section 12 Ecological Information

No Known evidence of adverse effects from available information

Section 13 Disposal Considerations

Disposal: Use safety containers for disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations

Section 14 Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Liquid Plastic, N.O. I.

Hazard Class: Not Regulated

Section 15 Regulatory Information

US Federal Regulations:

OSHA (Occupational Safety and Health Act): This Material Safety Data Sheet has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

RCRA (Resource Conservation and Recovery Act): Not a hazardous waste under RCRA (40 CFR 261).

SARA 311/312 Codes:

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372.

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

State Regulations:

CA Proposition: No component listed

May contain trace amounts of triethylenetetraamine (CAS # 112-24-3) which is on the Pennsylvania and New Jersey Right to Know lists

May contain trace amounts of aminoethylpiperazine (140-31-8) which is on the Pennsylvania, New Jersey and Massachusetts Right to Know lists

Section 16 Other Information

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Material Safety Data Sheet

Freeman 705-45 Hardener

Date of Preparation: January 24, 2007

Revision:

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Freeman 705-45 Hardener

Chemical Family: Amine

CAS Number: N/A

Other Designations: N/A

General Use: N/A

Manufacturer: Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011,
Phone (440)934-1902, FAX (440)934-7200, Hours of Operation 8-5, Emergency Phone Number 800-424-9300.

HMIS

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†Sec. 8

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Irritant

Section 2 - Composition / Information on Ingredients

Ingredient Name

Polyamine Adduct

CAS Number

68610-56-0

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Polyamine Adduct	none estab.	none estab.	none estab.	none estab.

Section 3 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Light yellow, amine odor.

Odor Threshold: N/A

Viscosity: 100-1000 cps

Vapor Pressure: <1 mm Hg at 20 °C

Vapor Density (Air=1): >1

Specific Gravity (H₂O=1, at 4 °C): 1.07

pH: N/A

Water Solubility: Slightly

Other Solubilities: N/A

Boiling Point: N/A

Freezing/Melting Point: N/A

%Solid: 100%

% Volatile: 0%

Evaporation Rate: N/A

Section 4 - Fire-Fighting Measures

Flash Point: 200 °F (93°C)

Flash Point Method: SETA

Burning Rate: N/A

Autoignition Temperature: N/A

LEL: N/E

UEL: N/E

Flammability Classification: N/A

Extinguishing Media: Water, fog, foam, dry chemical, CO₂.

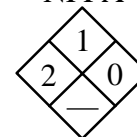
Unusual Fire or Explosion Hazards: Container areas exposed to intense heat or flame should be cooled with water to prevent pressure build-up and/or weakening of container structure.

Hazardous Combustion Products: N/A

Fire-Fighting Instructions: Do not enter confined fire space without full protective gear including a positive pressure, self-contained, NIOSH approved breathing apparatus. Cool fire exposed container with water. Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

NFPA



Section 5 - Stability and Reactivity

Stability: Freeman 705-45 Hardener is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur. Avoid mixing resin and hardener in uncontrollable quantities.

Chemical Incompatibilities: Incompatible with strong oxidizing agents, strong acids and bases, secondary aliphatic amines and mercaptans.

Conditions to Avoid: Avoid high temperatures, open flames and unscheduled contact with curing agents.

Hazardous Decomposition Products: Thermal oxidative decomposition of Freeman 705-15 Hardener can produce carbon dioxide, carbon monoxide, by products may include oxides of nitrogen when burned.

Section 6 - Health Hazard Information

Potential Health Effects

Primary Entry Routes: Inhalation, skin

Target Organs: N/A

Acute Effects: N/A

Signs and Symptoms:

Inhalation: Vapor is irritating to the upper respiratory system and mucous membranes.

Eye: Product can cause severe eye irritation, swelling and/or chemical burn. Contact lenses should not be worn when working with this material.

Skin: Skin contact may result in irritation or chemical burn.

Ingestion: Liquid causes damage to mucous membrane if swallowed.

Carcinogenicity: IARC, NTP, and OSHA do not list any component as carcinogenic.

Medical Conditions Aggravated by Long-Term Exposure: N/A

Chronic Effects: N/A

Emergency and First Aid Procedures

Inhalation: Remove victim to fresh air.

Eye Contact: Flush eyes with generous amounts of water for at least 15 minutes. Get medical attention immediately.

Skin Contact: Immediately wash skin with soap and water. Wash contaminated clothing before reuse.

Ingestion: If swallowed do not induce vomiting. Give large amounts of water or milk if available. Call a physician. Treatment based on judgment of the physician in response to reactions of the patient.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: N/A

Special Precautions/Procedures: N/A

Section 7 - Spill, Leak, and Disposal Procedures

Precautions: Store at ambient temperatures in well ventilated area. Avoid sparks, open flames and extreme heat. Store separately from epoxy resins. Protect container from physical damage. Container, even those that have been emptied, can contain product residues. Handle in accordance with good industrial practices. Avoid prolonged or repeated contact with skin. Wash with soap before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminate clothing before use.

Spill /Leak Procedures: Use cautious judgment when cleaning spills.

Small Spills: May be collected with adsorbent material, such as clay or sand.

Large Spills: Should be diked and contained with absorbent materials. Flush area with water spray to remove residue. Dispose of flush legally.

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Disposal Regulatory Requirements: N/A

Container Cleaning and Disposal: N/A

Ecological Information: N/A

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261.): Not classified

CERCLA Hazardous Substance (40 CFR 302.4) listed/unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

Revision:**Freeman 705-45 Hardener**

CERCLA Reportable Quantity (RQ), lb (kg)
 SARA 311/312 Codes:
 SARA Toxic Chemical (40 CFR 372.65): Not listed
 SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed
 OSHA Specifically Regulated Substance (29CFR 1910)

State Regulations: None Applicable

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: N/A

Ventilation: Use only with adequate ventilation. Local exhaust is recommended. General Mechanical can be used as a backup system. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: N/A

Respiratory Protection: Wear NIOSH approved respiratory protection where exposure limits are exceeded or in the absence of proper environmental control. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.

Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

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

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics

Section 9 - Special Precautions and Comments

Handling Precautions:

Storage Requirements:

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Liquid Plastic, N.O. I.

Shipping Symbols:

Hazard Class: Not Regulated

ID No.:

Packing Group:

Label:

Special Provisions (172.102):

Packaging Authorizations

a) **Exceptions:**

b) **Non-bulk Packaging:**

c) **Bulk Packaging:**

Quantity Limitations

a) **Passenger, Aircraft, or Railcar:**

b) **Cargo Aircraft Only:**

Vessel Stowage Requirements

a) **Vessel Stowage:**

b) **Other:**

Prepared By:

Revision Notes:

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