

Material Safety Data Sheet

Freeman 605 Resin

Date of Preparation: April 27, 2010

Section 1 Chemical Product and Company Identification

Product/Chemical Name: Freeman 605 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
F	1
R	0
PPE Sec.8.	

Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number
Bisphenol A Epoxy Resin	25068-38-6

Ingredient	OSHA		ACGIH	
	PEL	STEL	TLV	STEL
Bisphenol A Epoxy Resin	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 605 Resin

Section 5 Fire Fighting Measures

Flash Point: > 200°F (>93 °C)

Flash Point Method: estimated

LEL: Not established

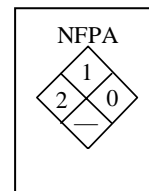
UEL: Not established

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 liquid, mild epoxy odor

Vapor Pressure: Not determined

Vapor Density (Air=1): > 1

Specific Gravity (H₂O=1, at 4 °C): 1.3

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 605 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

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.

Material Safety Data Sheet

Freeman 605-15 Hardener

Date of Preparation: February 9, 2010

Section 1 Chemical Product and Company Identification

Product/Chemical Name: Freeman 605-15 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

HMIS	
H	2
F	1
R	0
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 605-15 Hardener

Section 5 Fire Fighting Measures

Flash Point: 220°F (104 °C)

Flash Point Method: PMCC

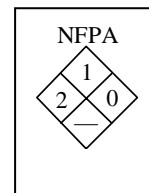
LEL: Not established

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 605-15 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 605-45 Hardener

Date of Preparation: February 9, 2010

Section 1 Chemical Product and Company Identification

Product/Chemical Name: Freeman 605-45 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

HMIS	
H	2
F	1
R	0
PPE Sec.8.	

Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number
Polyamine adduct	Proprietary
Imidazole	931-36-2
Amino Ethanolamine	111-41-1

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.
Amino Ethanolamine	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

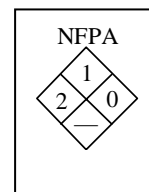
Freeman 605-45 Hardener

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.

Section 5 Fire Fighting Measures

Flash Point: >200 °F (>93°C)
Flash Point Method: SETA CC
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	Water Solubility: Moderate
Vapor Pressure: < 1 mm Hg @ 70°F	Boiling Point: Not determined
Vapor Density (Air=1): Not determined	% Volatile: Not determined
VOC Content: 0 lbs/gal	Evaporation Rate: Not determined
Specific Gravity (H₂O=1, at 4 °C): 1.02	pH: Not determined

Freeman 605-45 Hardener

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

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 Diethylenetriamine (CAS # 111-40-0) which is on the Pennsylvania and New Jersey Right to Know lists

Contains aminoethyl ethanolamine (CAS # 111-41-1) which is on the Pennsylvania and New Jersey Right to Know lists

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.