

Material Safety Data Sheet

Freeman 701 Hardener

Date of Preparation: January 3, 2007

Revision:

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Freeman 701 Hardener

Chemical Family: Amine

CAS Number: N/A

Other Designations: N/A

Intended Use or Product Type: Amine Hardener

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

H 3

F 1

R 0

PPE†

†Sec. 8

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Corrosive – causes skin and eye burns. Causes severe irritation if inhaled and can cause allergic respiratory reaction and allergic skin reaction. Can be harmful if absorbed through skin and may be harmful if swallowed.

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number
*Diethylenetriamine	111-40-0
* Triethylenetetramine	112-24-3
* Tetraethylenepentamine	112-57-2
*Butyl glycidyl ether	2426-08-6
* Pentaethylenehexamine	4067-16-7
* Bisphenol A	80-05-7
* Polyethylene Polyamine Epoxy Adduct	Proprietary

* = OSHA Hazardous Ingredient

Ingredient	OSHA		ACGIH		MFR
	PEL	STEL	TWA	STEL	
Diethylenetriamine	none estab.	none estab.	1 ppm	none estab.	none estab.
Triethylenetetramine	none estab.	none estab.	none estab.	none estab.	none estab.
Tetraethylenepentamine	none estab.	none estab.	none estab.	none estab.	none estab.
Butyl glycidyl ether	50 ppm	none estab.	25 ppm	none estab.	25 ppm
Pentaethylenehexamine	none estab.	none estab.	none estab.	none estab.	none estab.
Bisphenol A	none estab.	none estab.	none estab.	none estab.	TLV 5 mg/m3
Polyethylene Polyamine Epoxy Adduct	none estab.	none estab.	none estab.	none estab.	none estab.

Section 3 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Clear amber liquid

Vapor Pressure: Not Determined

Vapor Density (Air=1): Not Determined

Specific Gravity (H₂O=1, at 4 °C): 1.006

Water Solubility: Partially soluble

Boiling Point: >400° F (>204° C)

% Volatile: Negligible

VOC: Not Determined

Section 4 - Fire-Fighting Measures

Flash Point: >200 °F (>93 °C)

Flash Point Method: Estimated

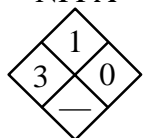
LEL: N/E

UEL: N/E

Extinguishing Media: Carbon dioxide, dry chemical, foam, water.

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

NFPA



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

Section 5 - Stability and Reactivity

Stability: Stable.

Conditions to Avoid: Excessive heat for prolonged periods of time.

Incompatibility: Strong oxidizers, acids, and bases

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

Hazardous Polymerization: Will not occur.

Section 6 - Health Hazard Information

Potential Health Effects

Primary Entry Routes: Dermal; heated product may produce inhalable vapors

Acute Effects: Corrosive. Causes skin and eye burns.

Chronic Effects: Overexposure may have effects on developing fetus, lung, kidney, and liver. Possible mutagen.

Overexposure Effects: Corrosive – causes skin and eye burns. Causes severe irritation if inhaled and can cause allergic respiratory reaction and allergic skin reaction. Can be harmful if absorbed through skin and may be harmful if swallowed.

Medical Conditions Aggravated by Exposure: Skin, eye and pulmonary conditions.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

Emergency and First Aid Procedures

Inhalation: Remove to fresh air. Call a physician.

Eye Contact: Immediately flush eyes with water for at least 15 minutes. Call a physician.

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

Ingestion: If conscious, give 2-4 glasses of water to drink. Do not induce vomiting. Call a physician.

Section 7 - Spill, Leak, and Disposal Procedures

Accidental Release Measures: Remove spillage by absorbing in absorbent material.

Waste Disposal Method: Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

Ecological Information: N/A

Toxicological Information:

Acute Oral Effects (LD50):

Diethylenetriamine = 1080 – 2330 mg/kg (rat)

Triethylenetetramine = 2500 – 4340 mg/kg (rat)

Acute Dermal Toxicity (LD50):

Diethylenetriamine = 672 – 1240 mg/kg (rabbit)

Triethylenetetramine = 550 – 800 mg/kg (rabbit)

Acute Inhalation Exposure Effects: Severe respiratory irritant.

Sensitization: May cause allergic skin reaction and respiratory sensitivity in some people.

Skin Irritation: Corrosive. Causes burns.

Eye Irritation: Corrosive. Causes burns.

Regulatory Information:

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This material Safety Data Sheet (MSDS) 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.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261) but handle with care due to corrosive effect on skin and eyes.

SARA Title III Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under Section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-

Common Name: Bisphenol A

Percent in Composition: 2.4994% by weight

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TSCA Section 8(b) - Inventory Status: All chemical components of this product are in compliance with TSCA inventory requirements.

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification

State Regulations:

California Proposition 65: This product does not contain any chemicals currently on the California list of Known Carcinogens and Reproductive Toxins.

*Diethylenetriamine (CAS # 111-40-0) is on the New Jersey and Pennsylvania Right to Know Lists.

Triethylenetetramine (CAS # 112-24-3) is on the New Jersey and Pennsylvania Right to Know Lists.

Tetraethylenepentamine(CAS # 112-57-2) is on the New Jersey Right to Know List.

Butyl glycidyl ether (CAS # 2426-08-6) is on the New Jersey Right to Know List.

Bisphenol A (CAS # 80-05-7) is on the New Jersey Right to Know List

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

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

Eye Protection: Wear splash-proof chemical goggles.

Skin protection: Wear impermeable gloves.

Section 9 - Special Precautions and Comments

Handling and Storage:

Signal Word: Danger!

Precautions: Corrosive-causes skin and eye burns. Causes irritation if inhaled and can cause allergic respiratory reaction and allergic skin reaction. Can be harmful if absorbed through skin and may be harmful if swallowed. Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing. Avoid tasting or swallowing. Keep containers closed when not in use. Use with adequate ventilation. Wash thoroughly after handling. Notice! Overexposure may have effects on developing fetus, lung, kidney, and liver. Possible mutagen.

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Corrosive liquid,
Basic, Organic, N.O.S.

Technical Shipping Name:
Tetraethylenepentamine,
Triethylenetetramine

Shipping Symbols:

Hazard Class: 8

ID No.: UN 3267

Packing Group: PG II

Label: Corrosive

Packaging Authorizations

a) Exceptions:

b) Non-bulk Packaging: Non-Bulk

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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