

4917 Dawn Avenue  
East Lansing, MI 48823-5691

8am to 4:30pm Phone: (517) 351-5900  
24-Hour Health/Environmental Emergency Phone: 1-888-354-3323

Effective Date: 11/13/00

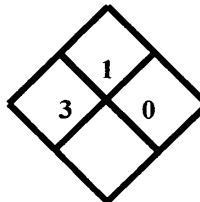
Material Safety Data Sheet

MSDS No: 6335

**1. PRODUCT IDENTIFICATION**

Trade Name: XMH 8579 Hardener

Chemical Family: Amine



NFPA RATING

Health	3
Flammability	1
Reactivity	0
Protective Equipment	

HMIS RATING

**Synonyms:**

LSA 642-03 Hardener

Intended Use or Product Type: Epoxy Adhesive Hardener.

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	10563-29-8	1,3-Propanediamine, N'-(3-aminopropyl)-N,N-dimethyl-Dimethylene Propylene Triamine	NE	NE	NE	NE	NE	NR	NR	NR
	Common Name:									
*	111-40-0	1,2-Ethanediamine, N-(2-aminoethyl)-Diethylenetriamine	1 ppm	NE	ppm	NE	NE	NR	NR	NR
	Common Name:									
*	112-24-3	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-Triethylenetetramine	NE	NE	NE	NE	NE	NR	NR	NR
	Common Name:									
*	68082-29-1	Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine Polyamide Resin	NE	NE	NE	NE	NE	NR	NR	NR
	Common Name:									
*	80-05-7	Phenol, 4,4'-(1-methylethylidene)bis-	NE	NE	NE	NE	TLV 5 mg/m3	NR	NR	NR
	Common Name:	Bisphenol A								

\* = OSHA Hazardous Ingredient

**3. HAZARDS IDENTIFICATION**

**Emergency Overview:** Corrosive - Causes skin and eye burns. May cause allergic skin and respiratory reactions.

**Primary Route(s) of Entry:** Dermal; heated product may produce inhalable vapors.

**Acute Exposure:** Corrosive. Causes skin and eye burns.

**4. FIRST AID MEASURES**

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

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

**Inhalation:** Remove to fresh air. Call a physician.

**Eyes:** Immediately flush eyes with water for at least 15 minutes. Call a physician.

**Overexposure Effects:** Corrosive - causes skin and eye burns. May cause allergic skin and respiratory reaction.

**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.

**5. FIRE FIGHTING MEASURES**

<b>Flash Point:</b>	> 200°F (> 93 °C)
<b>Flash Point Method Used:</b>	Estimated
<b>Flammable Limits in Air (Lower - % by volume):</b>	Not established
<b>Flammable Limits in Air (Upper - % by volume):</b>	Not established

**Fire Fighting Extinguishing Media:** Carbon dioxide, dry chemical, foam, water.

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

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

**6. ACCIDENTAL RELEASE MEASURES**

Effective Date: 11/13/00

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

**7. HANDLING AND STORAGE**

**Signal Word:** Danger!

**Precautions:** Corrosive - causes skin and eye burns. Can cause allergic respiratory reaction and allergic skin reaction. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

**Other Handling Information:** Nuisance dust may be generated when sanding or sawing cured material.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Skin Protection:** Wear impermeable gloves.

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

**Eye Protection:** Wear splash-proof chemical goggles.

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Color:</b>	Grey
<b>Physical State:</b>	Paste
<b>Solubility in Water:</b>	Moderate
<b>Vapor Pressure:</b>	Not Determined
<b>Specific Gravity:</b>	1.65 (water = 1)
<b>Boiling Point:</b>	Not Determined
<b>Evaporation Rate:</b>	Not Determined
<b>Vapor Density:</b>	Not Determined
<b>pH:</b>	Not Determined

**Percent Volatile:** Negligible.

**10. STABILITY AND REACTIVITY**

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

**Stability:** Stable.

**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.

Effective Date: 11/13/00

**11. TOXICOLOGICAL INFORMATION**

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

**Skin Irritation:** Corrosive. Causes burns.

**Eye Irritation:** Corrosive. Causes burns.

**12. ECOLOGICAL INFORMATION**

**13. DISPOSAL CONSIDERATIONS**

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

**14. TRANSPORT INFORMATION**

**DOT: Non-Bulk**

<b>Proper Shipping Name:</b>	Polyamines, liquid, corrosive, N.O.S.
<b>Technical Shipping Name (If n.o.s.):</b>	Dimethyl dipropyl triamine, Diethylene triamine
<b>Hazard Class:</b>	8
<b>ID Number:</b>	UN 2735
<b>Packing Group:</b>	PG II
<b>Label:</b>	Corrosive

**15. 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: 2.0094 % by wt

Comment:

**TSCA Section 8(b) - Inventory Status:** Chemical components listed on TSCA Inventory.

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Effective Date: 11/13/00

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**TSCA Section 12(b) - Export Notification:** This product contains the following chemical(s) that are subject to a Section 12(b) export notification:

Chemical Name: 1,2-Ethanediamine, N-(2-aminoethyl)-  
Common Name: Diethylenetriamine  
CAS Number: 111-40-0

**State Regulations:**

**California Proposition 65:** The following is required composition information. This product contains the following chemical(s) which are currently listed on the California list of Known Carcinogens and Reproductive Toxins:

Chemical Name: Quartz (SiO<sub>2</sub>)  
Common Name: Crystalline Silica  
CAS Number: 14808-60-7  
Percent in Composition: 0.085 % by wt  
Comment: Warning! This chemical is known to the State of California to cause cancer.

Chemical Name: Formaldehyde  
Common Name: Formaldehyde  
CAS Number: 50-00-0  
Percent in Composition: 0 % by wt  
Comment: Warning! This chemical is known to the State of California to cause cancer.

**Pennsylvania Right-to-Know:** The following is required composition information:

Chemical Name: Sulfuric acid, barium salt (1:1)  
Common Name: Barium Sulfate  
CAS Number: 7727-43-7  
Comment: Hazardous Substance

Chemical Name: Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine  
Common Name: Polyamide Resin  
CAS Number: 68082-29-1  
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Bentonite  
CAS Number: 1302-78-9  
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: 1,3-Propanediamine, N'-(3-aminopropyl)-N,N-dimethyl-  
Common Name: Dimethylene Propylene Triamine  
CAS Number: 10563-29-8  
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: 1,2-Ethanediamine, N-(2-aminoethyl)-  
Common Name: Diethylenetriamine  
CAS Number: 111-40-0  
Comment: Hazardous Substance

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

Effective Date: 11/13/00

Common Name: Bisphenol A  
 CAS Number: 80-05-7  
 Comment: Environmental Hazardous Substance

Chemical Name: 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-  
 Common Name: Triethylenetetramine  
 CAS Number: 112-24-3  
 Comment: Hazardous Substance

**16. OTHER INFORMATION**

MSDS No: 6335  
 Approved By: Kenneth L. Payne  
 Title: E,H&S Manager

**Disclaimer:** The following supercedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING 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 liability, tort or contract 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 or 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.

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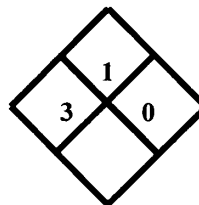
**Material Safety Data Sheet**

MSDS No: 6336

**1. PRODUCT IDENTIFICATION**

**Trade Name:** XMH 8579 Resin

**Chemical Family:** Epoxy



NFPA RATING

Health	3
Flammability	1
Reactivity	0
Protective Equipment	

HMIS RATING

**Synonyms:**

LSA 642-03 Resin

**Intended Use or Product Type:** Filled Epoxy Resin.

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	2425-79-8	Oxirane, 2,2'-[1,4-butanediylbis(oxyethylene)]bis-Butanediol Diglycidyl Ether Common Name:	NE	NE	NE	NE	NE	NR	NR	NR
*	25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane Bisphenol A Diglycidyl Ether Polymer Common Name:	NE	NE	NE	NE	NE	NR	NR	NR
	50327-99-6	REACTIVE MODIFIER	NE	NE	NE	NE	NE	NR	NR	NR

\* = OSHA Hazardous Ingredient

**3. HAZARDS IDENTIFICATION**

**Emergency Overview:** Causes severe skin irritation. Causes eye irritation. May cause skin burns and allergic skin reaction.

**Primary Route(s) of Entry:** Dermal; heated product may produce inhalable vapors.

Effective Date: 11/13/00

**4. FIRST AID MEASURES**

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

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

**Inhalation:** Remove to fresh air. Call a physician.

**Eyes:** Immediately flush eyes with water for at least 15 minutes. Call a physician.

**Overexposure Effects:** Causes severe skin irritation. Causes eye irritation. May cause skin burns and allergic skin reaction.

**Medical Conditions Aggravated by Exposure:** Skin and eye conditions.

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

**5. FIRE FIGHTING MEASURES**

<b>Flash Point:</b>	> 200°F (> 93 °C)
<b>Flash Point Method Used:</b>	Estimated
<b>Flammable Limits in Air (Lower - % by volume):</b>	Not established
<b>Flammable Limits in Air (Upper - % by volume):</b>	Not established

**Fire Fighting Extinguishing Media:** Carbon dioxide, dry chemical, foam, water.

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

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

**6. ACCIDENTAL RELEASE MEASURES**

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

**7. HANDLING AND STORAGE**

**Signal Word:** Danger!

**Precautions:** Causes severe skin irritation and may cause skin burns. Can cause eye irritation and allergic skin reaction. Do not get on skin or on clothing. Avoid contact with eyes. Wash thoroughly after handling.

**Other Handling Information:** Nuisance dust may be generated when sanding or sawing cured material.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Skin Protection:** Wear impermeable gloves.

Effective Date: 11/13/00

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

**Eye Protection:** Wear splash-proof chemical goggles.

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Color:</b>	Beige
<b>Physical State:</b>	Thixotropic Paste
<b>Solubility in Water:</b>	Negligible
<b>Vapor Pressure:</b>	Not Determined
<b>Specific Gravity:</b>	1.65 (water = 1)
<b>Boiling Point:</b>	Not Determined
<b>Evaporation Rate:</b>	Not Determined
<b>Vapor Density:</b>	Not Determined
<b>pH:</b>	Not Determined

**Percent Volatile:** Negligible.

**10. STABILITY AND REACTIVITY**

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

**Stability:** Stable.

**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.

**11. TOXICOLOGICAL INFORMATION**

**Sensitization:** Possible in susceptible individuals.

**Skin Irritation:** Severe skin irritant.

**Eye Irritation:** Irritant.

**12. ECOLOGICAL INFORMATION**

**13. DISPOSAL CONSIDERATIONS**

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

Effective Date: 11/13/00

**14. TRANSPORT INFORMATION**

**DOT: Non-Bulk**

**Proper Shipping Name:** Resin compounds, N.O.I.

**Department of Transportation:** Not regulated as a hazardous material by the U.S. Dept. of Transportation (DOT) 49 CFR 172.101 hazardous materials table.

**15. 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).

**SARA Title III: Section 313 Toxic Chemical List (TCL):** This product does not contain any chemicals for routine annual toxic chemical release reporting under Section 313 (40 CFR 372).

**TSCA Section 8(b) - Inventory Status:** Chemical components listed on TSCA Inventory.

**TSCA Section 12(b) - Export Notification:** This product contains the following chemical(s) that are subject to a Section 12(b) export notification:

Chemical Name: Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-  
 Common Name: Diglycidyl Ether of Bisphenol A  
 CAS Number: 1675-54-3

**State Regulations:**

**California Proposition 65:** The following is required composition information. This product contains the following chemical(s) which are currently listed on the California list of Known Carcinogens and Reproductive Toxins:

Chemical Name: Quartz (SiO<sub>2</sub>)  
 Common Name: Crystalline Silica  
 CAS Number: 14808-60-7  
 Percent in Composition: 0.05 % by wt  
 Comment: Warning! This chemical is known to the State of California to cause cancer.

**Pennsylvania Right-to-Know:** The following is required composition information:

Chemical Name: Sulfuric acid, barium salt (1:1)  
 Common Name: Barium Sulfate  
 CAS Number: 7727-43-7  
 Comment: Hazardous Substance

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane  
 Common Name: Bisphenol A Diglycidyl Ether Polymer

Effective Date: 11/13/00

CAS Number: 25068-38-6

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: 1- PROPENE, HOMOPOLYMER

CAS Number: 9003-07-0

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Bentonite

CAS Number: 1302-78-9

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: REACTIVE MODIFIER

CAS Number: 50327-99-6

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Silica

Common Name: Fumed Silica

CAS Number: 7631-86-9

Comment: Hazardous Substance

**16. OTHER INFORMATION**

<b>MSDS No:</b>	6336
<b>Approved By:</b>	Kenneth L. Payne
<b>Title:</b>	E,H&S Manager

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