

**Performance  
Polymers**

4917 Dawn Avenue  
East Lansing, MI 48823-5691

8:30am to 4:30pm Phone: (517) 351-5900  
24-Hour Health/Environmental Emergency Phone: 1-800-873-1138



Value beyond chemistry

Effective Date: 4/7/99

**Material Safety Data Sheet**

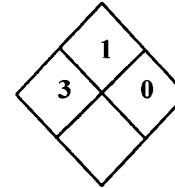
MSDS No: 5793

**1. PRODUCT IDENTIFICATION**

Trade Name: Hardener HV 8503

Chemical Family: Amine

Synonyms:  
XMH 8503 HARDENER  
Intended Use or Product Type: Adhesive hardener.



NFPA RATING

HEALTH	3
FLAMMABILITY	1
REACTIVITY	0
PROTECTIVE EQUIPMENT	

HMS RATING

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

O S H A	CAS#	CHEMICAL IDENTITY	EXPOSURE LIMITS					CARCINOGEN STATUS		
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	108-95-2 Common Name:	Phenol Phenol	5 ppm	NE	5 ppm	NE	NE	NR	NR	NR
*	112-24-3 Common Name:	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)- Triethylenetetramine	NE	NE	NE	NE	NE	NR	NR	NR
*	140-31-8 Common Name:	1-Piperazineethanamine Aminoethylpiperazine	NE	NE	NE	NE	NE	NR	NR	NR
*	25154-52-3 Common Name:	Phenol, Nonyl- Nonyl Phenol	NE	NE	NE	NE	NE	NR	NR	NR
*	68410-23-1 Common Name:	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines Polyamide Resin	NE	NE	NE	NE	NE	NR	NR	NR
*	68683-29-4 Common Name:	Pentanoic Acid, 4,4'-Azobis(4-Cyano-, polymer with 1,3-Butadiene, 1-Piperazine Ethanamine and 2-Propenenitrile) Synthetic Rubber	NE	NE	NE	NE	NE	NR	NR	NR
	32610-77-8	Formaldehyde, polymer with N,N'-	NE	NE	NE	NE	NE	NR	NR	NR

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	Common Name:	bis(2-Aminoethyl)-1,2-Ethanediamine and phenol  TETA, reaction products with Phenol/Formaldehyde								
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NE = Not Established    NR = Not Reviewed    \* = OSHA Hazardous Ingredient

**3. HAZARDS IDENTIFICATION****Emergency Overview:** Danger! 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:** Danger! 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:** Danger! Corrosive - Causes skin and eye burns. May cause allergic skin and respiratory 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****Flash Point:** > 200°F (> 93 °C)**Flash Point Method Used:** Estimated**Flammable Limits in Air (Lower - % by volume):** Not established**Flammable Limits in Air (Upper - % by volume):** 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. Avoid contact.

**7. HANDLING AND STORAGE**

**Precautions:** Danger! Corrosive. Causes skin and eye burns. May cause allergic skin and respiratory reactions. Do not get in eyes, on skin, on clothing. Avoid breathing vapor or mist. Keep container closed. 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:** Impermeable gloves and protective clothing.

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

**Eye Protection:** Full face shield.

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Color:</b>	Pale Yellow
<b>Physical State:</b>	Paste
<b>Solubility in Water:</b>	Soluble
<b>Vapor Pressure:</b>	Not Determined
<b>Specific Gravity:</b>	1.21 (water = 1)
<b>Boiling Point:</b>	Not Determined
<b>Evaporation Rate:</b>	Not Determined
<b>Vapor Density:</b>	Not Determined
<b>VOC:</b>	37.752 g/L
<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 oxidizing agents, acids, metal-organic compounds.

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

**Hazardous Polymerization:** Will not occur.

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**11. TOXICOLOGICAL INFORMATION****Sensitization:** Possible in susceptible individuals.**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>	Triethylene tetramine, Phenol
<b>Hazard Class:</b>	8
<b>ID Number:</b>	UN 2735
<b>Packing Group:</b>	PG II
<b>Label:</b>	Corrosive

**15. REGULATORY INFORMATION****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

Common Name: Phenol

CAS Number: 108-95-2

Percent in Composition: 3.12 % by wt

**TSCA Section 8(b) - Inventory Status:** Chemical components listed on TSCA Inventory.**TSCA Section 12(b) - Export Notification:** This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

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**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: 2- Propenenitrile  
Common Name: Acrylonitrile  
CAS Number: 107-13-1  
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: Pentanoic Acid, 4,4'-Azobis(4-Cyano-, polymer with 1,3-Butadiene, 1-Piperazine Ethanamine and 2-Propenenitrile)  
Common Name: Synthetic Rubber  
CAS Number: 68683-29-4  
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Limestone  
Common Name: Calcium Carbonate  
CAS Number: 1317-65-3  
Comment: Hazardous Substance

Chemical Name: Formaldehyde, polymer with N,N'-bis(2-Aminoethyl)-1,2-Ethanediamine and phenol  
Common Name: TETA, reaction products with Phenol/Formaldehyde  
CAS Number: 32610-77-8  
Comment: Not on Pennsylvania Hazardous Substance List

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

Chemical Name: Phenol  
Common Name: Phenol  
CAS Number: 108-95-2  
Comment: Environmental Hazardous Substance

Chemical Name: Phenol, Nonyl-  
Common Name: Nonyl Phenol  
CAS Number: 25154-52-3  
Comment: Hazardous Substance

Chemical Name: 1-Piperazineethanamine  
Common Name: Aminoethylpiperazine  
CAS Number: 140-31-8  
Comment: Hazardous Substance

## 16. OTHER INFORMATION

MSDS No: 5793  
Approved By: Kenneth L. Payne

Printed: 4/26/01

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**Effective Date:** 4/7/99

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**Title:** E,H&S Manager

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