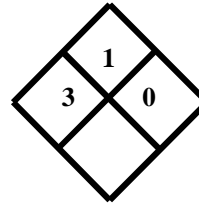


Effective Date: 11/3/05**Material Safety Data Sheet**

MSDS No: 6328

1. PRODUCT IDENTIFICATION**Trade Name:** Hardener HW 8535**Chemical Family:** Amine/Polyamidoamine

NFPA RATING

Health:	3*
Flammability:	1
Reactivity:	0
Personal Protection:	

HMIS RATING

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				
*	111-40-0 Common Name:	1,2-Ethanediamine, N-(2-aminoethyl)-Diethylenetriamine	1 ppm	NE	NE	NE	NE	NR	NR	NR
*	112-57-2 Common Name:	1,2-Ethanediamine, N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-Tetraethylenepentamine	NE	NE	NE	NE	NE	NR	NR	NR
*	140-31-8 Common Name:	1-Piperazineethanamine Aminoethylpiperazine	NE	NE	NE	NE	NE	NR	NR	NR
*	14464-46-1 Common Name:	Cristobalite (SiO ₂) Crystalline silica	0.05 mg/m ³	NE	2.5 mg/m ³	NE	NE	Yes	Yes	NR
*	14808-60-7 Common Name:	Quartz (SiO ₂) Crystalline silica	0.05 mg/m ³	NE	0.1 mg/m ³	NE	NE	Yes	Yes	NR
*	68610-56-0 Common Name:	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated Amine adduct	NE	NE	NE	NE	NE	NR	NR	NR
*	68683-29-4	Pentanoic Acid, 4,4'-Azobis(4-Cyano-, polymer with 1,3-Butadiene, 1-Piperazine Ethanamine and 2-Propenenitrile)	NE	NE	NE	NE	NE	NR	NR	NR

Effective Date: 11/3/05

	Common Name:	Synthetic Rubber								
*	68910-93-0	Fatty acids, tall-oil, reaction products with polyethylenepolyamines Aliphatic polyaminoamide	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/m ³	NR	NR	NR
	Common Name:	Bisphenol A								
*	90-72-2	Phenol, 2,4,6-tris[(dimethylamino)methyl]-	NE	NE	NE	NE	TLV 5 ppm	NR	NR	NR
	Common Name:	2,4,6-tris(Dimethylaminomethyl)phenol								

* = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: 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.

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

Acute Exposure: Corrosive. Causes skin and eye burns.

Chronic: Overexposure may have effects on developing fetus. This product contains Crystalline silica. Repeated inhalation of respirable free Crystalline silica dust may cause delayed lung injury (silicosis) and cancer.

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. 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.

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.

Effective Date: 11/3/05

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.

7. 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 get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Avoid tasting or swallowing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling. Notice! Contains crystalline silica. Breathing dust may cause cancer and delayed lung injury. Overexposure may have effects on developing fetus.

Other Handling Information: Crystalline silica may be generated when machining cured products. Overexposure may create possible cancer and silicosis hazard.

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

Color:	Black
Physical State:	Paste
Solubility in Water:	Moderate
Vapor Pressure:	Not Determined
Specific Gravity:	1.05 (water = 1)
Boiling Point:	Not Determined

Effective Date: 11/3/05

Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
VOC:	0.289 Lbs/Gallon
pH:	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

Acute Oral Effects (LD50): Component(s) are slightly toxic, 500 - 5000 mg/kg (rat).

Diethylenetriamine= 1080 - 2330 mg/kg (rat)

Aminoethylpiperazine= 2140 mg/kg (rat)

Acute Dermal Toxicity (LD50): Component(s) are toxic, 200 - 1000 mg/kg (rabbit).

Diethylenetriamine= 672 - 1240 mg/kg (rabbit)

Aminoethylpiperazine= 880 mg/kg (rabbit)

Acute Inhalation Exposure Effects: Respiratory irritant.

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

Carcinogenicity: This product contains crystalline silica. Repeated inhalation of respirable free crystalline silica dust may cause delayed lung injury (silicosis) and cancer.

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

Effective Date: 11/3/05

DOT: Non-Bulk

Proper Shipping Name:	Polyamines, liquid, corrosive, N.O.S.
Technical Shipping Name (If n.o.s.):	Diethylene triamine, Aliphatic polyaminoamide
Hazard Class:	8
ID Number:	UN 2735
Packing Group:	PG III
Label:	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: 1.5434 % by wt
Comment:

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: 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: Cristobalite (SiO₂)
Common Name: Crystalline silica
CAS Number: 14464-46-1
Percent in Composition: 2.142 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer.

Chemical Name: Quartz (SiO₂)
Common Name: Crystalline silica
CAS Number: 14808-60-7
Percent in Composition: 0.1852 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer.

Effective Date: 11/3/05

Chemical Name: Benzene, methyl-
Common Name: Toluene
CAS Number: 108-88-3
Percent in Composition: 0.0012 % by wt
Comment: Warning! This chemical is known to the State of California to cause birth defects or other reproductive harm.

Chemical Name: Arsenic
CAS Number: 7440-38-2
Percent in Composition: 0 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer and birth defects or other reproductive harm.

Chemical Name: Lead
CAS Number: 7439-92-1
Percent in Composition: 0 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer and birth defects or other reproductive harm.

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: 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: Fatty acids, tall-oil, reaction products with polyethylenepolyamines
Common Name: Aliphatic polyaminoamide
CAS Number: 68910-93-0
Comment: Not on Pennsylvania Hazardous Substance List

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

Chemical Name: Silica
Common Name: Fumed Silica
CAS Number: 7631-86-9
Comment: Hazardous Substance

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

Chemical Name: Silicic Acid, Calcium Salt
Common Name: Calcium silicate

Effective Date: 11/3/05

CAS Number: 1344-95-2
Comment: Hazardous Substance

Chemical Name: Cristobalite (SiO₂)
Common Name: Crystalline silica
CAS Number: 14464-46-1
Comment: Hazardous Substance

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

Chemical Name: 1,2-Ethanediamine, N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-
Common Name: Tetraethylenepentamine
CAS Number: 112-57-2
Comment: Hazardous Substance

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-
Common Name: Bisphenol A
CAS Number: 80-05-7
Comment: Environmental Hazardous Substance

16. OTHER INFORMATION

MSDS No:	6328
Approved By:	Dianne Blessing
Title:	EH&S Specialist

Disclaimer: The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

The information and recommendations contained herein are not intended to constitute performance information concerning the product, which is available in separate technical data sheets available from Huntsman upon request. Users are urged, and are urged to urge others who may come in contact with the product, to obtain and consult data sheets prior to purchase, use, transportation or storage of the product.

HUNTSMAN MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED TO REIMBURSEMENT OF BUYER'S PURCHASE PRICE, OR IN HUNTSMAN'S DISCRETION REPLACEMENT, OF THE PRODUCT IN RESPECT OF WHICH SUCH CLAIM IS MADE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED BY LEGAL NOTICES IN TECHNICAL DATA SHEETS, PRODUCT LITERATURE, AND/OR SALE DOCUMENTS. The foregoing DISCLAIMERS and LIMITATION OF LIABILITY supercede inconsistent or contradictory provisions in Buyer's documents.

USER SHOULD CONSULT A LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENTAL AGENCY TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT. HUNTSMAN DOES NOT UNDERTAKE TO FURNISH ADVICE ON SUCH MATTERS.

Effective Date: 11/3/05

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.