

PRODUCT NAME: **PM 400, PART B HARDENER**

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MATERIAL SAFETY DATA SHEET

24 HOUR EMERGENCY ASSISTANCE

CHEM TEL: 1-800-255-3924

GENERAL ASSISTANCE

TELE-TECH: 405-755-8448

HEALTH: 2

HAZARD RATING

FIRE: 0

LEAST = 0

SLIGHT = 1

MODERATE = 2

REACTIVITY: 0

HIGH = 3

EXTREME = 4

SECTION I

PRODUCT: PM 400, PART B HARDENER

CHEMICAL NAME: MIXTURE

CHEMICAL FAMILY: MODIFIED ALIPHATIC AMINE AQUEOUS SOLUTION

PRODUCT DESCRIPTION: EPOXY CURING AGENT

SECTION II-A

PRODUCT / INGREDIENT

<u>NO.</u>	<u>COMPOSITION</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>
1	POLYETHYLENE POLYAMINE ADDUCT	*	30-40%
2	2-PROPOXYETHANOL	2807-30-9	1-10%
3	ACETIC ACID	64-19-7	<5%
4	WATER	7732-18-5	40-50%
5	HYDROUS MAGNESIUM SILICATE	14807-96-6	1-10%
6	CRYSTALLINE SILICA	14808-60-7	1-10%

SECTION II-B

ACUTE TOXICITY DATA

<u>NO.</u>	<u>ACUTE ORAL LD50</u>	<u>ACUTE DERMAL LD50</u>	<u>ACUTE INHALATION LC50</u>
1	NO DATA AVAILABLE		
2	301 G/KG (RAT)	870 MG/KG (RABBIT)	>2000 PPM/6H (RAT)
3	3.31 G/KG (RAT)	1.06 G/KG (RABBIT)	5620/1H (RAT)
5	NO DATA AVAILABLE		
6	NO DATA AVAILABLE		

SECTION III

HEALTH INFORMATION

THE HEATH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910-1200).

EYE CONTACT: PRODUCT MAY BE SEVERLY IRRITATING TO THE EYES. MAY CAUSE CORNEAL DAMAGE.

SKIN CONTACT: PRODUCT MAY BE MODERATELY IRRITATING TO THE SKIN. PRODUCT MAY BE TOXIC AND MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN. MAY PRODUCE DAMAGE TO RED BLOOD CELLS. MAY CAUSE SKIN SENSITIZATION.

INHALATION: PRODUCT MAY CAUSE IRRITATION TO THE NOSE, THROAT AND RESPIRATORY TRACT. PRODUCT MAY BE TOXIC IF INHALED; MAY PRODUCE DAMAGE TO RED BLOOD CELLS. MAY CAUSE RESPIRATORY TRACT SENSITIZATION.

INGESTION: PRODUCT MAY BE MODERATELY TOXIC AND MAY BE HARMFUL IF SWALLOWED; MAY PRODUCE DAMAGE TO RED BLOOD CELLS.

SIGNS AND SYMPTOMS: IRRITATION AS NOTED ABOVE. SKIN SENSITIZATION (ALLERGY) MAY BE EVIDENCED BY RASHES, ESPICALLY HIVES. RESPIRATORY TRACT SENSITIZATION (E.G., ALLERGY, ASTHMA) MAY BE EVIDENCED BY WHEEZING WITH SHORTNESS OF BREATH AND COUGH. DAMAGE TO BLOOD

FORMING ORGANS MAY BE EVIDENCED BY EASY FATIGABILITY AND PALLOR (RBC EFFECT). DAMAGE TO BLOOD FORMING ORGANS MAY BE EVIDENCED BY DECREASED RESISTANCE TO INFECTION (WBC EFFECT). DAMAGE TO BLOOD FORMING ORGANS MAY BE EVIDENCED BY EXCESSIVE BRUISING AND BLEEDING (PLATELET EFFECT).

AGGRAVATED MEDICAL CONDITIONS: PREEXISTING EYE, SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. PREEXISTING SKIN AND RESPIRATORY TRACT ALLERGIES MAY INCREASE THE CHANCE OF DEVELOPING INCREASED ALLERGY SYMPTOMS FROM EXPOSURE TO THIS PRODUCT.

OTHER HEALTH EFFECTS: SEE SECTION VI FOR SUPPLEMENTAL HEALTH INFORMATION.

SECTION IV		OCCUPATIONAL EXPOSURE LIMITS			
No.	OSHA		ACGIH		OTHER
	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
1	NONE ESTABLISHED				
2					25 PPM
3	10 PPM		10 PPM	15 PPM	
5	NONE ESTABLISHED				
6	0.1 MG/M3 (RESPIRABLE DUST)		0.1 MG/M3 (RESPIRABLE DUST)		

SECTION V		EMERGENCY AND FIRST AID PROCEDURES			
EYE CONTACT:		IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.			
SKIN CONTACT:		IMMEDIATELY REMOVE CONTAMINATED CLOTHING OR SHOES, WIPE EXCESS FROM SKIN AND FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. USE SOAP IF AVAILABLE OR FOLLOW BY WASHING WITH SOAP AND WATER. DO NOT REUSE CLOTHING UNTIL THOROUGHLY CLEANED. GET MEDICAL ATTENTION. CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, CANNOT BE DECONTAMINATED AND SHOULD BE DESTROYED TO PREVENT REUSE.			
INHALATION:		REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.			
INGESTION:		DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.*			

SECTION VI		SUPPLEMENTAL HEALTH INFORMATION	
CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.			
COMPONENT 1:	IT HAS GENERALLY BEEN OBSERVED THAT ALIPHATIC AMINES CAN CAUSE CHANGES IN THE LUNGS, LIVER, KIDNEYS, AND HEART.		
COMPONENT 2:	IN MALE AND FEMALE RATS EXPOSED TO GREATER OR EQUAL TO 400 PPM VAPOR CONCENTRATION OF 2-PROPOXYETHANOL (2PE), TOXIC EFFECTS ON THE RED BLOOD CELLS (BBCS) WITH SECONDARY EFFECTS ON THE SPLEEN AND		

TRANSIENT HEMOGLOBINURIA WERE OBSERVED. THE NOEL IN THIS STUDY WAS 200 PPM.

IN PREGNANT RATS EXPOSED TO 100 PPM TO 400 PPM VAPOR CONCENTRATION OF 2-PE, NO TERATOGENIC OR SIGNIFICANT EMBRYO/FETOTOXICITY WAS OBSERVED AT ALL DOSE LEVELS DUE TO TOXIC EFFECTS ON THE RBCS.

SECTION VII

PHYSICAL DATA

BOILING POINT (°F):	212-301	SPECIFIC GRAVITY (H ₂ O = 1):	1.22
VAPOR PRESSURE (mm Hg @ 20°C):	<20		
SOLUBILITY (IN WATER):	MISCIBLE		
VAPOR DENSITY (AIR = 1):	>1		
EVAPORATION RATE (N-BUTYL ACETATE = 1):	<1		
APPEARANCE AND ODOR: OPAQUE COLORED VISCOUS LIQUID WITH AMMONIA AND SOLVENT ODOR.			

SECTION VIII

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:	N/A	(SETAFLASH)
FLAMMABLE LIMITS /% VOLUME IN AIR:	LOWER <4	UPPER: NA
EXTINGUISHING MEDIA:	USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO ₂	

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS: MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL PROTECTIVE GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS: CONTAINERS EXPOSED TO HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

SECTION IX

REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID: AVOID HEAT AND FLAMES. CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS, STRONG LEWIS OR MINERAL ACIDS, AND STRONG MINERAL AND ORGANIC BASES/ESPECIALLY PRIMARY AND SECONDARY ALIPHATIC AMINES. REACTION WITH SOME CURING AGENTS MAY PRODUCE CONSIDERABLE HEAT.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, ALDEHYDES, ACIDS AND OTHER ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION X

EMPLOYEE PROTECTION

RESPIRATORY PROTECTION: AVOID PROLONGED OR REPEATED BREATHING OF VAPORS OR MISTS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS

(SEC. IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING: AVOID CONTACT WITH EYES. WEAR CHEMICAL GOGGLES IF THERE IS LIKELIHOOD OF CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT.

SECTION XI	ENVIRONMENTAL PROTECTION
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SPILL OR LEAK PROCEDURES: MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGEMENT WHEN CLEANING UP LARGE SPILLS. ***LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. ***SMALL SPILLS*** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

SECTION XII	SPECIAL PRECAUTIONS
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GROUND ALL TRANSFER EQUIPMENT. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE. HANDLE AS AN INDUSTRIAL CHEMICAL. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. PRACTICE GOOD CAUTION AND PERSONAL CLEANLINESS TO AVOID SKIN AND EYE CONTACT. HOLD BULK STORAGE UNDER NITROGEN BLANKET. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

SECTION XIII	TRANSPORTATION REQUIREMENTS
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DEPARTMENT OF TRANSPORTATION CLASSIFICATION: NOT REGULATED

THE DOT INFORMATION IN THIS SECTION IS BASED UPON AN EVALUATION OF THE PRODUCT AGAINST THE REQUIREMENTS OF 49 CFR 172 & 173 AS REVISED BY HM-181.

HAZARD CLASS:
PACKING GROUP:
IDENTIFICATION NUMBER:
LABEL REQUIRED:

D.O.T. PROPER SHIPPING NAME:

SECTION XIV	OTHER REGULATORY CONTROLS
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NOT MEANT TO BE ALL-INCLUSIVE. SELECTED REGULATIONS PRESENTED.

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAN AIR ACT AMENDMENTS OF 1990); PER 40 CFR PART 82, THIS PRODUCT

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DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

- A. SARA TITLE III SECTION 311/312 HAZARDS:
- B. SARA TITLE III SECTION 313:
- C. WHMIS CLASSIFICATION:
- D. TSCA STATUS:
- E. OSHA HAZARD COMM. STD.:

SECTION XV STATE REGULATORY INFORMATION

THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES; OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THE MSDS MAY ALSO BE APPLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

STATE LISTED COMPONENT	PERCENT	STATE CODE
ACETIC ACID (CAS # 64-19-7)	<5	CA, CT, FL, IL, MA, ME, MN, NJ, PA, RI
CRYSTALLINE SILICA (CAS # 14808-60-7)	1-10	CA65

CA = CALIFORNIA HAZ. SUBST. LIST; CA65 = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT LIST; CT = CONNECTICUT TOX. SUBST. LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX. SUBST. LIST; LA = LOUISIANA HAZ. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST; ME = MAINE HAZ. SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ. SUBST. LIST.

SECTION XVI SPECIAL NOTES

NEW MSDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, MILAMAR COATINGS, INC. MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. MILAMAR COATINGS, INC. ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: SEPTEMBER 28, 2011

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