

PRODUCT NAME: **PM-180 PART B HARDENER**

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## MATERIAL SAFETY DATA SHEET

MILAMAR COATINGS, INC. 7500 MELROSE LANE OKLAHOMA CITY, OK 73127

### 24 HOUR EMERGENCY ASSISTANCE

CHEM•TEL: 1-800-255-3924

### GENERAL ASSISTANCE

TELE-TECH: 405-755-8448

HEALTH: 3

### HAZARD RATING

FIRE: 2

LEAST = 0 SLIGHT = 1 MODERATE = 2

REACTIVITY: 1

HIGH = 3 EXTREME = 4

## SECTION I

**PRODUCT:** PM-180 PART B HARDENER  
**CHEMICAL NAME:** MIXTURE  
**CHEMICAL FAMILY:** AMINE  
**PRODUCT DESCRIPTION:** FLEXIBLE EPOXY CURING AGENT

## SECTION II-A

### PRODUCT / INGREDIENT

<u>NO.</u>	<u>COMPOSITION</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>
1	POLYOXYPROPYLENEDIAMINE	9046-10-0	40-50%
2	TRIETHANOLAMINE	102-71-6	<5%
3	AMINOETHYLPIPERAZINE	000140-31-8	<5%
4	NONYLPHENOL	25154-52-3	10-20%

## 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	48 g/kg (rat)	2.09 g/kg (rabbit)	0/6 deaths (rabbit); 7 hrs
2	Not available	Not available	Not available
3	Not available	900 mg/kg (rabbit)	Not available
4	1.600 g/kg (rat)	>200 mg/kg (rabbit)	Not available

## SECTION III

### HEALTH INFORMATION

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

**EYE CONTACT:** MAY CAUSE SEVERE IRRITATION WITH CORNEAL INJURY WHICH MAY RESULT IN PERMANENT IMPAIRMENT OF VISION, EVEN BLINDNESS.

**SKIN CONTACT:** MAY CAUSE SEVERE IRRITATION WITH PAIN, CHEMICAL BURNS, BLISTER FORMATION, AND POSSIBLE TISSUE DESTRUCTION.

**INHALATION:** MAY CAUSE RESPIRATORY SENSITIZATION IN SUSCEPTIBLE INDIVIDUALS. SEVERE OVEREXPOSURE MAY RESULT IN DIFFICULTY BREATHING, HEADACHE, NAUSEA, VOMITING, AND DROWSINESS.

**INGESTION:** ACUTELY TOXIC. CAUSES BURNING OF MOUTH, THROAT, AND STOMACH WITH ABDOMINAL AND CHEST PAIN, NAUSEA, VOMITING, DIARRHEA, THIRST, WEAKNESS, AND COLLAPSE. ASPIRATION MAY OCCUR DURING SWALLOWING OR VOMITING, RESULTING IN LUNG DAMAGE.

**AGGRAVATED MEDICAL CONDITIONS:** SKIN CONTACT MAY AGGRAVATE AN EXISTING DERMATITIS (SKIN CONDITION). OVEREXPOSURE TO VAPOR, DUST, OR MIST MAY AGGRAVATE EXISTING RESPIRATORY CONDITIONS, SUCH AS ASTHMA, BRONCHITIS, AND INFLAMMATORY OR FIBROTIC RESPIRATORY DISEASE.

**OTHER HEALTH EFFECTS:** THIS PRODUCT CONTAINS ONE OR MORE AMINES WHICH MAY PRODUCE TEMPORARY AND REVERSIBLE HAZY OR BLURRED VISION. SYMPTOMS DISAPPEAR WHEN EXPOSURE IS TERMINATED. MAY CAUSE LIVER INJURY BASED ON ANIMAL STUDIES.

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**SECTION IV OCCUPATIONAL EXPOSURE LIMITS**

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No.	OSHA		ACGIH		OTHER
	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
1	None established				
2	Not available				
3	None established				
4	None established				

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**SECTION V EMERGENCY AND FIRST AID PROCEDURES**

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**EYE CONTACT:** REMOVE CONTACT LENSES AT ONCE. IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER OR NORMAL SALINE FOR AT LEAST 30 MINUTES. HOLD EYELIDS APART WHILE FLUSHING TO RINSE ENTIRE SURFACE OF EYE AND LIDS WITH WATER. **PROMPT MEDICAL ATTENTION IS ESSENTIAL.**

**SKIN CONTACT:** IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN IF IRRITATION PERSISTS. WASH CLOTHING BEFORE REUSE. DESTROY CONTAMINATED SHOES.

**INHALATION:** REMOVE TO FRESH AIR IF EFFECTS OCCUR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. **GET IMMEDIATE MEDICAL ATTENTION.**

**INGESTION:** **DO NOT INDUCE VOMITING.** IF PATIENT IS CONSCIOUS AND CAN SWALLOW, GIVE TWO GLASSES OF WATER (16 oz). **GET IMMEDIATE MEDICAL ATTENTION.** NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

**NOTE TO PHYSICIAN:** MAY CAUSE TISSUE DESTRUCTION LEADING TO STRICTURE. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGOSCOPIC CONTROL. IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION. NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT.

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**SECTION VI SUPPLEMENTAL HEALTH INFORMATION**

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**CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.**

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**SECTION VII PHYSICAL DATA**

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BOILING POINT:	Not determined	SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	0.983
VAPOR PRESSURE (mm Hg @ 20°C):	Not established		
SOLUBILITY (IN WATER):	Partially soluble	VAPOR DENSITY (AIR = 1):	> 1
EVAPORATION RATE (N-BUTYL ACETATE = 1):	Not established		
APPEARANCE AND ODOR:	Clear, colorless liquid with ammonia-like odor.		

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**SECTION VIII FIRE AND EXPLOSION HAZARDS**

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FLASH POINT AND METHOD: 210 °F (PMCC)

FLAMMABLE LIMITS /% VOLUME IN AIR: Not established

**EXTINGUISHING MEDIA:** USE WATER SPRAY, DRY CHEMICAL, FOAM, OR CARBON DIOXIDE. WATER OR FOAM MAY CAUSE FROTHING. USE WATER TO COOL FIRE-EXPOSED CONTAINERS. IF A LEAK OR SPILL HAS NOT IGNITED, USE WATER SPRAY TO DISPERSE THE VAPORS AND TO PROVIDE PROTECTION FOR PERSONS ATTEMPTING TO STOP THE LEAK.

**SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:** USE A POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** TOXIC VAPORS (HYDROGEN CYANIDE) MAY BE FORMED. HAZARDOUS COMBUSTION PRODUCTS MAY INCLUDE INTENSE HEAT, DENSE BLACK SMOKE, CARBON MONOXIDE, CARBON DIOXIDE, AND HYDROCARBON FRAGMENTS.

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**SECTION IX REACTIVITY**

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STABILITY: STABLE UNDER NORMAL CONDITIONS OF HANDLING.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

CONDITIONS AND MATERIALS TO AVOID: REACTS VIOLENTLY WITH ACIDS. AVOID ACID, OXIDIZING MATERIAL, HALOGENATED ORGANIC COMPOUNDS, ALDEHYDES, KETONES, AND ACRYLATES. RESULTS IN TEMPERATURE AND/OR PRESSURE INCREASE. AVOID EXPOSURE TO HEAT, LIGHT FLAME OR OTHER SOURCES OF IGNITION.

HAZARDOUS DECOMPOSITION PRODUCTS: TOXIC LEVELS OF AMMONIA, COMBUSTION PRODUCTS OF NITROGEN, CARBON MONOXIDE, CARBON DIOXIDE, IRRITATING ALDEHYDES, AND KETONES MAY BE FORMED ON BURNING IN A LIMITED AIR SUPPLY.

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## SECTION X

## EMPLOYEE PROTECTION

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RESPIRATORY PROTECTION: AIRBORNE CONCENTRATIONS SHOULD BE KEPT TO LOWEST LEVELS POSSIBLE. USE AN APPROVED RESPIRATOR. SELECTION OF AIR-PURIFYING OR POSITIVE-PRESSURE SUPPLIED AIR WILL DEPEND ON THE SPECIFIC OPERATION AND THE POTENTIAL AIRBORNE CONCENTRATION OF THE MATERIAL. FOR EMERGENCY CONDITIONS, USE AN APPROVED POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS.

PROTECTIVE CLOTHING: PROTECTIVE CLOTHING SUCH AS UNIFORMS, COVERALLS, OR LAB COATS MUST BE WORN. LAUNDRY OR DRY-CLEAN WHEN SOILED. GLOVES AND GOGGLES RESISTANT TO CHEMICALS AND PETROLEUM DISTILLATES REQUIRED. WHEN HANDLING LARGE QUANTITIES, IMPERVIOUS SUITS, GLOVES, AND RUBBER BOOTS MUST BE WORN.

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## SECTION XI

## ENVIRONMENTAL PROTECTION

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SPILL OR LEAK PROCEDURES: VENTILATE THE AREA. AVOID BREATHING VAPOR. USE SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED AIR FOR LARGE SPILLS OR CONFINED AREAS. CONTAIN SPILL IF POSSIBLE. WIPE UP OR ABSORB ON SUITABLE MATERIAL AND PICK UP WITH SHOVELS. DO NOT USE SAWDUST, WOOD CHIPS, OR OTHER CELLULOSIC MATERIALS TO ABSORB THE SPILL. PREVENT ENTRY INTO SEWERS AND WATERWAYS. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

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## 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. COPPER AND ALLOYS OF COPPER SHOULD NOT BE USED AS THEY ARE QUICKLY CORRODED BY THE PRODUCT.

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## SECTION XIII

## TRANSPORTATION REQUIREMENTS

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DEPARTMENT OF TRANSPORTATION CLASSIFICATION:

HAZARD CLASS: 8 -- CORROSIVE LIQUID

PACKING GROUP: III

IDENTIFICATION NUMBER: UN 1760

LABEL REQUIRED: CORROSIVE

D.O.T. PROPER SHIPPING NAME: CORROSIVE LIQUID, N.O.S., (POLYOXYPROPYLENEDIAMINE AND NONYLPHENOL) MARINE POLLUTANT, 8, PG III, UN 1760

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## SECTION XIV

## OTHER REGULATORY CONTROLS

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NOT MEANT TO BE ALL-INCLUSIVE. SELECTED REGULATIONS PRESENTED.

A. SARA TITLE III SECTION 311/312: IMMEDIATE HEALTH HAZARD.

B. WHMIS CLASSIFICATION: CLASSES D1B, D2, D2B, E

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C.	TSCA STATUS:	LISTED ON TSCA INVENTORY
D.	OSHA HAZARD COMM. STD.:	HAZARDOUS CHEMICAL

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SECTION XV	STATE REGULATORY INFORMATION
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NONYLPHENOL:	CA, FL, MA, PA
TRIETHANOLAMINE:	FL, MA, PA, RI
PIPERAZINE:	FL, MA, NJ, PA
N-AMINOETHYLPIPERAZINE:	CT, FL, MA, NJ, PA

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.

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SECTION XVI	SPECIAL NOTES
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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.

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REPAIRED BY: MILAMAR COATINGS, INC.  
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