

PRODUCT NAME: **PM-301 PART B HARDENER**

PAGE: 1

MATERIAL SAFETY DATA SHEET

24 HOUR EMERGENCY ASSISTANCE

CHEM•TEL: 1-800-255-3924

HEALTH: 3

FIRE: 1

REACTIVITY: 0

GENERAL ASSISTANCE

TELE-TECH: 405-755-8448

HAZARD RATING

LEAST = 0 SLIGHT = 1 MODERATE = 2

HIGH = 3 EXTREME = 4

SECTION I

PRODUCT: PM-301 PART B HARDENER

CHEMICAL NAME: MIXTURE

CHEMICAL FAMILY: AMINE

PRODUCT DESCRIPTION: EPOXY CURING AGENT

SECTION II-A

PRODUCT / INGREDIENT

<u>NO.</u>	<u>COMPOSITION</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>
1	NONYLPHENOL	25154-52-3	***
2	BENZYL ALCOHOL	100-51-6	***
3	ISOPHORONE DIAMINE	2855-13-2	***
4	PHENOL	108-95-2	***
5	TRIMETHYLHEXAMETHYLENEDIAMINE	25620-58-0	***
*** THE SPECIFIC CHEMICAL IDENTITY AND/OR PROPORTION OF THESE COMPONENTS IS CONSIDERED TRADE SECRET INFORMATION.			

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	1.600 g/kg (rat)	>200 mg/kg (rabbit)	Not available
2	Not available	Not available	Not available
3	Not available	Not available	Not available
4	28 g/kg (rat)	Not available	Not available
5	384 – 1000 g/kg (rat)	850 – 2000 g/mg (rat)	74mg/m3 (rat)

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: CORROSIVE TO THE EYES AND MAY CAUSE SEVERE DAMAGE WHICH MAY RESULT IN PERMANENT IMPAIRMENT OF VISION, EVEN BLINDNESS. VAPORS MAY BE IRRITATING.

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

INHALATION: MAY CAUSE RESPIRATORY SENSITIZATION IN SUSCEPTIBLE INDIVIDUALS. VAPORS OR MISTS MAY BE CORROSIVE TO THE UPPER RESPIRATORY TRACT. REPEATED EXPOSURE MAY RESULT IN LUNG DAMAGE.

INGESTION: ACUTELY TOXIC. CORROSIVE AND MAY CAUSE SEVERE AND PERMANENT DAMAGE TO MOUTH, THROAT, AND STOMACH. ASPIRATION MAY OCCUR DURING SWALLOWING OR VOMITING, RESULTING IN LUNG DAMAGE.

PRODUCT NAME: **PM-301 PART B HARDENER**

PAGE: 2

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: SEE SECTION VI FOR SUPPLEMENTAL HEALTH INFORMATION.

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		0.1 mg/M ³ (skin)*	0.1 mg/M ³ (skin)**		
3	None established				
4	None established				
5	None established				
	* The skin notation indicates the substance may be absorbed through the skin, mucous membranes, or eyes, by direct or airborne exposure, and suggests that appropriate measures be taken to prevent such absorption so that the exposure limit is not invalidated.				
	** Ceiling limit.				

SECTION V		EMERGENCY AND FIRST AID PROCEDURES	
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EYE CONTACT: REMOVE CONTACT LENSES AT ONCE. IMMEDIATELY FLUSH EYES FOR AT LEAST 15 MINUTES WITH RUNNING WATER. HOLD EYELIDS APART TO ENSURE RINSING OF THE ENTIRE EYE SURFACE AND LIDS WITH WATER. IF PHYSICIAN IS NOT AVAILABLE, FLUSH FOR AN ADDITIONAL 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.

SKIN CONTACT: FOR SKIN CONTACT, UNDER A SAFETY SHOWER, IMMEDIATELY REMOVE CLOTHING AND SHOES. WASH AFFECTED AREAS THOROUGHLY WITH LARGE AMOUNTS OF WATER, AND SOAP IF AVAILABLE, FOR AT LEAST 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION. DISCARD OR DECONTAMINATE CLOTHING BEFORE RE-USE AND DESTROY CONTAMINATED SHOES.

INHALATION: IF INHALED, REMOVE FROM AREA TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION. IF BREATHING IS DIFFICULT, TRANSPORT TO MEDICAL CARE AND, IF AVAILABLE, GIVE SUPPLEMENTAL OXYGEN.

INGESTION: DO NOT INDUCE VOMITING. IF PATIENT IS CONSCIOUS AND CAN SWALLOW, GIVE 3 -4 GLASSES OF WATER (16 oz). IF VOMITING OCCURS GIVE FLUIDS AGAIN. 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.

SECTION VI		SUPPLEMENTAL HEALTH INFORMATION	
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CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.
SOME AROMATIC AMINES ARE KNOWN TO PRODUCE METHEMOGLOBINEMIA AND CANCER OF THE URINARY TRACT. OTHER TOXIC EFFECTS INCLUDE HEMATURIA, CYSTITIS, AND ANEMIA. IT HAS BEEN GENERALLY KNOWN THAT ALIPHATIC AMINES CAN CAUSE CHANGES IN THE LUNGS, LIVER, KIDNEYS, AND HEART.

SECTION VII		PHYSICAL DATA	
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BOILING POINT (°F):	> 200°C	SPECIFIC GRAVITY (H ₂ O = 1):	1 @25°
VAPOR PRESSURE (mm Hg @ 20°C):		Not established	
SOLUBILITY (IN WATER):	MISCIBLE	VAPOR DENSITY (AIR = 1):	> 1

PRODUCT NAME: **PM-301 PART B HARDENER**

PAGE: 3

EVAPORATION RATE (N-BUTYL ACETATE = 1): > 1

APPEARANCE AND ODOR: Clear, light yellow, liquid with ammonia-like odor.

SECTION VIII

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD: > 200 °F (SETAFLASH)

FLAMMABLE LIMITS /% VOLUME IN AIR: Not established

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL, WATER SPRAY

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS: USE A POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES, AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: DELAYED LUNG DAMAGE (PULMONARY EDEMA) CAN BE EXPERIENCED AFTER EXPOSURE TO COMBUSTION PRODUCTS, SOMETIMES HOURS AFTER THE EXPOSURE. HAZARDOUS COMBUSTION PRODUCTS MAY INCLUDE INTENSE HEAT, DENSE BLACK SMOKE, CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES, NITROGEN CONTAINING ORGANIC COMPOUNDS, AND HYDROCARBON FRAGMENTS.

SECTION IX

REACTIVITY

STABILITY: STABLE UNDER NORMAL CONDITIONS OF HANDLING.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

CONDITIONS AND MATERIALS TO AVOID: AVOID EXPOSURE TO HEAT, LIGHT FLAME OR OTHER SOURCES OF IGNITION. REACTS WITH STRONG OXIDIZING AGENTS AND ACIDS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, ALDEHYDES, NOTROGEN OXIDES.

SECTION X

EMPLOYEE PROTECTION

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. LAUNDER 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.

SECTION XI

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES: **DANGER -- CORROSIVE!** PREVENT ALL BODILY CONTACT WITH SPILLED MATERIAL. VENTILATE THE AREA. AVOID BREATHING VAPOR. USE SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED AIR FOR LARGE SPILLS OR CONFINED AREAS. SHUT OFF LEAK ONLY IF SAFE TO DO SO. ELIMINATE POTENTIAL FIRE HAZARDS. DIKE AND CONTAIN SPILL IF POSSIBLE. REMOVE WITH VACUUM TRUCK OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIAL AND PICK UP WITH SHOVELS. PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL. 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.

SECTION XII**SPECIAL PRECAUTIONS**

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. HEATING THIS CURING AGENT IN THE PRESENCE OF AIR MAY CAUSE THERMAL AND OXIDATIVE DECOMPOSITION. WITH SOME EPOXY RESINS, IT MAY PRODUCE EXOTHERMIC REACTIONS WHICH IN LARGE MASSES CAN CAUSE RUNAWAY POLYMERIZATION AND CHARRING OF THE REACTANTS. FUMES AND VAPORS FROM THESE THERMAL AND CHEMICAL DECOMPOSITIONS VARY WIDELY IN COMPOSITION AND TOXICITY. DO NOT BREATHE FUMES. USE A NIOSH-APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER EXPOSURE.

SECTION XIII**TRANSPORTATION REQUIREMENTS****DEPARTMENT OF TRANSPORTATION CLASSIFICATION:**

HAZARD CLASS: 8

PACKING GROUP: III

IDENTIFICATION NUMBER: UN 2289

LABEL REQUIRED: CORROSIVE

D.O.T. PROPER SHIPPING NAME: ISOPHORONEDIAMINE MIXTURE, N.O.S.
(TRIMETHYLHEXAMETHYLENEDIAMINE AND NONYLPHENOL)
MARINE POLLUTANT, 8, PG III, UN 2289

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

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| A. | SARA TITLE III SECTION 311/312: | IMMEDIATE HEALTH |
| B. | WHMIS CLASSIFICATION: | NOT AVAILABLE |
| C. | TSCA STATUS: | LISTED ON TSCA INVENTORY |
| D. | OSHA HAZARD COMM. STD.: | HAZARDOUS CHEMICAL |

SECTION XV**STATE REGULATORY INFORMATION**

NONYLPHENOL: CA, FL, MA, PA

M-XYLENE DIAMINE: FL, IL, LA, MA, MN, NJ, PA, RI

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****UPDATED 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 UPDATED: OCTOBER 5, 2011

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