PAGE: 1

MATERIAL SAFETY DATA SHEET

MILAMAR COATINGS, INC. 311 NW 122ND ST, STE 100 OKLAHOMA CITY, OK 73114

24 HOUR EMERGENCY ASSISTANCE GENERAL ASSISTANCE

CHEM•TEL: 1-800-255-3924 TELE-TECH: 405-755-8448

HEALTH: 3 HAZARD RATING

Fire: 1 Least = 0 Slight = 1 Moderate = 2

REACTIVITY: 1 HIGH = 3 EXTREME = 4

SECTION I

PRODUCT: PM-250V EPOXY WALL SYSTEM COATING, PART B

CHEMICAL NAME: MIXTURE
CHEMICAL FAMILY: AMINE

PRODUCT DESCRIPTION: EPOXY CURING AGENT

SECTION II-A		PRODUCT / INGREDIENT		
No.	COMPOSITION	CAS Number	<u>Percent</u>	
1	NONYLPHENOL	25154-52-3	30-50%	
2	POLYOXYPROPYLENEDIAMINE	9046100	40-60%	
3	AMORPHOUS SILICA	112945-54-5	0-10%	

SECTION II-B		ACUTE TOXICITY DATA	
No.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
1	$1.600\mathrm{G/KG}$ (RAT)	>200mg/kg (rabbit)	NOT AVAILABLE
2	2.885 g/kg (rat)	2.980 G/KG (rabbit)	0/6 deaths (rabbit); 7 hrs.
3			

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: 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, DROWSINESS, ANESTHESIA, NARCOSIS, UNCONSCIOUSNESS, AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS, INCLUDING DEATH.

INGESTION: 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.

PAGE: 2

SECTION IV OC		CCUPATIONAL EXPOSURE LIMITS		ΓS	
	OSH	A	ACG	IH	OTHER
No.	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
1	None establish	hed			
2		0.1 mg/M3 (skin)	0.1 mg/M3 (sk	in)**	
3	None establish	ned			
4	None establish	hed			
5	None establish	ned			
*	the skin notation indicates the stbstance may be absorbed through the skin, mucous membranes, or				
	eyes, by direct or airborne expoisure, and suggests that apporiate measures be taken to prevent such that				
	the exposure l	imit is not invalidated.			
**	Ceiling limit.				

SECTION V

EMERGENCY AND FIRST AID PROCEDURES

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 <u>AT LEAST 15 MINUTES</u> 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. N-BUTANOL IS ESPECIALLY TOXIC IF ASPIRATED. THE VAPORS APPEAR TO CAUSE A SPECIAL VACUOLAR KERATOPATHY IN HUMANS. NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT.

SECTION VI

SUPPLEMENTAL HEALTH INFORMATION

CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.

SECTION VII	PHYSI	CAL DATA
BOILING POINT (°F):	>450	SPECIFIC GRAVITY ($H_2O = 1$): 0.976
VAPOR PRESSURE (mm Hg @ 20°C):		Not established
SOLUBILITY (IN WATER):	Partially soluble	Vapor Density (Air = 1): > 1
EVAPORATION RATE (N-BUTYL A	CETATE $= 1$):	Not established
APPEARANCE AND ODOR:		Clear colorless liquid with ammonia-like odor.

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD: 310 F

FLAMMABLE LIMITS /% VOLUME IN AIR: NOT ESTABLISHED

PAGE: 3

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, CARBON MONOXIDE, CARBON DIOXIDE, AND HYDROCARBON FRAGMENTS.

SECTION IX REACTIVITY

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.

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: 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.

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.

PAGE: 4

SECTION XIII TRANSPORTATION REQUIREMENTS

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

SECTION XIV OTHER REGULATORY CONTROLS

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

A. SARA TITLE III SECTION 311/312: IMMEDIATE HEALTH, DELAYED HEALTH, FIRE HAZARDS

B. WHMIS CLASSIFICATION: NOT AVAILABLE

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

SECTION XV STATE REGULATORY INFORMATION

N-BUTANOL: MA. PA

NONYLPHENOL: CA, FL, MA, 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.

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 PREPARED: OCTOBER 5, 2011 PREPARED BY: MILAMAR COATINGS, INC.

311 NW 122ND ST, STE 100 OKLAHOMA CITY, OK 73114