

**MATERIAL SAFETY DATA SHEET**

PRODUCT

NAME:

EX-88

HARDENER

Page 1 of 2

PRODUCT CLASS: CLEAR EPOXY HARDENER D.O.T. SHIPPING INFORMATION:

PRODUCT #: 01188, 01188C, 01288, 01288C, 01287, 01183      PROPER SHIPPING NAME: CORRISIVE LIQUID, N.O.S.

(CONTAINS NONYL PHENOL & N-AMINOETHYLPIPERAZINE)

**SECTION I**

ENVIRONMENTAL TECHNOLOGY, INC.  
300 SOUTH BAY DEPOT ROAD  
FIELDS LANDING, CA 95537  
PHONE NUMBER FOR INFORMATION: (707) 443-9323  
PHONE NUMBER:  
424-9300  
DATE PREPARED: 10-05-31

PROPER HAZARD CLASS: CLASS 8  
PROPER I.D. #: UN-1760  
PACKAGING GROUP: III  
LIMITED QUANTITY (PER 173.154)  
TRANSPORTATION EMERGENCY  
**CHEMTREC (800)**

PREPARED BY: TECHNICAL DEPARTMENT

**SECTION II Hazardous Ingredients/Identity Information**

HAZARDOUS COMPONENTS	CAS REG.NO.	APPRO X WT.%	ACGIH TWA/TL V	OSHA PEL	VAPOR PRESSURE mm Hg
NONYL PHENOL	84852-15-3	T/S	N/E	N/E	<1
N-AMINOETHYLPIPERAZINE	140318	T/S	N/E	N/E	0.05
POLYOXYALKYLENEAMINES	T/S	T/S	N/E	N/E	N/E

Although no exposure standards have been established for this product, air contaminant concentrations must be maintained at lowest possible levels. T/S = TRADE SECRET    N/A = NOT AVAILABLE    N/E = NOT ESTABLISHED

**SECTION III - Physical/Chemical Characteristics**

BOILING RANGE °F	>400 °	PERCENT VOLATILE BY VOLUME		T/S
MELTING OR FREEZING POINT	N/E	PERCENT VOLATILE BY WEIGHT		T/S
VAPOR DENSITY (AIR=1)	>1	EVAPORATION RATE (SLOWER THAN ETHER)	LBS./GAL	8.1
SOLUBILITY IN WATER: SLIGHT			VOC LBS/GAL	T/S
APPEARANCE AND ODOR: CLEAR, SLIGHTLY YELLOW, SOMEWHAT VISCOUS SOLUTION WITH TYPICAL AMINE ODOR (SOMEWHAT FISHY)			VOC GRAMS/LITER	T/S

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED): >200°F PMCC      FLAMMABLE LIMITS: LEL: N/E    UEL: N/E

EXTINGUISHING MEDIA:  X  FOAM  X  ALCOHOL FOAM  X  CO<sub>2</sub>  X  DRY CHEMICAL  X  WATER SPRAY   OTHER

SPECIAL FIRE FIGHTING PROCEDURES: USE NIOSH APPROVED PROTECTIVE CLOTHING INCLUDING POSITIVE PRESSURE SELF CONTAINED BREATHING APPARATUS(SCBA). COOL UNOPENED CONTAINERS WITH WATER SPRAY. UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE EXPECTED

**SECTION V - REACTIVITY DATA**

STABILITY   UNSTABLE  X  STABLE / CONDITIONS TO AVOID:

MATERIAL SAFETY DATA SHEET  
NAME: EX-88

PRODUCT  
Page 2 of 2

HARDENER

INCOMPATIBILITY (MATERIALS TO AVOID): ACIDS OR POLYMERS REACTIVE WITH AMINES  
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: BURNING PRODUCT WILL EMIT TOXIC OXIDES  
OF CARBON AND NITROGEN.

HAZARDOUS POLYMERIZATION MAY OCCUR MAY NOT OCCUR. CONDITIONS TO AVOID:  
AVOID PRODUCT CONTAMINATION.

**SECTION VI - HEALTH HAZARD DATA**

ROUTE(S) OF ENTRY: INHALATION? YES SKIN? YES INGESTION? NOT LIKELY

HEALTH HAZARDS (ACUTE AND CHRONIC): DANGER - MATERIAL IS CORROSIVE AND COULD SEVERELY BURN SKIN, EYES, RESPIRATORY TRACT, AND LUNGS IF ASPIRATED. COULD CAUSE BLINDNESS OR DEATH IF SWALLOWED.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO  
SIGNS AND SYMPTOMS OF EXPOSURE: IRRITATION OF EYES, SKIN AND RESPIRATORY SYSTEM. CAUSES PAIN IN EXPOSED AREAS; BLISTERS MAY FORM, ABDOMINAL AND DIGESTIVE TRACT PAIN IF SWALLOWED.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: PRE-EXISTING SKIN AND/OR RESPIRATORY PROBLEMS COULD BE WORSENER BY EXPOSURE TO THIS PRODUCT.

EMERGENCY AND FIRST AID PROCEDURES: FLUSH EYES WITH RUNNING WATER AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING; WASH SKIN WITH WARM, SOAPY WATER, THEN RINSE WELL. IF INGESTED, DO NOT INDUCE VOMITING. FOR ANY SIGNIFICANT EXPOSURE, CONTACT A POISON CONTROL CENTER IMMEDIATELY.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: VENTILATE AREA. WEAR PROTECTIVE CLOTHING AND NIOSH APPROVED RESPIRATOR. DIKE AND CONTAIN SPILL. SPREAD ABSORBENT MATERIAL. KEEP SPECTATORS AWAY.

WASTE DISPOSAL METHOD: NOT A RCRA HAZARDOUS WASTE AS SUPPLIED; USER MUST DETERMINE RCRA STATUS AT TIME OF DISPOSAL. LANDFILL OR INCINERATE IN ACCORDANCE WITH EXISTING FEDERAL, STATE, AND LOCAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: STORE IN COOL DRY AREA, AWAY FROM STRONG OXIDANTS, HEAT OR IGNITION SOURCES. ALWAYS KEEP CONTAINERS CLOSED. DO NOT GET ON SKIN OR BREATHE VAPORS.

OTHER PRECAUTIONS: CLEAN UP ANY SPILLS IMMEDIATELY. WASH ANY AREAS OF BODY CONTACT IMMEDIATELY.

**SECTION VIII - CONTROL MEASURES**

RESPIRATORY PROTECTION (SPECIFY TYPE): NIOSH APPROVED TO PREVENT INHALATION OF VAPORS; IF VENTILATION IS INADEQUATE, SCBA MAY BE REQUIRED.

VENTILATION: LOCAL EXHAUST: IF REQUIRED. SPECIAL VENTILATION MUST BE ADEQUATE TO AVOID BREATHING VAPORS.

USE IN SEALED EQUIPMENT AS MUCH AS POSSIBLE. MECHANICAL (GENERAL): REQUIRED

PROTECTIVE GLOVES: NEOPRENE OR RUBBER EYE PROTECTION: SAFETY GOGGLES

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: TO AVOID ALL SKIN CONTACT, WEAR A PROTECTIVE APRON AND AVOID FOOT CONTACT.

WORK/HYGIENIC PRACTICES: WASH AT END OF WORK SHIFT, BEFORE EATING, SMOKING OR USING RESTROOM. DO NOT RE-USE CONTAMINATED CLOTHING.

MATERIAL SAFETY DATA SHEET

PRODUCT

NAME:

EX-88

HARDENER

Page 4 of 2

REGULATORY INFORMATION: THIS PRODUCT IS REGULATED UNDER SARA TITLE III SECTION 311 AS ACUTELY HAZARDOUS.

All information, recommendations, and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity, and suitability for his or her own use of the product described herein. Since the actual use by others is beyond Environmental Technology, Inc.'s control, no guarantee, expressed or implied, is made by Environmental Technology, Inc. as to the effects of such use, the results to be obtained, or the safety and toxicity of the product.