

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: EX-74 HARDENER
 PRODUCT CLASS: CLEAR HARDENER, FOR EPOXY RESIN SYSTEM
 PRODUCT

NUMBER	PART	DESCRIPTION
12025	H	16 FL. OZ. (473 ml)
23500	H	128 FL. OZ. (3.79 L)
9800532	H	16 OZ FL OZ (473 ml)

SECTION I - MANUFACTURER IDENTIFICATION

ETI
 ENVIRONMENTAL TECHNOLOGY, INC.
 300 SOUTH BAY DEPOT ROAD
 FIELDS LANDING, CA 95537
 PHONE NUMBER FOR INFORMATION: (707) 443-9323
 DATE PREPARED: 12-05-25
 PREPARED BY: Technical Group

DEPARTMENT OF TRANSPORTATION INFORMATION:
 PROPER SHIPPING NAME: Corrosive Liquid, N.O.S.
 PROPER HAZARD CLASS: Class 8
 PROPER ID#: UN-1760
 PACKAGING GROUP: III
 LIMITED QUANTITY (PER 173.154)

TRANSPORTATION EMERGENCY PHONE NUMBER:
CHEMTREC (800) 424-9300

HMIS HAZARD RATINGS: HEALTH: 3 FIRE: 1 REACTIVITY: 0 PERSONAL PROTECTION: X

N.A. = Not Applicable N.D. = Not Determined (Not Available) N.E. = Not Established T.S. = Trade Secret

This MSDS is prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200). Proprietary ingredients are considered to be trade secrets of Environmental Technology, Inc. Identities of proprietary ingredients will be made available following the procedures specified in the trade secret section of this standard.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Ingredients which are hazardous chemicals, according to OSHA (29 CFR 1910.1200), are listed at 1% or above. Carcinogen are listed when at 0.1% or greater. These ingredients are subject to SARA, Title III, sections 311 and 312.

Item #)	Chemical Name	CAS #	Wt. %	TLV-TWA	ACGIH		OSHA		29 CFR 1910.1200	
					PEL-TWA	Vapor Pressure	Hazard Class			
1).	Nonyl phenol		84852-15-3	T.S.	N.E.	N.E.	<1 mm Hg @68°F	Corrosive		
2).	Polyoxyalkyleneamines-mixture of		T.S.	T.S.	N.E.	N.E.	<1 mm Hg @68°F	Corrosive		

Notes: No OSHA or ACGIH exposure guideline limits have been established for this product or its individual ingredients. Air contaminant concentrations must be maintained at lowest possible levels.
 No Toxic Chemicals subject to reporting requirements of SARA section 313 Title III and 40 CFR Part 372. No Hazardous Substances subject to **CERCLA**, and SARA, Title III, section 304 spill reporting.
 Ingredients known to the State of California to cause cancer or to cause birth defects or other reproductive harm: None
CANCER INFORMATION: See Section VI, CARCINOGENICITY.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

MELTING POINT °F: N.D.
 BOILING RANGE: IBP 432°F (222°C) (IBP = Initial Boiling Point)
 APPEARANCE AND ODOR: Clear slight yellow, slightly viscous liquid with a slight ammonia like odor.
 SOLUBILITY IN WATER: Slight.
 EVAPORATION RATE (BUTYL ACETATE =1): N.A.
 PERCENT SOLIDS BY VOLUME: 100
 VOC GRAMS/LITER: 0
 PERCENT VOLATILE BY VOLUME: 0 %
 VAPOR DENSITY (AIR =1): N.A.
 SPECIFIC GRAVITY: 0.972 g/cc

VOC LBS/GAL: 0
 PERCENT VOLATILE BY WEIGHT: 0 %
 VAPOR PRESSURE (mm Hg @68°F): <1
 DENSITY: 8.0 LBS./ GAL.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): 212°F, (PMCC).
 FLAMMABLE LIMITS IN AIR BY VOLUME: LEL: N.D. UEL: N.D.
 AUTO IGNITION TEMPERATURE, °F: N.D.
 EXTINGUISHING MEDIA: **X** FOAM, **X** ALCOHOL FOAM, **X** CO2, **X** DRY CHEMICAL, **X** WATER SPRAY, **X** OTHER (HALON).
SPECIAL FIRE FIGHTING PROCEDURES: If product is present in the fire and the threat of decomposition exist, wear self contained positive pressure breathing apparatus with full face piece. Water spray may be ineffective. However, water spray may be used to cool containers exposed to heat or fire.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture when exposed to extreme heat or fire.
 Some curing agents when mixed with epoxy resins in large masses can produce vigorous exothermic reactions with considerable heat which may char the reactants, and release fumes and vapors from the thermal decomposition.

SECTION V - REACTIVITY DATA

STABILITY: UNSTABLE **X** STABLE

CONDITIONS TO AVOID: Strong oxidizing chemicals, strong mineral and organic acids, sustained direct open flames and hot surfaces. When product is mixed with Part A and left in a large mass a vigorous exothermic reaction may occur, and may result in charring of the reactants. Read and follow all instructions. Do not add nitrites, may form suspected cancer causing nitrosamines.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon monoxide, carbon dioxide, phenol, ammonia, oxides of nitrogen, and various amine containing compounds. Irritating aldehydes and ketones may be formed on burning in limited air supply.

HAZARDOUS POLYMERIZATION: MAY OCCUR X MAY NOT OCCUR.

CONDITIONS TO AVOID UNCONTROLLED POLYMERIZATION: N.A.

SECTION VI - HEALTH HAZARD DATA

The health effects noted below are consistent with requirements under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

HEALTH HAZARD WARNING STATEMENTS:

DANGER! CORROSIVE, AVOID CONTACT WITH EYES AND SKIN. CAUSES EYE AND SKIN BURNS. HARMFUL IF ABSORBED THROUGH THE SKIN. DO NOT TAKE INTERNALLY. HARMFUL OR FATAL IF SWALLOWED. ASPIRATION HAZARD IF SWALLOWED- CAN ENTER LUNGS AND CAUSE DAMAGE. USE ONLY IN ADEQUATE VENTILATED AREAS. AVOID BREATHING VAPORS OR MIST. CAUSES MUCOUS MEMBRANE AND RESPIRATORY TRACT IRRITATION. DO NOT ADD NITRITES-MAY FORM SUSPECTED CANCER CAUSING NITROSAMINES. KEEP AWAY FROM CHILDREN. WASH WITH SOAP AND WATER AFTER USE.

ROUTE(S) OF ENTRY: INHALATION, SKIN CONTACT, EYE CONTACT, INGESTION.

SIGNS AND SYMPTOMS OF OVEREXPOSURE :

INHALATION: Irritation, coughing, nasal discharge, with possible breathing difficulties. Possible blurred or hazy vision.
SKIN CONTACT: Irritation with pain, redness and swelling with chemical burns.
EYE CONTACT: Irritation with pain, redness, and eye watering with chemical burns. Severe eye damage may cause blindness.
INGESTION: Irritation with pain to mouth, throat, abdominal and chest. Nausea, vomiting, diarrhea, thirst, weakness, and collapse. Aspiration (liquid enters the lungs) of vomit can cause lung damage.

EMERGENCY AND FIRST AID PROCEDURES :

Never give anything by mouth to an unconscious or convulsing person.

EYE CONTACT: Remove any contact lenses and flush for 15 minutes with potable water. Hold eyelids open to assure complete flushing. Do not attempt to neutralize with chemical agents. CALL A PHYSICIAN IMMEDIATELY. Repeat 15 minute water flush if medical attention is not immediately available.

SKIN CONTACT: Remove contaminated clothing/shoes and wipe excess from skin. Flush skin with water for 15 minutes. Do not attempt to neutralize with chemical agents. DO NOT USE SOLVENTS TO REMOVE HARDENER

FROM SKIN. Follow by washing with soap and water. GET MEDICAL ATTENTION. Do not reuse clothing until cleaned. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.

INHALATION: Leave the area to obtain fresh air. If breathing has stopped, give artificial respiration then oxygen if needed. If difficulty breathing or other symptoms continue, CALL A PHYSICIAN IMMEDIATELY

INGESTION: DO NOT INDUCE VOMITING, THIS MATERIAL IS CORROSIVE. If patient is conscious, give two glasses, (12-16 oz.) of water for dilution effect only. Do not induce vomiting. If vomiting occurs, give water again. CALL A PHYSICIAN IMMEDIATELY, or the Poison Control Center. Do not give anything by mouth to an unconscious or convulsing person.

IF ANY SYMPTOMS PERSIST CONTACT A PHYSICIAN

HEALTH HAZARD, ACUTE:

INHALATION: Inhalation of vapors may cause irritation to the respiratory tract. Prolonged or repeated exposure may cause lung damage.

SKIN CONTACT: Irritation, tissue damage, and dermatitis. Skin absorption may cause other adverse effects listed.

EYE CONTACT: Primary irritant. Cornea damage possible. Severe eye damage may cause blindness.

INGESTION: Irritation to gastrointestinal tract. Severe ulceration, inflammation, and possible perforation of the upper alimentary tract, with hemorrhage and fluid loss. Aspiration (liquid enters the lungs) of vomit can cause lung damage.

HEALTH HAZARDS, CHRONIC, (TARGET ORGANS): Repeated skin contact may cause persistent irritation or dermatitis. Repeated inhalation may cause lung damage.

CARCINOGENICITY: For hazard communication purposes under OSHA standard 29 CFR part 1910.1200. None of the products ingredients is found on the following lists.

NTP: No IARC: No Federal OSHA: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Persons with pre-existing lung disorders may be more susceptible to irritating effects. Pre-existing skin and eye disorders may be aggravated by exposure to this product.

SECTION VII -SPILL, LEAK, AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Evacuate area. Eliminate sources of ignition. May burn although not readily ignitable. Use Protective equipment and respiratory protection as stated in Section VIII. Contain liquid or contaminated wash water spills using a barrier of inert material such as sand or by diking the area. Absorb spilled or contaminated wash water with an inert material. Scoop or shovel absorbed material into containers for disposal. Prevent spilled product or contaminated wash water from entering drinking water supplies, streams, or sewers. Certain releases of any substance to the environment are prohibited by law and may require reporting to an environmental agency.

WASTE DISPOSAL METHOD: This product does not meet criteria of a hazardous waste under RCRA if discarded as this product is supplied. Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether product meets RCRA criteria for hazardous waste. No disposal method should be used which would pose an environmental or human health threat including any which would contaminate ground or surface waters. Dispose of waste in accordance with local, state, and federal regulations. **Canada:** Dispose of waste in accordance with local, provincial and national regulations.

SECTION VIII- PRECAUTIONS FOR SAFE HANDLING AND USE

PRECAUTIONS: USE ONLY IN VENTILATED AREAS. Minimum feasible handling temperatures should be maintained. Hardener, Part H recommended handling temperature is 68°F or below to reduce vapors and maintain working time. This material should be confined as far as possible within sealed or covered equipment in which case normal ventilation should be adequate. To avoid breathing vapors during mixing, application and the drying process use local exhaust ventilation or other means to provide fresh air, opening windows and doors to achieve cross-ventilation. Air contaminant concentrations must be maintained at lowest possible levels. Close container after use, and store in upright position in a cool, dry, and well ventilated area. Periods of exposure to high temperatures should be minimized. Water contamination should be avoided. If stored above 100°F, a nitrogen atmosphere is recommended.

OTHER PRECAUTIONS: "Empty" containers contain product residue (liquid and/ or vapor). Dispose of properly. Dust from sanding dry films should be treated as nuisance dust, TLV of 10 mg /Cu. meter.

MECHANICAL (GENERAL) VENTILATION: Provide sufficient mechanical ventilation to remove vapors. Since no limits have been established for this product or its individual ingredients, air contaminant concentrations must be maintained at lowest possible levels. The need for fume hoods, local exhaust, or spray booths should be considered for commercial operations.

SPECIAL VENTILATION: Local exhaust if necessary to ventilate spill area, or where product is heated.

RESPIRATORY PROTECTION: Respiratory protection is not ordinarily required in ventilated area. Respiratory protection is required in the absence of proper environmental control. Use an approved air purifying ORGANIC VAPOR RESPIRATOR, (type NIOSH/MSHA TC-23C), or positive pressure self-contained breathing apparatus, SCBA, when products are: used in confined or poorly ventilated areas, or at elevated temperatures.

PROTECTIVE GLOVES: Chemical impervious rubber or nitrile gloves are recommended. Avoid ALL skin contact.

EYE PROTECTION: Avoid contact with eyes. Approved safety glasses with splash guards or goggles are required.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Impervious clothing, foot ware, and synthetic apron to prevent skin contact are recommended. Provide nearby safety showers and eye washing (preferably full face) facilities.

WORK/HYGIENIC PRACTICES: Wash thoroughly after handling. Clean up spills. Wash contaminated clothes before reuse. Launder work clothes separate from family clothes. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. Check protective equipment and clothing before use.

Disclaimer: 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.