MATERIAL SAFETY DATA SHEET

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MSDS-0367
EPOXY CURING AGENT
REV DATE: 06/09/94

SECTION 1 - IDENTIFICATION

PRODUCT (TRADE) NAME: Epoxy Curing Agent*

CHEMICAL FAMILY: Amine

TRADE NAME SYNONYMS: Tetraethylenepentamine Blend

SUPPLIER: OMEGA ENGINEERING, INC.
P.O. BOX 4047
STAMFORD, CT 06907

TELEPHONE: (203) 359-1660

SHIPPING NAME (UN NUMBER PER TRANSPORTATION AUTHORITY): N/A

EMERGENCY RESPONSE TELEPHONE NUMBERS:

(800) 255-3924 (813) 979-0626

*** OMEGA Part No.** 0-88-3B

SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Ingredients/Identity Information	%	CAS Number
Tetraethylenepentamine	45	112-57-2
Aminoethyltriethylenetetramine	18	31295-46-2
Aminoethylpiperazinylethyl ethylenediamine	18	31295-54-2

SECTION 3-PHYSICAL DATA

BOILING POINT (°F): 482
MELTING POINT (°F): N/A
SPECIFIC GRAVITY (H2O = 1): 0.989–0.995
VAPOR PRESSURE (mm Hg): <1 @ 20°C
PERCENT VOLATILE BY VOLUME (%): 100
VAPOR DENSITY (Air = 1): 6.53
EVAPORATION RATE (Ethyl ether = 1): <0.001
SOLUBILITY IN WATER: Completely miscible
MATERIAL AT NORMAL CONDITION: Liquid
EXPANSION RATIO (LIQUID TO GAS): N/A
VISCOSITY: 5–10 cps
APPEARANCE AND ODOR: Amber liquid with an amine odor.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >310°F
FLASH POINT (METHOD USED): N/A
FLAMMABILITY LIMITS IN AIR (% BY VOL): LOWER: N/A UPPER: N/A
EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide

****** SPECIAL FIRE FIGHTING PROCEDURES ******

If not leaking, keep exposed containers cool with water spray to prevent rupture. High-pressure water may spread product from broken containers, increasing contamination or fire hazard. Prevent human exposure to fire, smoke, fumes, or combustion products; evacuate non-essential personnel. Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARD: N/A

SECTION 5 - HEALTH AND HAZARD DATA

THRESHOLD LIMIT VALUE: N/A
UNUSUAL CHRONIC TOXICITY: N/A
CARCINOGENICITY: N/A
ROUTES OF EXPOSURE: Principally skin contact and inhalationof vapors.

EFFECTS OF OVEREXPOSURE: Inhalation can cause respiratory irritation, dizziness, and respiratory failure. Prolonged skin contact can cause dermatitis and severe burns. Ingestion may produce abdominal pain, diarrhea, depression, and convulsions.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/A

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately flush with large amounts of water for 15 minutes. Hold eyelids apart to assure a thorough flushing. Do not attempt to neutralize any chemical. Obtain medical attention as soon as possible.

SKIN CONTACT: Flush affected areas with water for 15 minutes. Remove any contaminated clothing or shoes. Wash or discard clothing. Seek medical attention if irritation develops.

INHALATION: Remove from area. Seek medical attention if breathing is difficult. Oxygen may be delivered upon the advice of a physician. If not breathing, give artificial (mouth-to-mouth) respiration.

INGESTION: Do not induce vomiting. Give several glasses of water. If vomiting occurs, give more fluid. Have physician determine if condition of patient will permit evacuation of stomach.

SECTION 6 - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Excess heating over long periods of time can degrade resin (can autoignite at 572°F).

INCOMPATIBILITY (MATERIALS TO AVOID): Amines, oxidizing agents, strong bases.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

HAZARDOUS POLYMERIZATION: May occur with excess of hardener.

CONDITIONS TO AVOID: Excess hardener.

SECTION 7 -SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Anyone entering an area with high vapor content should use aself-contained air pack. Soak up liquid with a suitable absorbent, such as sawdust, clay, or oil absorber. Sweep up absorbed material and place in a chemical waste drum for disposal. Wash up area with detergent and water and flush area with water. Large spills should be diked and pumped into a drum for salvage or disposal. Residual may be removed with non-flammable solvents, such as methylene chloride.

WASTE DISPOSAL METHOD: Material that cannot be used should be disposed of in an EPA-authorized facility. Dispose of empty containers according to applicable regulations under the Resource Conservation and Recovery Act.

SECTION 8 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: If adequate ventilation is not available and vapor is being generated, use NIOSH-approved organic vapor respirators. If a higher level of protection is needed, a positive pressure air supply respirator is recommended.

VENTILATION: General mechanical ventilation is suggested in a closed area; local exhaust may be necessary for some operations.

PROTECTIVE GLOVES: Plastic or rubber gloves.

EYE PROTECTION: Chemical splash goggles.

OTHER PROTECTIVE EQUIPMENT: Protective apron/coveralls.

SECTION 9 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Containers should be stored in a cool, dry, well-ventilated area remote from flammable materials and sources of heat. Exercise caution to prevent damage to or leakage from containers.

VALVE CONNECTION: N/A

OTHER PRECAUTIONS: Use good hygienic practices. Remove and destroy contaminated clothes. Non-corrosive to steel. Some plastics may swell under exposure to material.

**** SECTION NOTES ****

HMIS RATING	HEALTH:	3
	FLAMMABILITY:	1
	REACTIVITY:	1
	SPECIAL HAZARDS:	3
NPFA RATING:	HEALTH:	3
	FLAMMABILITY:	1
	CONTACT:	1
	SPECIAL HAZARDS:	3