

TS-100 MSDS

HEALTH HAZARDS:

DATE ISSUED: 04/15/09

HEALTH: 2
FIRE: 1
REACTIVITY: 0
FLASH POINT: 245°F

METHOD USED: PMCC

PRODUCT NAME
HARDENER TS-100

COMMON CODE:

HAZARD MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS:
Plastic Material - Liquid NOIBN Not Restricted

CHEMICAL FAMILY
Epoxy Hardener - Formulated

FORMULA
Proprietary

HAZARDOUS INGREDIENTS

CAS #	% (optional)	CHEMICAL NAMES	TLV/PEL
112-24-3	---	Ethylene Amines	

KEY: --- LIMITS HAVE NOT BEEN ESTABLISHED

PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point: 260°C
Vapor Pressure: 20°C <1 mm Hg
Vapor Density (air=1) >1
Solubility in water: Moderate
Specific gravity (H₂O=1) 0.98
Percent volatile by volume (%): 0%
Evaporation rate: (=1): <0.01
Percent solid by weight (%): 100%
Appearance and odor: Light Straw Colored Liquid, Amine Odor
Analytical: 8.1 lbs/gal

FIRE AND EXPLOSION DATA

Flammable Limits:	LEL Not Established UEL Not established
Extinguishing Media:	Water, fog, foam, dry chemical, CO ₂
Special Fire Fighting Procedures:	Do not enter confined fire space without full protective gear including a positive pressure, self-contained, NIOSH approved breathing apparatus. Cool fire exposed container with water.
Unusual Fire and Explosion Hazard:	Container areas exposed to intense heat or flame should be cooled with H ₂ O to prevent pressure build-up and/or weakening of container structure.

REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Avoid high temperatures, open flames and unscheduled contact with curing agents.
Incompatibility: (Materials to Avoid)	Incompatible with strong oxidizing agents, strong acids and bases, secondary aliphatic amines and mercaptans.
Hazardous Decomposition Products:	Carbon dioxide (CO ₂) Carbon Monoxide (CO), by products may include oxides of nitrogen (NO _x) when burned.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Avoid mixing resin and hardener in uncontrollable quantities.

HEALTH HAZARD DATA

Chemical Listed as Carcinogen or Potential Carcinogen in NTP, IARC or OSHA 1910(Z)	This material is neither carcinogenic or potentially carcinogenic.
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EFFECTS OF OVEREXPOSURE

Skin Contact: Skin contact may result in irritation or chemical burn,

Eye Contact: Product can cause severe eye irritation, swelling and/or chemical burn. Contact lenses should not be worn when working with this material.

Inhalation: Vapor is irritating to the upper respiratory system and mucous membranes.

Ingestion: Liquid causes damage to mucous membrane if swallowed.

Primary Routes of Entry:

Inhalation: **Skin Contact** **Other (Specify)**

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove victim to fresh air.

Eyes: Flush eyes with generous amounts of water for a least 15 minutes. ***GET MEDICAL ATTENTION IMMEDIATELY.***

Skin: Immediately wash skin with soap and water. Wash contaminated clothing before reuse.

Ingestion: If swallowed do not induce vomiting. Give large amounts of water or mild if available. Call a physician. Treatment based on judgment of the physician in response to reactions of the patient.

OCCUPATIONAL EXPOSURE LIMITS

OSHA Permissible Exposure Limit: OSHA limits have not been established for this product.

ACGIH Threshold Limit Value: ACGIH limits have not been established for this product.

SPECIAL PROTECTION INFORMATION

Respiratory Protection:	Wear NIOSH approved respiratory protection where exposure limits are exceeded or in the absence of proper environmental control.
Ventilation:	Use only with adequate ventilation. Local exhaust is recommended. Mechanical exhaust can be used as a back up system.
Protective Gloves:	Chemical resistant gloves such as PVA.
Eye Protection:	NIOSH approved safety glasses or goggles with side shields.
Other Protective Clothing or Equipment:	Chemical resistant clothing as required to minimize skin contact.

SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:	Use cautious judgment when cleaning spills. Small spills may be collected with absorbent material , such as clay or sand. Large spills should be diked and contained with absorbent materials. Flush area with water spray to remove residue. Dispose of flush legally.
Waste Disposal Methods:	Dispose in accordance with local, state and federal regulations.

SPECIAL PRECAUTIONS

Precaution to be Taken in Handling and Storage:	Store at ambient temperatures in well ventilated area. Avoid sparks, open flames and extreme heat. Store separately from amine curing agents. Protect container from physical damage.
Other Precautions:	Container, even those that have been emptied, can contain product residues. Handle in accordance with good industrial practices. Avoid prolonged or repeated contact with skin. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminate clothing before use.

KEY ---- Limits have not been established

NA - Not Applicable

UI - Unavailable Information

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