

# MATERIAL SAFETY DATA SHEET

MSDS NUMBER: 405 H  
 T NUMBER: EC-405 Hardener  
 PRODUCT NAME: Epoxy Hardener EC-405

## SECTION I

MANUFACTURER: CASS Polymers of Michigan  
 ADDRESS: 815 West Shepherd St  
 Charlotte MI 48813  
 EMERGENCY TELEPHONE NUMBER: (800) 424-9300  
 INFORMATION TELEPHONE NUMBER: (248) 588-2270  
 DATE REVISED: 12/30/03

### HMIS RATINGS:

HEALTH: 3  
 FIRE: 1  
 REACTIVITY: 1

## SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CAS NUMBER	HAZARDOUS COMPONENT	OSHA PEL	ACGIH TLV	PERCENT
68991844	Fatty Amidoamine	NE	NE	40/60
140318	Piperazine 1 - (2-Aminoethyl)	NE	NE	10/15
84852-15-3	Nonyl Phenol	NE	NE	40/50

## SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT	ND	SPECIFIC GRAVITY(H <sub>2</sub> O = 1)	0.95
VAPOR PRESSURE(mm Hg.)	NA	MELTING POINT	NA
VAPOR DENSITY(AIR = 1)	NA	EVAPORATION RATE(Butyl Acetate = 1)	NA
SOLUBILITY IN WATER: Slight		%VOLATILE:	0%
APPEARANCE AND ODOR: Clear amber liquid with mild ammoniacal odor			
OTHER INFORMATION: NA			

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200°F PMCC	FLAMMABLE LIMITS:	LEL: NA	UEL: NA
EXTINGUISHING MEDIA: Water spray, CO <sub>2</sub> , alcohol foam, dry chemical			
SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus			
UNUSUAL FIRE FIGHTING PROCEDURES: May produce hazardous fumes and organic compounds			

## SECTION V - REACTIVITY DATA

STABILITY: Stable  
 INCOMPATIBILITY(MATERIALS TO AVOID): Strong oxidants, Acids, Nitriles  
 HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Oxides of Carbon and Nitrogen  
 HAZARDOUS POLYMERIZATION: Will not occur

## SECTION VI - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: Skin contact

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**SECTION VI - HEALTH HAZARD DATA(Continued)****HEALTH HAZARDS (ACUTE AND CHRONIC):**

This material contains polyethylene amines which are suspected mutagens.

Skin Contact: May cause skin sensitization or other allergic response.

Eye Contact: None known

Inhalation: None known

Ingestion: None known

SIGNS AND SYMPTOMS OF EXPOSURE: Redness and swelling of affected areas

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Dermatitis, Allergies

**EMERGENCY AND FIRST AID PROCEDURES:**

Skin: Wash thoroughly with soap and water and remove contaminated clothing if necessary

Eyes: Flush eyes immediately with water for 15 minutes, contact physician

Inhalation: Remove to fresh air if effects occur, contact physician

Ingestion: If swallowed, dilute with water, DO NOT INDUCE VOMITING, contact physician

OTHER HEALTH WARNINGS: ND

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

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Protective clothing and equipment must be worn by clean-up personnel.

Broadcast absorbent material, soak up, discard, and rinse with warm water. Avoid discharge into waterways and sewers.

WASTE DISPOSAL METHOD: Dispose in accordance with Federal, State and Local regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a dry area at room temperature. Avoid extreme temperatures and elongated storage times. Keep containers closed to prevent moisture absorption.

OTHER PRECAUTIONS: None known

**SECTION VIII - CONTROL MEASURES**

VENTILATION REQUIREMENTS: Local exhaust recommended, mechanical(general) required

PERSONAL PROTECTIVE EQUIPMENT: Respirator with organic vapors cartridge

Eyes: Safety goggles

Gloves: Chemical resistant rubber gloves

**SECTION IX - ADDITIONAL INFORMATION**

ADDITIONAL MANUFACTURER WARNINGS: When mixing materials, if they begin to exotherm or smoke, douse with water

OTHER PRECAUTIONS AND COMMENTS: NA

**SECTION X - REGULATORY INFORMATION**

TSCA: The ingredients of this product are listed on TSCA Inventory

CANADIAN REGULATION: WHMIS - D1B/D2A E - Corrosive

SARA TITLE 311/312: Health Hazard

SARA TITLE 313: Requirement for Reporting as Follows: NA

NOTE: To the best of our knowledge, the information contained herein is accurate. Final determination of the suitability of any material is the sole responsibility of the users. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.