

Dow Chemical U.S.A. Midland, MI 48674 Emergency Phone: 517-636-4400

PRODUCT NAME: ~~EPICHLOROHYDRIN~~ - E/U Product Code: 27447

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Effective Date: 11/19/85 Date Printed: 09/24/87

MSD: 000599

1. INGREDIENTS:

Epichlorohydrin, minimum

CAS# 000106-89-8 99%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: 241F, 116C

VAP PRESS: 13.0 mmHg @ 20C

VAP DENSITY: 3.2

SOL. IN WATER: 6.6% @ 25C, 77F

SP. GRAVITY: 1.173 @ 25/25C, 77F

APPEARANCE: Water-white liquid.

ODOR: Sweet, pungent odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 88F, 31C

METHOD USED: TCC

FLAMMABLE LIMITS

LFL: 3.8 Vol.%

UFL: 21.0 Vol.%

EXTINGUISHING MEDIA: Water fog, alcohol foam, CO2, dry chemical.

FIRE & EXPLOSION HAZARDS: Epichlorohydrin and hydrogen chloride vapors.

FIRE-FIGHTING EQUIPMENT: Wear full protective clothing.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Avoid two phase storage with water wherein a slow exothermic reaction may be initiated. Keep vapors away from possible ignition sources. An exotherm begins at 325C (617F).

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Acid, base, oxidizing material - such as: bleach and chlorine.

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4. REACTIVITY DATA: (CONTINUED)

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride.

HAZARDOUS POLYMERIZATION: Will occur with certain catalysts.
Avoid strong acids or bases.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Deluge with water. If available, use foam to smother or suppress fumes. Wear protective equipment, as recommended, during cleanings. Use only sand to absorb spills. Do not use clay based absorbants such as Millsorb, Drierite, or Absorb-n-Dri.

DISPOSAL METHOD: Burn in flare equipped with hydrogen chloride scrubber; dilute any effluent water to very low concentration for disposal. Consult with local, state, and federal officials.

6. HEALTH HAZARD DATA:

EYE: May cause moderate irritation with corneal injury. Effects may be delayed.

SKIN CONTACT: Likely to cause an allergic skin reaction.

SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts. Repeated skin exposure may result in absorption of harmful amounts. The LD50 for skin absorption in rabbits is 515 mg/kg.

INGESTION: Single dose oral toxicity is moderate. The oral LD50 for male rats is 282 mg/kg and for female rats is 175 mg/kg. Amounts ingested incidental to industrial handling are not likely to cause injury; however ingestion of larger amounts could cause serious injury, even death.

INHALATION: Excessive vapor concentrations are readily attainable and may cause unconsciousness and death. Excessive exposure may cause irritation to upper respiratory tract and lung injury. Single exposure may cause lung, liver and/or kidney effects with delayed respiratory depression leading to death at high concentrations.

SYSTEMIC & OTHER EFFECTS: Repeated exposures may cause lung, liver and/or kidney effects with kidney being the more likely. Has been shown to cause cancer in laboratory animals. This

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6. HEALTH HAZARD DATA: (CONTINUED)

chemical is considered to be a potential carcinogen for OSHA hazard communication purposes under regulation 29 CFR part 1910.1200 and is listed by: IARC. Human carcinogenic potential is equivocal. Birth defects are unlikely. Exposures having no adverse effect on the mother should have no effect on the fetus. In laboratory animals at excessive doses, however, there were other adverse effects on the mother and fetus. In animal studies, has been shown to interfere with fertility in males. Has been shown to be a mutagen in bacteria and animals. Effects may be delayed.

7. FIRST AID:

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician if irritation persists. Wash clothing before reuse. Destroy contaminated shoes.

INGESTION: If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Call a physician. (Never give anything by mouth to or attempt to induce vomiting in an unconscious person.) Seek medical attention immediately.

INHALATION: Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. Material may produce delayed skin burns and these may be second degree burns with little or no warning. Liver and kidney function should be followed after a significant exposure.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): ACGIH TLV is 2 ppm skin; 5 ppm STEL. OSHA PEL is 5 ppm skin.

VENTILATION: Provide general and/or local exhaust ventilation to

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8. HANDLING PRECAUTIONS: (CONTINUED)

control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus.

SKIN PROTECTION: Rubber protective clothing gives adequate protection for occasional liquid contact. However, liquid in continuous contact with heavy rubber, neoprene or equivalent (20 mils or greater) may penetrate in as little as 15 minutes. Do not use thin rubber clothing. Frequent washing of epichlorohydrin from the rubber greatly increases use time before penetration. Wash contaminated rubber clothing with soap and water and dry at least overnight in a moving stream of air. Polyethylene and polyvinyl chloride give very short term protection. Do not wear leather articles, including shoes. Leather cannot be decontaminated.

EYE PROTECTION: Use chemical goggles. Eye wash fountain should be located in immediate work area. If vapor exposure causes eye irritation, use a full-face respirator.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Do not breathe vapors. Do not get in eyes, on skin, or on clothing. Storage tanks should be blanketed with nitrogen, and the oxygen concentration should be maintained below nine percent (9%).

MSDS STATUS: Revised section 3.

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