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Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

Date last revised: June 9, 2012

Date printed: July 9, 2012

SECTION 1. ----- CHEMICAL IDENTIFICATION-----

CATALOG #: 2109-5-X0

NAME: (2S)-(+)-3-CHLORO-1,2-PROPENOXIDE

SYNONYMS: (S)-(+)-EPICHLORHYDRIN; (2S)-(+)-2-(CHLOROMETHYL)OXIRANE

SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

CAS NUMBER: 67843-74-7

MOLECULAR FORMULA: C₃H₅ClO

MOLECULAR WEIGHT: 92.52

SECTION 3. ----- HAZARDS IDENTIFICATION -----

LABEL PRECAUTIONARY STATEMENTS

HIGHLY FLAMMABLE.

TOXIC.

TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.

CORROSIVE.

CAUSES BURNS.

LACHRYMATOR.

MAY CAUSE SENSITIZATION BY SKIN CONTACT.

CARCINOGEN.

SECTION 4. ----- FIRST-AID MEASURES-----

ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.

INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

EYE EXPOSURE

ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS.

DERMAL EXPOSURE

TAKE OFF CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH OFF WITH SOAP AND PLENTY OF WATER. TAKE VICTIM IMMEDIATELY TO HOSPITAL. CONSULT A PHYSICIAN.

SECTION 5. ----- FIRE FIGHTING MEASURES -----

EXPLOSION HAZARDS

CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.

CONDITIONS OF FLAMMABILITY

UNDER FIRE CONDITIONS, MATERIAL MAY DECOMPOSE TO FORM FLAMMABLE AND/OR EXPLOSIVE MIXTURES IN AIR.

FLASH POINT

90 °F / 32 °C METHOD: CLOSED CUP

EXTINGUISHING MEDIA

SUITABLE: FOR SMALL (INCIPIENT) FIRES, USE MEDIA SUCH AS "ALCOHOL" FOAM, DRY CHEMICAL, OR CARBON DIOXIDE. FOR LARGE FIRES, APPLY WATER FROM AS FAR AS POSSIBLE. USE VERY LARGE QUANTITIES (FLOODING) OF WATER APPLIED AS A MIST OR SPRAY; SOLID STREAMS OF WATER MAY BE INEFFECTIVE. COOL ALL AFFECTED CONTAINERS WITH FLOODING QUANTITIES OF WATER.

FIREFIGHTING

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIFIC HAZARD(S): FLAMMABLE LIQUID. EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

EXPOSURE HAZARD(S)

MATERIAL: CORROSIVE. TOXIC. LACHRYMATOR.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

EVACUATE AREA. SHUT OFF ALL SOURCES OF IGNITION.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES.

METHODS FOR CLEANING UP

ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. ----- HANDLING AND STORAGE-----

HANDLING

USER EXPOSURE: DO NOT BREATHE VAPOR. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

STORAGE

SUITABLE: KEEP TIGHTLY CLOSED. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. STORE IN A COOL DRY PLACE.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

ENGINEERING CONTROLS

USE ONLY IN A CHEMICAL FUME HOOD. SAFETY SHOWER AND EYE BATH.

PERSONAL PROTECTIVE EQUIPMENT

OTHER: WEAR APPROPRIATE GOVERNMENT APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING. FACESHIELD (8-INCH MINIMUM).

GENERAL HYGIENE MEASURES

WASH THOROUGHLY AFTER HANDLING. REMOVE AND WASH CONTAMINATED CLOTHING PROMPTLY.

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE AND ODOR

LIQUID

PHYSICAL PROPERTIES

BOILING POINT:	92-93°C @ 360 mmHg
VAPOR PRESSURE:	12.5 mmHg @ 20°C
DENSITY:	1.183 g/mL @ 20 °C
REFRACTIVE INDEX:	1.438 @ 20 °C

SECTION 10. -----STABILITY AND REACTIVITY-----

STABILITY

MATERIALS TO AVOID: ACIDS, BASES, OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, HYDROGEN CHLORIDE.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ROUTE OF EXPOSURE

MULTIPLE ROUTES: TOXIC IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.

SIGNS AND SYMPTOMS OF EXPOSURE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED. SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA, AND VOMITING. INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS, AND PULMONARY EDEMA. MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND
SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS
HIGHLY FLAMMABLE. OBSERVE ALL FEDERAL, STATE, AND LOCAL
ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----

DOT
UN-NUMBER: 2023 CLASS: 6.1 (3) PACKING GROUP: II
PROPER SHIPPING NAME: EPICHLOROHYDRIN

SECTION 15. ----- REGULATORY INFORMATION -----

EU ADDITIONAL CLASSIFICATION
SYMBOL OF DANGER: F-T
INDICATION OF DANGER: HIGHLY FLAMMABLE. TOXIC.
RISK STATEMENTS: 11-23/24/25-34-43-45
SAFETY STATEMENTS: 16-23-24/25-26-36/37/39-45-53
US CLASSIFICATION AND LABEL TEXT
TSCA: NOT LISTED ON TSCA INVENTORY; FOR R&D USE ONLY

SECTION 16. ----- OTHER INFORMATION -----

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO
BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SYNQUEST LABS, INC. SHALL
NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING
OR FROM CONTACT WITH THE ABOVE PRODUCT.