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Material Safety Data Sheet Phenyloxirane MSDS

Section 1: Chemical Product and Company Identification

Product Name: Phenyloxirane

Catalog Codes: SLP2281

CAS#: 96-09-3 or 20780-53-4

RTECS: CZ9625000

TSCA: TSCA 8(b) inventory: Phenyloxirane

CI#: Not available.

Synonym: Styrene Oxide; 1,2-Epoxyethylbenzene

Chemical Name: Phenyloxirane

Chemical Formula: C8-H8-O

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Phenyloxirane	96-09-3 or 20780-53-4	100

Toxicological Data on Ingredients: Phenyloxirane: ORAL (LD50): Acute: 2000 mg/kg [Rat]. 1500 mg/kg [Mouse]. DERMAL (LD50): Acute: 890 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer).

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified 2A (Probable for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Combustible.

Auto-Ignition Temperature: 498°C (928.4°F)

Flash Points:

OPEN CUP: 74°C (165.2°F) (NFPA; Lewis, 1992) 79 C (175 F) (Clayton and Clayton, 1994) .

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:

Flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, alkalis.

Storage:

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 25°C (77°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Pleasant. Sweetish.

Taste: Not available.

Molecular Weight: 120.15 g/mole

Color: Colorless to light yellow.

pH (1% soln/water): Not available.

Boiling Point: 194.1°C (381.4°F)

Melting Point: -35.6°C (-32.1°F)

Critical Temperature: Not available.

Specific Gravity: 1.0523 (Water = 1)

Vapor Pressure: 0 kPa (@ 20°C)

Vapor Density: 4.3 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.4 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 1.6

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, acetone.

Solubility:

Soluble in methanol, diethyl ether, acetone. Partially soluble in cold water. Soluble with Benzene, Heptane, Alcohol, and Carbon Tetrachloride. Miscible with most organic solvents.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity:

Reacts vigorously with compounds having labile hydrogen, including water, in the presence of catalysts such as acids, bases, and certain salts. Styrene Oxide will polymerize exothermically. Avoid heating above 200 C.

Special Remarks on Corrosivity: Not available.

Polymerization: Yes.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:

Acute oral toxicity (LD50): 1500 mg/kg [Mouse]. Acute dermal toxicity (LD50): 890 mg/kg [Rabbit].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified 2A (Probable for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer).

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose: LCL [Rat] - Route: Inhalation; Dose: 500 ppm/4H

Special Remarks on Chronic Effects on Humans:

May affect genetic material. May cause adverse reproductive effects (fertility, fetotoxicity) and birth defects based on animal data. May cause cancer (tumorigenic) based on animal data.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. May cause skin sensitization. May be harmful if absorbed through skin. Eyes: Causes eye irritation. May cause corneal damage and conjunctivitis. Inhalation: Breathing in vapors may cause respiratory and mucous membrane irritation causing coughing, wheezing, and/or shortness of breath. May also affect behavior/central nervous system with symptoms similar to that of ingestion. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting and diarrhea. May affect behavior/central nervous system (CNS depressant - dizziness, lightheadedness, passing out), liver and brain. May be harmful if swallowed.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Toxic, Liquid, Organic, n.o.s (Phenyloxirane) UNNA: 2810 PG: III

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Phenyloxirane California prop.

65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Phenyloxirane Illinois chemical safety act: Phenyloxirane New York release reporting list: Phenyloxirane Pennsylvania RTK: Phenyloxirane Minnesota: Phenyloxirane Massachusetts RTK: Phenyloxirane New Jersey: Phenyloxirane New Jersey spill list: Phenyloxirane Louisiana spill reporting: Phenyloxirane California Director's List of Hazardous Substances: Phenyloxirane TSCA 8(b) inventory: Phenyloxirane SARA 313 toxic chemical notification and release reporting: Phenyloxirane CERCLA: Hazardous substances.: Phenyloxirane: 100 lbs. (45.36 kg)

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

R21/22- Harmful in contact with skin and if swallowed. R36/38- Irritating to eyes and skin. R45- May cause cancer. S2- Keep out of the reach of children. S36/37- Wear suitable protective clothing and gloves. S46- If swallowed, seek medical advice immediately and show this container or label. S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:**Protective Equipment:**

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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