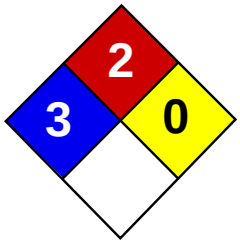

Health	2
Fire	2
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Ethyl Chloroacetate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ethyl Chloroacetate

Catalog Codes: SLE1066

CAS#: 105-39-5

RTECS: AF9110000

TSCA: TSCA 8(b) inventory: Ethyl Chloroacetate

CI#: Not available.

Synonym: Chloroacetic Acid, ethyl ester; Ethyl alpha-chloroacetate; Ethyl chloroethanoate; Ethyl monochloracetate; Ethyl monochloroacetate

Chemical Name: Acetic acid, chloro-, ethyl ester

Chemical Formula: C4-H7-Cl-O2

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
Ethyl Chloroacetate	105-39-5	100

Toxicological Data on Ingredients: Ethyl Chloroacetate: ORAL (LD50): Acute: 180 mg/kg [Rat]. 350 mg/kg [Mouse]. DERMAL (LD50): Acute: 161 mg/kg [Rat]. 230 mg/kg [Rabbit]. VAPOR (LC50): Acute: 3.3 mg/m 4 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to lungs, upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

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 immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: Not available.

Flash Points: OPEN CUP: 64°C (147.2°F).

Flammable Limits: Not available.

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

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat.

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:
Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Never direct a water jet in the container in order to prevent any splashing of the product which could cause spreading of the fire. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: When heated to decomposition it emits highly toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Toxic flammable liquid, insoluble or very slightly soluble in water. Poisonous liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water

inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
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, reducing agents, acids, alkalis.

Storage:
Store in a segregated and approved area. 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). Moisture sensitive.

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: Fruity. Pungent.

Taste: Not available.

Molecular Weight: 122.56 g/mole

Color: Colorless.

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

Boiling Point: 144°C (291.2°F) - 146 C

Melting Point: -26°C (-14.8°F)

Critical Temperature: 344.85°C (652.7°F)

Specific Gravity: 1.1498 (Water = 1)

Vapor Pressure: 0.6 kPa (@ 25°C)

Vapor Density: 4.23 - 4.46 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 0.9

Ionicity (in Water): Not available.

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

Solubility:
Miscible in diethyl ether, acetone. Insoluble in cold water, hot water. Miscible with alcohol, ethanol.

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, reducing agents, acids, alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity:
Can react vigorously with oxidizing materials. Will react with water or steam to produce toxic and corrosiive fumes. Vigorous reaction with sodium cyanide. When heated to decomposition, it emits highly toxic fumes of hydrogen chloride. Moisture sensitive

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

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

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 180 mg/kg [Rat]. Acute dermal toxicity (LD50): 161 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 3.3 mg/m3 4 hours [Rat].

Chronic Effects on Humans: May cause damage to the following organs: lungs, upper respiratory tract.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. It can be absorbed through the skin in harmful amounts and cause systemic effects similar to inhalation and ingestion. Eyes: Causes severe eye irritation. It is a lacrimator. May cause conjunctivitis or eye damage. Inhalation: Harmful if inhaled. Causes respiratory tract irritation (nose, throat), and mucous membrane irritation with coughing and wheezing. Vapors may cause headache, nausea, dizziness, tremor, or suffocation. Breathing Ethyl chloroacetate can also irritate the lungs causing coughing and/or shortness of breath (dyspnea) or respiratory stimulation. Higher exposures can also cause a build-up of fluid in the lungs (pulmonary edema) Ingestion: Harmful if swallowed. Causes digestive tract (mouth, stomach)irritation with nausea, vomiting, headache. May affect behavior may affect behavior/central nervous system (somnolence, ataxia, hallucinations, flaccid paralysis without anesthesia, tremor, dizziness).

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 as toxic as 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 3: Flammable liquid. CLASS 6.1: Poisonous material.

Identification: : Ethyl Chloroacetate UNNA: 1181 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Ethyl Chloroacetate Pennsylvania RTK: Ethyl Chloroacetate Florida: Ethyl Chloroacetate Massachusetts RTK: Ethyl Chloroacetate Massachusetts spill list: Ethyl Chloroacetate New Jersey: Ethyl Chloroacetate TSCA 8(b) inventory: Ethyl Chloroacetate

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): CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

DSCL (EEC):
R10- Flammable. R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R50- Very toxic to aquatic organisms. S7/9- Keep container tightly closed and in a well-ventilated place. S16- Keep away from sources of ignition - No smoking. S33- Take precautionary measures against static discharges. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

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

Health: 3

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References:
-Manufacturer's Material Safety Data Sheet. Registery of Toxic Effects of Chemical Substances (RTECS). National Fire Protection Association (NFPA). Hazardous Substance Data Bank (HSDB)

Other Special Considerations: Not available.

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