

# Material Safety Data Sheet

## Ethyl chloroacetate

ACC# 96883

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Ethyl chloroacetate

**Catalog Numbers:** AC118220000, AC118220010, AC118220025, AC118220050, AC220410000, AC220411000 AC220411000

**Synonyms:** Chloroacetic acid, ethyl ester; Ethyl alpha-chloroacetate; Ethyl chloroethanoate; Ethyl monochloroacetate; Acetic acid, chloro-, ethyl ester; Ethyl chloroacetate.

**Company Identification:**

Acros Organics N.V.  
One Reagent Lane  
Fair Lawn, NJ 07410

**For information in North America, call:** 800-ACROS-01

**For emergencies in the US, call CHEMTREC:** 800-424-9300

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
105-39-5	Ethyl chloroacetate	>98.5	203-294-0

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: colorless liquid. Flash Point: 53 deg C.

**Danger!** May be fatal if absorbed through the skin. May cause severe eye, skin and respiratory tract irritation with possible burns. Harmful if inhaled or swallowed. **Flammable liquid and vapor.** Very toxic to aquatic organisms.

**Target Organs:** Lungs, respiratory system, eyes, skin.

#### Potential Health Effects

**Eye:** Causes severe eye irritation. Vapors cause eye irritation. Lachrymator (substance which increases the flow of tears). Strong irritant of the eyes.

**Skin:** Causes skin irritation. May be fatal if absorbed through the skin. May cause skin burns. Ethyl chloroacetate is readily absorbed through the skin of rats causing hallucinations, distorted perceptions, and tearing. Some references have said that it may cause an allergic skin reaction.

**Ingestion:** Harmful if swallowed. Causes digestive tract irritation.

**Inhalation:** Causes respiratory tract irritation. Harmful if inhaled. Inhalation may cause nausea and headache.

**Chronic:** Halogenated acid ester compounds have the potential to produce pulmonary edema.

### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

**Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Use of water will produce irritating and toxic vapors of hydrogen chloride. Hydrochloric acid solutions react with most metals, forming flammable hydrogen gas.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** 53 deg C ( 127.40 deg F)

**Autoignition Temperature:** 452 deg C ( 845.60 deg F)

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 2; Instability: 0

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm

sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat, sparks and flame.

**Storage:** Keep away from sources of ignition. Flammables-area.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethyl chloroacetate	none listed	none listed	none listed

**OSHA Vacated PELs:** Ethyl chloroacetate: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear chemical splash goggles.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** colorless

**Odor:** pungent odor - fruity odor

**pH:** Not applicable.

**Vapor Pressure:** 4.87 mm Hg @ 25 deg C

**Vapor Density:** 4.3 (air=1)

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 144 deg C @ 760 mm Hg

**Freezing/Melting Point:** -27 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Insoluble - decomposes

**Specific Gravity/Density:** 1.1498 g/ml

**Molecular Formula:** C<sub>4</sub>H<sub>7</sub>ClO<sub>2</sub>

**Molecular Weight:** 122.55

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Slow hydrolysis to ethanol and chloroacetic acid will cause slow corrosion of common metals.

**Conditions to Avoid:** Ignition sources, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong reducing agents, strong acids, strong bases.

**Hazardous Decomposition Products:** Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide, ethyl alcohol.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 105-39-5: AF9110000

### LD50/LC50:

**CAS#** 105-39-5:

Draize test, rabbit, eye: 250 ug Severe;

Draize test, rabbit, eye: 250 ug/24H Severe;

Oral, mouse: LD50 = 350 mg/kg;

Oral, rat: LD50 = 180 mg/kg;

Skin, rabbit: LD50 = 230 mg/kg;

Skin, rat: LD50 = 161 mg/kg;

The estimated LC50 in rats was 4.65 mg/L (927 ppm)/ one hour. (TSCATS)

### Carcinogenicity:

**CAS#** 105-39-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** No information found  
**Reproductive Effects:** No information found  
**Mutagenicity:** No information found  
**Neurotoxicity:** No information found  
**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.  
**Environmental:** No information available.  
**Physical:** Octanol/water partition coefficient as log Pow: 1.28 (calculated)  
**Other:** Toxic to aquatic organisms.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.  
**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	ETHYL CHLOROACETATE	ETHYL CHLOROACETATE
<b>Hazard Class:</b>	6.1	6.1(3)
<b>UN Number:</b>	UN1181	UN1181
<b>Packing Group:</b>	II	II

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 105-39-5 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 105-39-5: immediate, fire.

#### Section 313

No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.  
This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.  
None of the chemicals in this product are listed as Priority Pollutants under the CWA.  
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 105-39-5 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

#### California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

#### European Labeling in Accordance with EC Directives

#### Hazard Symbols:

T N

#### Risk Phrases:

R 10 Flammable.  
R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
R 50 Very toxic to aquatic organisms.

**Safety Phrases:**

S 16 Keep away from sources of ignition - No smoking.  
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S 7/9 Keep container tightly closed and in a well-ventilated place.  
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

**WGK (Water Danger/Protection)**

CAS# 105-39-5: 2

**Canada - DSL/NDSL**

CAS# 105-39-5 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of B3, D1A, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 105-39-5 is listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 2/24/1999

**Revision #4 Date:** 3/22/2006

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*