CATO Research Chemicals Inc.
3/F,Building B,No.179 BASIGO, Guangpu Rd East,Huangpu Dist,Guangzhou
Web: www.cato-chem.com
Tel: +86-20-81960175 Fax: +86-20-81717260 E-mail: info@cato-chem.com

SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.2
Creation Date: July 15, 2019
Revision Date: August 08, 2025

SECTION 1: Identification

1.1 GHS Product identifier

Product name Chloroethane

1.2 Other means of identification

Product number LCEM501914
Other names ethyl cerotate; Ethylhexacosanoat; Hexacosansaeure-aethylester

1.3 Recommended use of the chemical and restrictions on use

Identified uses For laboratory and Industrial use only.
Uses advised against no data available

1.4 Supplier's details

Company CATO Research Chemicals Inc.
Address 3/F,Building B,No.179 BASIGO, Guangpu Rd East,Huangpu Dist,Guangzhou
Telephone +86-20-81960175

1.5 Emergency phone number

Emergency phone number +86-20-81960175
Service hours 'Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Gases under pressure: Compressed gas
Flammable gases, Category 1A, Flammable gas
Carcinogenicity, Category 2
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 3

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Danger
Hazard statement(s)
H220 Extremely flammable gas
H351 Suspected of causing cancer
H412 Harmful to aquatic life with long lasting effects

Precautionary statement(s)
Prevention
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P203 Obtain, read and follow all safety instructions before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P273 Avoid release to the environment.

Response
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 In case of leakage, eliminate all ignition sources.
P318 IF exposed or concerned, get medical advice.

Storage
P410+P403 Protect from sunlight. Store in a well-ventilated place.
P403 Store in a well-ventilated place.
P405 Store locked up.

Disposal
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Chloroethane	Chloroethane	75-00-3	200-830-5	100%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Rinse skin with plenty of water or shower. Refer for medical attention .

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms/effects, acute and delayed

Vapor causes drunkenness, anesthesia, possible lung injury. Liquid may cause frostbite on eyes and skin. (USCG, 1999)

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Irrigate eyes with water. Wash contaminated areas of body with soap and water.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Water fog, carbon dioxide, dry chemical. For large fire it is best to allow material to burn while cooling surrounding equipment. Stop flow of ethyl chloride.

5.2 Specific hazards arising from the chemical

Special Hazards of Combustion Products: Toxic and irritating gases are generated in fires. Behavior in Fire: Containers may explode. (USCG, 1999)

5.3 Special protective actions for fire-fighters

Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out. In other cases extinguish with powder, carbon dioxide. In case of fire: keep cylinder cool by spraying with water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate danger area! Consult an expert! Personal protection: self-contained breathing apparatus. Ventilation. Do NOT let this chemical enter the environment.

6.2 Environmental precautions

Evacuate danger area! Consult an expert! Personal protection: self-contained breathing apparatus. Ventilation. Do NOT let this chemical enter the environment.

6.3 Methods and materials for containment and cleaning up

Waste water treatment: evaporation from water at 25 deg C of 1 ppm solution (still air, avg depth 6.5 cm), 50% after 21 min, 90% after 79 min

SECTION 7: Handling and storage

7.1 Precautions for safe handling

NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding) if in liquid state. Use non-sparking handtools. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Fireproof.MATERIALS WHICH ARE TOXIC AS STORED OR WHICH CAN DECOMPOSE INTO TOXIC COMPONENTS ... SHOULD BE STORED IN A COOL WELL VENTILATED PLACE, OUT OF THE DIRECT RAYS OF THE SUN, AWAY FROM

AREAS OF HIGH FIRE HAZARD, AND SHOULD BE PERIODICALLY INSPECTED. INCOMPATIBLE MATERIALS SHOULD BE ISOLATED ...

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

TLV: 100 ppm as TWA; (skin); A3 (confirmed animal carcinogen with unknown relevance to humans).MAK: skin absorption (H); carcinogen category: 3B.EU-OEL: 268 mg/m3, 100 ppm as TWA

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear face shield or eye protection in combination with breathing protection.

Skin protection

Cold-insulating gloves. Protective clothing.

Respiratory protection

Use ventilation, local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Ethyl chloride is a clear colorless gas with a pungent odor. Flash point -58°F. Boiling point 54°F. Less dense than water and insoluble in water. Vapors are heavier than air. Under prolonged exposure to fire or heat the containers may rupture violently and rocket.
Colour	COLORLESS LIQUID
Odour	Ethereal odor
Melting point/freezing point	-31°C(lit.)
Boiling point or initial boiling point and boiling range	96°C/4mmHg(lit.)
Flammability	Flammable Gas
Lower and upper explosion limit/flammability limit	Lower limit 3.8% - Upper limit 15.4%
Flash point	41°C(lit.)
Auto-ignition temperature	966° F (USCG, 1999)
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	0.279 cP at 10 deg C
Solubility	0.574 g/100 mL at 68° F (NTP, 1992)
Partition coefficient n-octanol/water	log Kow= 1.43
Vapour pressure	32.29 psi (55 °C)
Density and/or relative density	2.22（气）
Relative vapour density	2.22 (vs air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

3800 ppm [Based on 10% of the lower explosive limit for safety considerations even though the relevant toxicological data indicated that irreversible health effects or impairment of escape existed only at higher concentrations.]
Decomposes on heating and on burning. This produces toxic gases of hydrogen chloride (see ICSC 0163) and phosgene (see ICSC 0007).

10.2 Chemical stability

At low temp or under increased pressure, ethyl chloride is a mobile, very volatile liquid.

10.3 Possibility of hazardous reactions

FLAMMABLE GAS AT ORDINARY TEMP AND PRESSURE.The gas is heavier than air and may travel along the ground; distant ignition possible.ETHYL CHLORIDE is heat sensitive. This compound will hydrolyze in the presence of alkalis and water. It reacts with

water or steam to produce toxic and corrosive fumes. It can also react vigorously with oxidizing materials. The vapor forms highly flammable mixtures with air. A mixture of this compound with potassium is shock-sensitive. Contact with chemically active metals such as Na, K, Ca, powdered Al, Zn and Mg may result in violent reactions. (NTP, 1992)

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Can react vigorously with oxidizing materials.

10.6 Hazardous decomposition products

Thermally stable to 400 deg C; thermal splitting yields ethylene and hydrogen chloride.

SECTION 11: Toxicological information

Acute toxicity

- Oral: no data available
- Inhalation: LC50 Rat inhalation 152 mg/l/2 hr
- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

Evaluation: No epidemiological data relevant to the carcinogenicity of chloroethane. There is limited evidence in experimental animals for the carcinogenicity of chloroethane. Overall evaluation: Chloroethane is not classifiable as to its carcinogenicity to humans (Group 3).

Reproductive toxicity

No studies were located regarding reproductive or developmental effects following ethyl chloride inhalation exposure in humans. Several animal studies found no reproductive effects caused by ethyl chloride exposure. An animal study reported a decrease in uterine weights, while another study reported minimal evidence of fetotoxicity (increase in centers of unossified bones of the skull) from inhalation exposure to ethyl chloride.

STOT-single exposure

The substance is mildly irritating to the eyes, skin and respiratory tract. Rapid evaporation of the liquid may cause frostbite. The substance may cause effects on the central nervous system. Exposure far above the OEL could cause unconsciousness, cardiac dysrhythmia and death.

STOT-repeated exposure

no data available

Aspiration hazard

A harmful concentration of this gas in the air will be reached very quickly on loss of containment.

SECTION 12: Ecological information

12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: Ethyl chloride, present at 1.84 and 4.19 mg/l, reached 1% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 2 mg/l and the closed bottle test(1).

12.3 Bioaccumulative potential

Food chain concn potential: none

12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc for ethyl chloride can be estimated to be 24(SRC). According to a classification scheme(2), this estimated Koc value suggests that ethyl chloride is expected to have very high

mobility in soil.

12.5 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

14.1 UN Number

ADR/RID: UN1037 (For reference only, please check.) IMDG: UN1037 (For reference only, please check.) IATA: UN1037 (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: ETHYL CHLORIDE (For reference only, please check.) IMDG: ETHYL CHLORIDE (For reference only, please check.) IATA: ETHYL CHLORIDE (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: 2.1 (For reference only, please check.) IMDG: 2.1 (For reference only, please check.) IATA: 2.1 (For reference only, please check.)

14.4 Packing group, if applicable

ADR/RID: (For reference only, please check.) IMDG: (For reference only, please check.) IATA: (For reference only, please check.)

14.5 Environmental hazards

ADR/RID: No IMDG: No IATA: No

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Chloroethane	Chloroethane	75-00-3	200-830-5
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

SECTION 16: Other information

Information on revision

Creation Date July 15, 2019
Revision Date August 08, 2025

Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA - European Chemicals Agency, website: https://echa.europa.eu/

Other Information

Use of alcoholic beverages enhances the harmful effect.Rinse contaminated clothing with plenty of water because of fire hazard.Do NOT use in the vicinity of a fire or a hot surface, or during welding.Turn leaking cylinder with the leak up to prevent escape of gas in liquid state.

Any questions regarding this SDS, Please send your inquiry to info@cato-chem.com

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Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.