



Material Safety Data Sheet

1. Product and Company Identification

Product name : **Ethyl Chloride**

Chemical formula : C₂H₅Cl

Synonyms : Chloroethane; Monochloroethane; Muriatic Ether; Kelene; Hydrochloric Ether; Ether Hydrochloric; Ether Muriatic; Narcotile; Aethylis; Chelen; Chlorethyl; Chloridum; Chloryl; Chloryl Anesthetic; Ether Chloratus; Aethylis Chloridum; UN 1037

Company : Med Tech Gases, Inc.
20 Hall Street
Medford, MA 02155

Telephone : 800-FINE-GAS

Emergency : 800-424-9300

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Ethyl Chloride	75-00-3	100%

3. Hazards Identification

Emergency Overview

Flammable gas. May cause flash fire.
May cause eye irritation, central nervous system depression.

Potential Health Effects

Inhalation : Irritation, nausea, vomiting, irregular heartbeat, symptoms of drunkenness. May cause disorientation, kidney damage, liver damage in long term exposure.

Eye contact : Irritation, blurred vision.

Skin contact : Irritation, blisters.

Ingestion : Same as reported in other routes of exposure, sore throat, frostbite, headache.

Chronic Health Hazard : Not available.

4. First Aid Measures

Eye contact : Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Skin contact : If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115°F; 41-46°C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blanket. Get immediate medical attention.

Ingestion : Contact a poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head

Inhalation : to side. Get medical attention immediately.
: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

5. Fire-Fighting Measures

Suitable extinguishing media : Regular dry chemical, carbon dioxide, water, regular foam.
Large fires: Use regular foam or flood with fine water spray.
Specific hazards : Severe fire hazard. Severe explosion hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive.
Fire fighting : Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Water may be ineffective.

6. Accidental Release Measures

Water release : Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.
Occupational spill/release : Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).
Additional advice : None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Grounding and bonding required. Protect from physical damage. Store outside or in a detached building. Store with flammable liquids. Keep separated from incompatible substances. Avoid contact with light. Store in a cool, dry place. Store in a well ventilated area.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH : 100 ppm TWA
Skin – potential significant contribution to overall exposure by the cutaneous rate.
OSHA (final) : 1000 ppm TWA; 2600 mg/m³ TWA
OSHA (vacated) : 1000 ppm TWA; 2600 mg/m³ TWA

IDLH

3800 ppm

Engineering measures/Ventilation

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

Personal protective equipment

Respiratory protection	:	The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA. 3800 ppm – Any supplied-air respirator. Any self-contained breathing apparatus with a full facepiece. Emergency or planned entry into unknown concentrations or IDLH conditions – Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode. Escape – Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister. Any appropriate escape-type, self-contained breathing apparatus.
Hand protection	:	Wear insulated gloves.
Eye protection	:	For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin and body protection	:	For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Not available.
Molecular weight	:	64.52
Vapor density	:	2.2 (air = 1)
Vapor pressure	:	1000 mmHg @ 20°C
Boiling point	:	12°C
Melting point	:	-136°C
Water solubility	:	0.6%
Specific gravity	:	0.9 (water = 1)
Solvent solubility	:	Soluble: alcohol, ether, organic solvents.

10. Stability and Reactivity

Stability	:	Stable under normal conditions. May react on contact with water. May release toxic and/or flammable gases.
Conditions to avoid	:	Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.
Materials to avoid	:	Oxidizing materials, metals.
Hazardous decomposition products	:	Thermal decomposition products: acid halides, phosgene.

11. Toxicological Information

The components of this material have been reviewed in various sources and the following endpoints are published:

ETHYL CHLORIDE : Oral LD50 Rat: 152 g/m3/2H
(75-00-3)

Acute Toxicity Level

ETHYL CHLORIDE : Slightly toxic: inhalation
(75-00-3)

Component Carcinogenicity

ACGIH : A3 – Confirmed Animal Carcinogen with Unknown Relevance to Humans
IACR : Monograph 71 [1999]; Monograph 52 [1991] (Group 3 (not classifiable))
DFG : Category 3B (could be carcinogenic for man)

Local Effects

ETHYL CHLORIDE : Irritant: eye
(75-00-3)

Target Organs

ETHYL CHLORIDE : Central nervous system.
(75-00-3)

Medical Conditions Aggravated by Exposure

Heart or respiratory disorders, kidney disorders, liver disorders.

Additional Data

May be excreted in breast milk. Alcohol may enhance the toxic effects. Stimulants such as epinephrine may induce ventricular fibrillation.

12. Ecological Information

Aquatic Toxicity

ETHYL CHLORIDE : Algae: 72 Hr EC50 Desmodesmus subspicatus: 39 mg/L
(75-00-3) Invertebrate: 48 Hr EC50 Daphnia magna: 58 mg/L

13. Disposal Considerations

Waste from residues : Dispose in accordance with all applicable regulations. Subject to disposal
/ unused products regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.
Contaminated : Return cylinder to supplier.
packaging

14. Transport Information

DOT (US only)

Proper shipping : Ethyl Chloride
name
Class : 2.1
UN/ID No. : UN1037
Labeling : Flammable Gas

15. Regulatory Information

U.S. Federal Regulations

This material contains one or more of the following chemicals required under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

ETHYL CHLORIDE (75-00-3) : SARA 313: 1.0% de minimis concentration
CERCLA: 100 lb final RQ; 45.4 kg final RQ

SARA 311/312

Acute: Yes
Chronic: No
Fire: Yes
Reactive: Yes
Pressure: No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
ETHYL CHLORIDE	75-00-3	Yes	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.