Material Name: ETHYL CHLORIDE

Manufacturer Information

MATHESON TRI-GAS, INC. General Information: 1-800-416-2505
150 Allen Road, Suite 302 Emergency #: 1-800-424-9300 (CHEMTREC)
Basking Ridge, NJ 07920 Outside the US: 703-527-3887 (Call collect)

Chemical Family

halogenated, aliphatic

Synonyms

MTG MSDS 32; CHLOROETHANE; MONOCHLOROETHANE; MURIATIC ETHER; KELENE; HYDROCHLORIC ETHER; ETHER HYDROCHLORIC; ETHER MURIATIC; NARCOTILE; AETHYLIS; CHELEN; CHLORETHYL; CHLORIDUM; CHLORYL; CHLORYL ANESTHETIC; ETHER CHLORATUS; AETHYLIS CHLORIDUM; STCC 4908162; UN 1037; C2H5CL; RTECS: KH7525000

EMERGENCY OVERVIEW

Physical Form: gas

Health Hazards: eye irritation, central nervous system depression

Physical Hazards: Flammable gas. May cause flash fire.

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: irritation, nausea, vomiting, irregular heartbeat, headache, symptoms of drunkenness

Long Term: disorientation, kidney damage, liver damage

Skin

Short Term: irritation, blisters
**Safety Data Sheet**

**Material Name:** ETHYL CHLORIDE

**SDS ID:** MAT08880

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**Long Term:** same as effects reported in short term exposure

**Eye**

**Short Term:** irritation, blurred vision

**Long Term:** same as effects reported in short term exposure

**Ingestion**

**Short Term:** same as effects reported in other routes of exposure, sore throat, frostbite, headache

**Long Term:** no information is available

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### **Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-00-3</td>
<td>ETHYL CHLORIDE</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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### **Section 4 - FIRST AID MEASURES**

**Inhalation**

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

**Skin**

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 blankets. Get immediate medical attention.

**Eyes**

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

**Ingestion**

Contact local 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 to side. Get medical attention.
**Section 5 - FIRE FIGHTING MEASURES**

See Section 9 for Flammability Properties

**NFPA Ratings:**
- **Health:** 2
- **Fire:** 4
- **Reactivity:** 0

**Hazard Scale:**
- 0 = Minimal
- 1 = Slight
- 2 = Moderate
- 3 = Serious
- 4 = Severe

**Flammable Properties**

Severe fire hazard. Severe explosion hazard. Vapor/air mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

**Extinguishing Media**

- regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular foam or flood with fine water spray.

**Fire Fighting Measures**

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.

**Section 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).
**Section 7 - HANDLING AND STORAGE**

Storage Procedures


**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

Component Analysis

ETHYL CHLORIDE (75-00-3)

ACGIH: 100 ppm TWA

Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA (final): 1000 ppm TWA; 2600 mg/m3 TWA

OSHA (vacated): 1000 ppm TWA; 2600 mg/m3 TWA

Component Biological Limit Values

There are no biological limit values for any of this product's components.

IDLH

3800 ppm

Ventilation

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

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

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.

Protective Clothing

For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.
Glove Recommendations

Wear insulated gloves.

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.

*** Section 9 - PHYSICAL AND CHEMICAL PROPERTIES ***
Material Name: ETHYL CHLORIDE

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Gas</th>
</tr>
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<tbody>
<tr>
<td>Physical Form:</td>
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<tr>
<td>Odor Threshold:</td>
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<td>Odor:</td>
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<tr>
<td>Boiling Point:</td>
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<td>Melting/Freezing Point:</td>
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<td>Flash Point:</td>
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<td>Decomposition:</td>
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<td>LEL:</td>
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<td>UEL:</td>
<td>15.4 %</td>
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<tr>
<td>Vapor Pressure:</td>
<td>1000 mmHg @ 20 °C</td>
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<tr>
<td>Vapor Density (air = 1):</td>
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<tr>
<td>Specific Gravity (water=1):</td>
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<tr>
<td>Water Solubility:</td>
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<td>Auto Ignition:</td>
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<tr>
<td>Viscosity:</td>
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<td>Molecular Weight:</td>
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<tr>
<td>Molecular Formula:</td>
<td>C2-H5-CL</td>
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</table>

Solvent Solubility

Soluble: alcohol, ether, organic solvents

*** Section 10 - STABILITY AND REACTIVITY ***

Chemical Stability

Stable at normal temperatures and pressure. 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

metals, oxidizing materials

Decomposition Products

acid halides, phosgene

Possibility of Hazardous Reactions

Will not polymerize.
**Section 11 - TOXICOLOGICAL INFORMATION**

Component Analysis - LD50/LC50

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

**ETHYL CHLORIDE (75-00-3)**

Inhalation LC50 Rat 152 g/m3 2 h

Acute Toxicity Level

**ETHYL CHLORIDE (75-00-3)**

Slightly Toxic: inhalation.

Component Carcinogenicity

**ETHYL CHLORIDE (75-00-3)**

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 71 [1999]; Monograph 52 [1991] (Group 3 (not classifiable))

DFG: Category 3B (could be carcinogenic for man)

Local Effects

**ETHYL CHLORIDE (75-00-3)**

Irritant: eye.

Target Organs

**ETHYL CHLORIDE (75-00-3)**

central nervous system.

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.
**Section 12 - ECOLOGICAL INFORMATION**

Component Analysis - Aquatic Toxicity

ETHYL CHLORIDE (75-00-3)

Algae: 72 Hr EC50 Desmodesmus subspicatus: 39 mg/L
Invertebrate: 48 Hr EC50 Daphnia magna: 58 mg/L

**Section 13 - DISPOSAL CONSIDERATIONS**

Disposal Methods

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Dispose in accordance with all applicable regulations.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

**Section 14 - TRANSPORT INFORMATION**

US DOT Information

Shipping Name: Ethyl chloride
UN/NA #: UN1037  Hazard Class: 2.1
Required Label(s): 2.1

TDG Information

Shipping Name: Ethyl chloride
UN #: UN1037  Hazard Class: 2.1
Required Label(s): 2.1
U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified 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 Health:** Yes  **Chronic Health:** No  **Fire:** Yes  **Pressure:** No  **Reactive:** Yes

U.S. State Regulations

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
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<tr>
<td>ETHYL CHLORIDE</td>
<td>75-00-3</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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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.

Canada WHMIS

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List

**ETHYL CHLORIDE (75-00-3)**

1 %

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>US</th>
<th>CA</th>
<th>EU</th>
<th>AU</th>
<th>PH</th>
<th>JP</th>
<th>KR</th>
<th>CN</th>
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</thead>
<tbody>
<tr>
<td>ETHYL CHLORIDE</td>
<td>75-00-3</td>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>
**Key / Legend**

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

**Other Information**

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