1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATHESON TRI-GAS, INC.
150 Allen Road Suite 302
Basking Ridge, New Jersey 07920
Information: 1-800-416-2505

Emergency Contact:
CHEMTREC 1-800-424-9300
Calls Originating Outside the US:
703-527-3887 (Collect Calls Accepted)

SUBSTANCE: ETHYL CHLORIDE

TRADE NAMES/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; MAT08880;
RTECS KH7525000

CHEMICAL FAMILY: halogenated, aliphatic

CREATION DATE: Jan 24 1989
REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: ETHYL CHLORIDE
CAS NUMBER: 75-00-3
PERCENTAGE: 100.0

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=2  FIRE=4  REACTIVITY=0

EMERGENCY OVERVIEW:
PHYSICAL FORM: gas

MAJOR HEALTH HAZARDS: eye irritation, central nervous system depression

PHYSICAL HAZARDS: Flammable gas. May cause flash fire.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation, nausea, vomiting, irregular heartbeat, headache, symptoms of
drunkenness

**LONG TERM EXPOSURE**: disorientation, kidney damage, liver damage

**SKIN CONTACT**: 

**SHORT TERM EXPOSURE**: irritation, blisters

**LONG TERM EXPOSURE**: same as effects reported in short term exposure

**EYE CONTACT**: 

**SHORT TERM EXPOSURE**: irritation, blurred vision

**LONG TERM EXPOSURE**: same as effects reported in short term exposure

**INGESTION**: 

**SHORT TERM EXPOSURE**: same as effects reported in other routes of exposure, sore throat, frostbite, headache

**LONG TERM EXPOSURE**: no information is available

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### 4. FIRST AID MEASURES

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

**EYE CONTACT**: 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.

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### 5. FIRE FIGHTING MEASURES

**FIRE AND EXPLOSION HAZARDS**: 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**: 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.

**FLASH POINT:** -58 F (-50 C) (CC)
**LOWER FLAMMABLE LIMIT:** 3.8%
**UPPER FLAMMABLE LIMIT:** 15.4%
**AUTOIGNITION:** 966 F (519 C)

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### 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 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).

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### 7. HANDLING AND STORAGE


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### 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

**EXPOSURE LIMITS:**

**ETHYL CHLORIDE:**
- 1000 ppm (2600 mg/m³) OSHA TWA
- 100 ppm ACGIH TWA (skin)
- NIOSH (handle with caution in workplace)

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

**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.

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

**GLOVES:** Wear insulated gloves.

**RESPIRATOR:** 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.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** gas

**ODOR:** Not available

**MOLECULAR WEIGHT:** 64.52

**MOLECULAR FORMULA:** C₂-H₅-CL

**BOILING POINT:** 54 F (12 C)

**FREEZING POINT:** -213 F (-136 C)

**VAPOR PRESSURE:** 1000 mmHg @ 20 C

**VAPOR DENSITY (air=1):** 2.2

**SPECIFIC GRAVITY (water=1):** 0.9

**WATER SOLUBILITY:** 0.6%

**PH:** Not applicable

**VOLATILITY:** Not applicable

**ODOR THRESHOLD:** Not available

**EVAPORATION RATE:** Not applicable

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not applicable

**SOLVENT SOLUBILITY:**
Soluble: alcohol, ether, organic solvents
10. STABILITY AND REACTIVITY

**REACTIVITY:** 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.

**INCOMPATIBILITIES:** metals, oxidizing materials

**HAZARDOUS DECOMPOSITION:**
Thermal decomposition products: acid halides, phosgene

**POLYMERIZATION:** Will not polymerize.

11. TOXICOLOGICAL INFORMATION

**ETHYL CHLORIDE:**
**TOXICITY DATA:** 152 gm/m3/10 minute(s) inhalation-rat LC50
**CARCINOGEN STATUS:** IARC: Human No Adequate Data, Animal Limited Evidence, Group 3; ACGIH: A3 -Confirmed Animal Carcinogen

**LOCAL EFFECTS:**
Irritant: eye

**ACUTE TOXICITY LEVEL:**
Slightly Toxic: inhalation

**TARGET ORGANS:** central nervous system

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** heart or respiratory disorders, kidney disorders, liver disorders

**TUMORIGENIC DATA:** Available.

**MUTAGENIC DATA:** Available.

**REPRODUCTIVE EFFECTS DATA:** Available.

**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

Not available

13. DISPOSAL CONSIDERATIONS
14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:
PROPER SHIPPING NAME: Ethyl chloride
ID NUMBER: UN1037
HAZARD CLASS OR DIVISION: 2.1
LABELING REQUIREMENTS: 2.1
QUANTITY LIMITATIONS:
PAASSENGER AIRCRAFT OR RAILCAR: Forbidden
CARGO AIRCRAFT ONLY: 150 kg

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
SHIPPING NAME: Ethyl chloride
UN NUMBER: UN1037
CLASS: 2.1

15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
Chloroethane (Ethyl chloride): 100 LBS RQ


SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370 Subparts B and C):
ACUTE: Yes
CHRONIC: No
FIRE: Yes
REACTIVE: Yes
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):
Chloroethane (Ethyl chloride)

STATE REGULATIONS:
California Proposition 65:
Known to the state of California to cause the following:
Chloroethane (Ethyl chloride)
Cancer (Jul 01, 1990)

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: AB

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): Not determined.

16. OTHER INFORMATION

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