1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Matheson Tri-Gas, Inc.

The telephone numbers listed below are emergency numbers, please contact your local branch for routine inquiries.

USA
959 Route 46 East
Parsippany, New Jersey

CANADA
530 Watson Street
Whitby, Ontario

24 Hour EMERGENCY CONTACT
U.S. CHEMTREC 1-800-424-9300
CANADA CANUTEC 613-996-6666
SUBSTANCE: ISOPROPYL MERCAPTAN

SYMBOL: \( \text{C}_3\text{H}_8\text{S} \)

TRADE NAMES/SYNONYMS:
ISOPROPAANETHIOL; 2-PROPANETHIOL; ISOPROPYLTHIOL; 2-MERCAPTOPROPANE; 1-METHYLETHANETHIOL; 2-PROPYLMERCAPTAN; PROPYL MERCAPTAN; STCC 4909205; UN 2703; C3H8S; MAT12190; RTECS TZ7302000

CHEMICAL FAMILY: mercaptans

CREATION DATE: Jan 24 1989
REVISION DATE: Mar 16 1999

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: ISOPROPYL MERCAPTAN

CAS NUMBER: 75-33-2
EC NUMBER (EINECS): 200-861-4
PERCENTAGE: 100.0

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=3 REACTIVITY=0

WHMIS CLASSIFICATION: BD2

EC CLASSIFICATION (CALCULATED):
F Highly Flammable
R 11

EMERGENCY OVERVIEW:

Color: colorless
Physical Form: liquid
Odor: skunk-like odor

Major Health Hazards: No significant target effects reported.

Physical Hazards: Flammable liquid and vapor. Vapor may cause flash fire.

POTENTIAL HEALTH EFFECTS:

INHALATION:
  Short Term Exposure: irritation, lack of sense of smell, nausea, vomiting, diarrhea, difficulty breathing, headache, symptoms of drunkenness, bluish skin color, lung congestion, kidney damage, convulsions, coma
  Long Term Exposure: no information on significant adverse effects

SKIN CONTACT:
  Short Term Exposure: irritation
  Long Term Exposure: same as effects reported in short term exposure

EYE CONTACT:
  Short Term Exposure: irritation
  Long Term Exposure: same as effects reported in short term exposure

INGESTION:
  Short Term Exposure: nausea, vomiting, diarrhea, symptoms of drunkenness, bluish skin color, coma
  Long Term Exposure: no information on significant adverse effects

CARCINOGEN STATUS:
OSHA: N
NTP: N
IARC: N

4. FIRST AID MEASURES

INHALATION:
Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

SKIN CONTACT:
Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

EYE CONTACT:
Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

INGESTION:
Never make an unconscious person vomit or drink fluids. Give sodium bicarbonate solution. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.
ANTIDOTE:
amyl nitrite, inhalation; sodium nitrite, intravenous; pyridoxine, intravenous; urea, intravenous.
CAUTION! Get medical attention immediately.

NOTE TO PHYSICIAN:
For ingestion, consider gastric lavage.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS:
Severe fire 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). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

FLASH POINT:
-29 F (-34 C) (CC)

FLAMMABILITY CLASS (OSHA):
IB

6. ACCIDENTAL RELEASE MEASURES

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.

7. HANDLING AND STORAGE

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

ISOPROPYL MERCAPTAN:
No occupational exposure limits established.

VENTILATION: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.

For Unknown Concentrations or Immediately Dangerous to Life or Health -
- Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
- Any self-contained breathing apparatus with a full facepiece.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid

COLOR: colorless

ODOR: skunk-like odor

MOLECULAR WEIGHT: 76.16

MOLECULAR FORMULA: (C-H3)2-C-H-S-H

BOILING POINT: 127 F (53 C)

FREEZING POINT: -204 F (-131 C)

VAPOR PRESSURE: Not available

VAPOR DENSITY (air=1): 2.6

SPECIFIC GRAVITY (water=1): 0.8143

WATER SOLUBILITY: insoluble
**PH:** Not available

**VOLATILITY:** Not available

**ODOR THRESHOLD:** 0.25 ppb

**EVAPORATION RATE:** Not available

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

**SOLVENT SOLUBILITY:**
Soluble: alcohol, ether, acetone

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### 10. STABILITY AND REACTIVITY

**REACTIVITY:**
Stable at normal temperatures and pressure.

**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:**
acids, oxidizing materials

**HAZARDOUS DECOMPOSITION:**
Thermal decomposition products: hydrogen sulfide, oxides of sulfur, carbon

**POLYMERIZATION:**
Will not polymerize.

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### 11. TOXICOLOGICAL INFORMATION

Not available

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### 12. ECOLOGICAL INFORMATION

Not available.

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### 13. DISPOSAL CONSIDERATIONS

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

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### 14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101. SHIPPING NAME-UN NUMBER; HAZARD CLASS; PACKING GROUP; LABEL:
Propanethiols-UN2402; 3; II; Flammable liquid
15. REGULATORY INFORMATION

U.S. REGULATIONS:
TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed

CERCLA SECTION 103 (40CFR302.4): N

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): N

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):
  ACUTE: N
  CHRONIC: N
  FIRE: Y
  REACTIVE: N
  SUDDEN RELEASE: N


STATE REGULATIONS:
  California Proposition 65: N

EUROPEAN REGULATIONS:

EC NUMBER (EINECS): 200-861-4

EC RISK AND SAFETY PHRASES:

16. OTHER INFORMATION

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