

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
 Product name : Propane Odorized  
 CAS No : 74-98-6  
 Other means of identification : Liquefied Propane;  
 Dimethylmethane;  
 Liquefied Petroleum Gas or LPG

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Commercial petroleum industry product.

#### 1.3. Details of the supplier of the safety data sheet

Enterprise Products  
 1100 Louisiana St.  
 Rm 23.174  
 Houston, TX 77002  
 T 888-806-3794  
[www.enterpriseproducts.com](http://www.enterpriseproducts.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-824-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Simple Asphy H380  
 Flam. Gas 1 H220  
 Liquefied gas H280

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H220 - Extremely flammable gas  
 H280 - Contains gas under pressure; may explode if heated  
 H380 - May displace oxygen and cause rapid suffocation

Precautionary statements (GHS-US) :

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely  
 P381 - In case of leaking gas fire, eliminate all ignition sources if safe to do so  
 P403 - Store in a well-ventilated place  
 P410+P403 - Protect from sunlight. Store in a well-ventilated place

#### 2.3. Other hazards

Other hazards not contributing to the classification : Radon may be present in a negligible amount (see Section 16 for more information concerning radioactivity).

#### 2.4. Unknown acute toxicity (GHS-US)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

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### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Propane	(CAS No) 74-98-6	>= 90	Simple Asphy, H380 Flam. Gas 1, H220 Compressed gas, H280
Ethane	(CAS No) 74-84-0	< 6	Flam. Gas 1, H220 Compressed gas, H280
Isobutane	(CAS No) 75-28-5	< 2.5	Simple Asphy, H380 Flam. Gas 1, H220
Propylene	(CAS No) 115-07-1	< 5	Flam. Gas 1, H220 Compressed gas, H280
Ethyl Mercaptan	(CAS No) 75-08-1	< 0.1	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
First-aid measures after inhalation	: Call 911 or emergency medical service. If not breathing, give artificial respiration. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
First-aid measures after skin contact	: In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.
First-aid measures after eye contact	: Seek medical attention immediately. Contact with the liquid may cause frostbite and serious damage to eyes. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Vomiting: prevent asphyxia/aspiration pneumonia. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Asphyxiation. Freeze burns.
Symptoms/injuries after inhalation	: Cough. Shortness of breath. Vapors may cause dizziness or suffocation. Some may be irritating if inhaled at high concentrations.
Symptoms/injuries after skin contact	: May cause frostbite.
Symptoms/injuries after eye contact	: May cause frostbite.
Symptoms/injuries after ingestion	: This product is a compressed gas; hence oral exposure and resulting acute toxicity are unlikely.
Chronic symptoms	: Inhalation may produce mild intoxication, drowsiness, or loss of coordination. High concentrations produce intoxication followed by loss of consciousness, asphyxiation, and death. Caution is recommended for personnel with pre-existing central nervous system disorders. Personnel with pre-existing chronic respiratory diseases should refrain from breathing this material.

### 4.3. Indication of any immediate medical attention and special treatment needed

Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias (irregular beating) in persons exposed to this material.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Small Fire: Dry Chemical or CO <sub>2</sub> . Large Fire: Water spray or fog.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: EXTREMELY FLAMMABLE. Will be easily ignited by heat, sparks or flames. Vapors from liquefied gas are initially heavier than air and spread along ground. Vapors may travel to source of ignition and flash back. Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.
Explosion hazard	: May form flammable/explosive vapor-air mixture. Containers may explode when heated. Ruptured cylinders may rocket.



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### 5.3. Advice for firefighters

- Firefighting instructions : Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- Protection during firefighting : Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED. Remove ignition sources. Evacuate area.

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area. As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas.

### 6.2. Environmental precautions

- Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Stop leak if you can do it without risk. Do not walk through spilled material. If possible, turn leaking containers so that gas escapes rather than liquid. Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled.
- Methods for cleaning up : All equipment used when handling the product must be grounded. Prevent entry into waterways, sewers, basements or confined areas. Isolate area until gas has dispersed.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Flammable gas. Hazardous waste due to potential risk of explosion.
- Precautions for safe handling : Use only with adequate ventilation. Wear appropriate personal protective equipment and use exposure controls. Avoid all contact with skin and eyes. Avoid breathing product dust or vapors. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Do not reuse container. Remove contaminated clothing immediately. Wash with soap and water after working with this product.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from: all heat sources, direct sunlight, where freezing is possible, incompatible materials, and away from oxygen cylinders or other oxidizers by a minimum distance of 20 feet, or by a barrier of non-combustible material at least 5 feet high having a fire rating of at least 1/2 hour. Store in the original container or an approved alternative made from compatible material. Do not store in unlabelled containers. Treat empty containers in a similar fashion as residual product may exist. Keep container closed when not in use. Keep in fireproof place.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.
- Storage temperature : <= 50 °C (Based on Propane content)
- Storage area : Store in a well-ventilated place.



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### 7.3. Specific end use(s)

Commercial petroleum industry product.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Propane (74-98-6)		
ACGIH	ACGIH TWA (ppm)	0.50 ppm
ACGIH	Remark (ACGIH)	URT irr; CNS impair
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
OSHA	OSHA PEL (Ceiling) (ppm)	10 ppm

Propane (74-98-6)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	4508 mg/m <sup>3</sup>
ACGIH	ACGIH TWA (ppm)	2500 ppm
ACGIH	Remark (ACGIH)	Asphyxiant; CNS effects; Explosive
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

Ethane (74-84-0)		
ACGIH	ACGIH TWA (ppm)	Formerly 1000 ppm Based on Aliphatic hydrocarbon gases, Alkanes [C1-C4] ; Refer to Appendix F : Minimal Oxygen Content of the 2014 TLV Book
ACGIH	Remark (ACGIH)	Simple Asphyxiant if Oxygen level is 18% by volume; Explosive
OSHA	Not applicable	

Propylene (115-07-1)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	860 mg/m <sup>3</sup>
ACGIH	ACGIH TWA (ppm)	500 ppm
ACGIH	Remark (ACGIH)	Asphyxia; URT irr
OSHA	Not applicable	

Isobutane (75-28-5)		
ACGIH	ACGIH STEL (ppm)	1000 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	none

Ethyl Mercaptan (75-08-1)		
ACGIH	ACGIH TWA (ppm)	0.50 ppm
ACGIH	Remark (ACGIH)	URT irr; CNS impair
OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
OSHA	OSHA PEL (Ceiling) (ppm)	10 ppm

### 8.2. Exposure controls

Appropriate engineering controls	: Provide adequate general and local exhaust ventilation. Ensure exposure is below occupational exposure limits (where available).
Personal protective equipment	: Avoid all unnecessary exposure.
Materials for protective clothing	: Nitrile.
Hand protection	: Wear chemically resistant protective gloves.
Eye protection	: Employees should be provided with and required to use splash-proof safety goggles and splash shields where there is any possibility of product coming in contact with the eyes. Ensure that an eye wash station is operable and nearby.



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Skin and body protection	: Wear fire resistant clothing (FRC).
Respiratory protection	: Depending on airborne concentration, a full-face supplied air respirator is recommended because air purifying respirators cannot provide adequate protection.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Gas
Color	: Colorless gas or liquefied gas
Odor	: Distinct skunk-like odor
Odor threshold	: Not Established Not Established
pH	: Not Applicable
Relative evaporation rate (butyl acetate=1)	: Not Established
Relative evaporation rate (ether=1)	: Not Established
Melting point	: Not Established
Freezing point	: -305 °C (-517°F)
Boiling point	: -44 °C (-47°F)
Flash point	: -160 °C (-256°F)
Auto-ignition temperature	: 449 °C (840°F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 208 psig max @ 100°F
Relative vapor density at 20 °C	: 1.5 at 101 kPa
Relative density	: No data available
Specific gravity / density	: 0.51 at 40 °F
Solubility	: Insoluble.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Vapors may form explosive mixtures with air.
Oxidizing properties	: No data available
Explosive limits	: 2 - 9.5 vol %

#### 9.2. Other information

Gas group	: Liquefied gas
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Not reactive under normal use and conditions.

#### 10.2. Chemical stability

This product is anticipated to be stable under normal ambient storage and handling conditions of temperature and pressure.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

Air contact. Heat, sparks, open flame, and other ignition sources.

#### 10.5. Incompatible materials

Oxidizing agent. chlorine. fluorine. bromine and metal catalysts.

#### 10.6. Hazardous decomposition products

Products of thermal decomposition include sulfur oxides, carbon oxides and nitrogen oxides.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Propane (1f)74-98-6	
LD50 oral rat	NE
LD50 dermal rabbit	NE
LC50 inhalation rat (mg/l)	658 mg/l/4h
ATE US (vapors)	658.000 mg/l/4h
ATE US (dust, mist)	658.000 mg/l/4h
Additional information	This product is non-toxic and is a simple asphyxiant; however, it does have slight anaesthetic properties and higher concentrations may cause dizziness.

Ethane (74-84-0)	
Additional information	From a toxicologic standpoint, methane and ethane are of low anaesthetic potency and are practically inert; however, at very high concentrations, they act as a simple asphyxiant and can cause suffocation by displacement of oxygen from breathing atmosphere, below the critical level of 16% oxygen that is required to sustain life.

Propylene (115-07-1)	
ATE US (vapors)	86000.000 mg/l/4h

Isobutane (75-28-5)	
LC50 inhalation rat (ppm)	570000 ppm
ATE US (vapors)	658.000 mg/l/4h

Ethyl Mercaptan (75-08-1)	
LD50 oral rat	682 mg/kg American Industrial Hygiene Association Journal. Vol. 19, Pg. 171, 1958.
LC50 inhalation rat (ppm)	4420 ppm/4h American Industrial Hygiene Association Journal. Vol. 19, Pg. 171, 1958.
ATE US (oral)	682.000 mg/kg body weight
ATE US (gases)	4420.000 ppmV/4h
ATE US (vapors)	11.200 mg/l/4h
ATE US (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation : Not classified  
pH: Not Applicable

Serious eye damage/irritation : Not classified  
pH: Not Applicable

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

(This product is not listed as a carcinogen by NTP, OSHA, or IARC.)

Propylene (115-07-1)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Propane (74-98-6)	
Additional information	Exposure may have adverse health effects.

Specific target organ toxicity (repeated exposure) : Not classified

Propane (74-98-6)	
Additional information	Repeated exposure may cause frostbite injuries, respiratory, and central nervous system effects, depending on routes of exposure.



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Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Cough. Shortness of breath. Vapors may cause dizziness or suffocation. Some may be irritating if inhaled at high concentrations.
Symptoms/injuries after skin contact	: May cause frostbite.
Symptoms/injuries after eye contact	: May cause frostbite.
Symptoms/injuries after ingestion	: This product is a compressed gas; hence oral exposure and resulting acute toxicity are unlikely.
Chronic symptoms	: Inhalation may produce mild intoxication, drowsiness, or loss of coordination. High concentrations produce intoxication followed by loss of consciousness, asphyxiation, and death. Caution is recommended for personnel with pre-existing central nervous system disorders. Personnel with pre-existing chronic respiratory diseases should refrain from breathing this material.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general	: This product has no known eco-toxicological effects.
Ecology - water	: This product is not expected to be harmful to aquatic life.

#### 12.2. Persistence and degradability

<b>Propane (74-98-6)</b>	
Persistence and degradability	Readily biodegradable.

#### 12.3. Bioaccumulative potential

<b>Propane (74-98-6)</b>	
Bioconcentration factor (BCF REACH)	log BCF is about 1.56-1.78; therefore the product is not expected to accumulate.
Bioaccumulative potential	No ecological damage caused by this product.

<b>Propane (74-98-6)</b>	
Log Pow	2.3

#### 12.4. Mobility in soil

<b>Ethane (74-84-0)</b>	
Mobility in soil	If released to soil, ethane is expected to have very high mobility based upon an estimated Koc of 37.

#### 12.5. Other adverse effects

Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations	: It is recommended that this product, in any form, be incinerated in a suitable combustion chamber for disposal. Empty containers should be disposed of in a similar fashion due to presence of product residue. Follow applicable Federal, state and local regulations.
Additional information	: Handle empty containers with care because residual vapors are flammable. Hazardous waste due to potential risk of explosion.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT	
Transport document description	: UN1075 Petroleum gases, liquefied or Liquefied petroleum gas, 2.1
UN-No.(DOT)	: UN1075
Proper Shipping Name (DOT)	: Petroleum gases, liquefied or Liquefied petroleum gas
Department of Transportation (DOT) Hazard Classes	: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

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Hazard labels (DOT) : 2.1 - Flammable gas



DOT Special Provisions (49 CFR 172.102) : 19 - For domestic transportation only, the identification number UN1978 may be used in place of the identification number specified in column (4) of the 172.101 table. The identification number used must be consistent on package markings, shipping papers and emergency response information.  
 T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306

DOT Packaging Non Bulk (49 CFR 173.xxx) : 304

DOT Packaging Bulk (49 CFR 173.xxx) : 314;315

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg

DOT Vessel Stowage Location : E - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Marine pollutant : Not Listed

### Additional information

Emergency Response Guide (ERG) Number : 115

### ADR

No additional information available

### Transport by sea

No additional information available

### Air transport

Class (IATA) : 2.1 - Gases : Flammable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Propane (74-98-6)	
EPA TSCA Regulatory Flag	This product is listed on the TSCA inventory or otherwise complies with TSCA pre-manufacture notification requirements
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Sudden release of pressure hazard
Not listed on the United States SARA Section 313	
Ethane (74-84-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not listed on the United States SARA Section 313	
Propylene (115-07-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
Isobutane (75-28-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not listed on the United States SARA Section 313	



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### Ethyl Mercaptan (75-08-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Not listed on the United States SARA Section 313

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F+; R12

Full text of R-phrases: see section 16

### 15.2.2. National regulations

### 15.3. US State regulations

#### Propane(74-98-6)

State or local regulations	
	U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities
	U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities
	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
	U.S. - Idaho - Occupational Exposure Limits - TWAs
	U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
	U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
	U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
	U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
	U.S. - Massachusetts - Right To Know List
	U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
	U.S. - Michigan - Occupational Exposure Limits - TWAs
	U.S. - Minnesota - Hazardous Substance List
	U.S. - Minnesota - Permissible Exposure Limits - TWAs
	U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
	U.S. - New Jersey - Environmental Hazardous Substances List
	U.S. - New Jersey - Right to Know Hazardous Substance List
	U.S. - New Jersey - Special Health Hazards Substances List
	U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)
	U.S. - New York - Occupational Exposure Limits - TWAs
	U.S. - Ohio - Accidental Release Prevention - Threshold Quantities
	U.S. - Oregon - Permissible Exposure Limits - TWAs
	U.S. - Pennsylvania - RTK (Right to Know) List
	U.S. - Tennessee - Occupational Exposure Limits - TWAs
	U.S. - Texas - Effects Screening Levels - Long Term
	U.S. - Texas - Effects Screening Levels - Short Term
	U.S. - Vermont - Permissible Exposure Limits - TWAs
	U.S. - Washington - Permissible Exposure Limits - TWAs
	U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
	U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)

#### Ethane (74-84-0)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

#### Propylene (115-07-1)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

#### Isobutane (75-28-5)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

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### Ethyl Mercaptan (75-08-1)

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

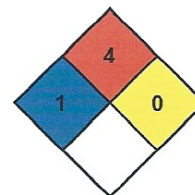
### SECTION 16: Other information

Revision date : 11/25/2015  
Data sources : ChemADVISOR, Inc.[<https://www.chemadvisor.com>].  
Other information : Potential for radon daughter buildup within processing systems, whatever the source of product streams. During maintenance operations that require the opening of contaminated process equipment, the flow of gas should be stopped and a four hour delay enforced to allow gamma radiation to drop to background levels. Protective equipment should be worn by personnel entering a vessel or working on contaminated process equipment to prevent skin contamination, ingestion, or inhalation.

Full text of H-phrases:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Compressed gas	Gases under pressure Compressed gas
Flam. Gas 1	Flammable gases Category 1
Flam. Liq. 2	Flammable liquids Category 2
Liquefied gas	Gases under pressure Liquefied gas
Simple Asphy	Simple Asphyxiant
H220	Extremely flammable gas
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H332	Harmful if inhaled
H380	May displace oxygen and cause rapid suffocation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.  
NFPA fire hazard : 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.  
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible  
Flammability : 4 Severe Hazard  
Physical : 0 Minimal Hazard  
Personal Protection : H

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*