

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 00013  
 Product Name: Ethane  
 Company Name: Gas Innovations Phone Number:  
 18005 E. Hwy 225 +1 (281)471-2200  
 La Porte, TX 77571  
 Web site address: www.gasinnovations.com  
 Emergency Contact: 3E (within United States) +1 (866)303-2640  
 Information: Infotrac (outside of United States) +1 (352)323-3500

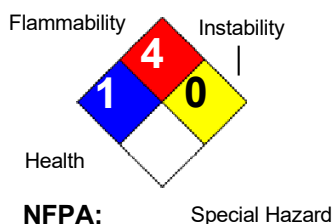
## 2. HAZARDS IDENTIFICATION

Flammable Gases, Category 1  
 Gas Under Pressure, Compressed gas



GHS Signal Word: **Danger**  
 GHS Hazard Phrases: H220 - Extremely flammable gas.  
 H280 - Contains gas under pressure: liquified gas; may explode if heated.  
 GHS Precaution Phrases: P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 GHS Response Phrases: P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
 P381 - Eliminate all ignition sources if safe to do so.  
 GHS Storage and Disposal Phrases: P410+403 - Protect from sunlight and store in well-ventilated place.

Hazard Rating System:



Potential Health Effects (Acute and Chronic): Inhalation of high concentration may cause rapid respiration, dizziness, fatigue, and nausea. Chemical asphyxiant. Exposure to low concentrations for extended periods may result in dizziness or unconsciousness, and may lead to death.

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. This material can act as a simple asphyxiant by displacement of air.

Skin Contact: May be harmful if absorbed through the skin. May cause skin irritation.

Eye Contact: May cause eye irritation.

Ingestion: May be harmful if swallowed.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
74-84-0	Ethane	>100.0 %
68476-40-4	Hydrocarbons C3-C4 propane butane	<5.00 %
74-82-8	Methane	<2.00 %

## 4. FIRST AID MEASURES

<b>Emergency and First Aid Procedures:</b>	Consult a physician. Show this safety data sheet to the doctor in attendance.
<b>In Case of Inhalation:</b>	If breathed in, move a person into fresh air. If not breathing give artificial respiration. Consult a physician.
<b>In Case of Skin Contact:</b>	Wash off with soap and plenty of water. If skin irritation occurs, get medical advice/attention. If frostbite occurs, immediately flush with lukewarm water.
<b>In Case of Eye Contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.
<b>In Case of Ingestion:</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE FIGHTING MEASURES

<b>Flash Pt:</b>	-211 F (-135 C) Method Used: Estimate
<b>Explosive Limits:</b>	LEL: 3% (V) UEL: 12.4% (V)
<b>Autoignition Pt:</b>	472 C (882 F)
<b>Suitable Extinguishing Media:</b>	Stop the flow of gas. IF the flow cannot be stopped, let the fire burn out while cooling the cylinder and the surrounding areas using a water spray. Carbon dioxide, regular dry chemical, Large Fires: water spray or fog
<b>Fire Fighting Instructions:</b>	Personnel may have to wear approach-type protective suits and positive pressure self-contained breathing apparatus. Firefighters' turnout gear may be inadequate. Cylinders exposed to fire may rupture with violent force. Extinguishing surrounding fire and keep cylinders cool by applying water from a maximum possible distance with a water spray. Flammable gases may spread from a spill after the fire is extinguished and be subject to re-ignition. On-site fire brigades must comply with their provincial and local fire code regulations
<b>Flammable Properties and Hazards:</b>	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide. Toxic carbon monoxide may be given off during combustion

## 6. ACCIDENTAL RELEASE MEASURES

<b>Protective Precautions, Protective Equipment and Emergency Procedures:</b>	Use proper personal protective equipment as indicated in Section 8. Ensure adequate ventilation. Evacuate all personnel from affected areas. If leak is on equipment, purge piping. If leak on container/valve, contact closest Linde Canada location. For a large spill, evacuate for at least 800 meters.
<b>Environmental Precautions:</b>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	Forms explosive mixtures with air. Immediately evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Remove all sources of ignition if safe to do so. Reduce vapors with fog or fine water spray, taking care not to spread liquid with water. Shut off flow if safe to do so. Ventilate area or move container to a well-ventilated area. Flammable vapors may spread from leak and could explode if reignited by sparks or flames. Explosive atmospheres may linger. Before entering area, especially confined areas, check atmosphere with an appropriate device. Isolate area until gas has dispersed. Dispose of contents/container in accordance with local/regional/national/international regulations. For controlling larger flows, personnel may have to wear approach-type protective suits

and self-contained breathing apparatus.

## 7. HANDLING AND STORAGE

### Precautions To Be Taken in Handling:

Avoid inhalation of vapor or mist. Keep away from heat, sparks and flame. Keep away sources of ignition - No smoking. Use spark-proof tools and explosion proof equipment. Use in a closed system. Secure the cylinder to prevent it from falling or being knocked over. Leak check the lines and equipment. Have an emergency plan covering steps to be taken steps to be taken in the event of an accidental release.

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in this product, see section 16.

### Precautions To Be Taken in Storing:

Cylinders should be stored and used in dry, well-ventilated areas away from sources of heat, like sunlight, or ignition. Store away from oxidizers. Protect containers against damage.

### Other Precautions:

Special precautions should be taken when entering or handling equipment in this type of gas service because of possible radioactive contamination. All equipment should be checked for radioactivity or opened to the atmosphere and have forced ventilation applied for at least four hours prior to entry or handling. Avoid direct skin contact with any surface. Avoid generation of dust, smoke, fumes, etc. in the work area, or if they cannot be avoided, a tested and certified radionuclide dust respirator should be worn. Smoking, eating, or drinking, should be prohibited when working with the equipment. Employees should wash thoroughly with soap and water and discard contaminated clothing after entering or handling the equipment.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
74-84-0	Ethane	1000 ppm TWA (VLE-PPT)	TLV: Simple asphyxiant ppm	No data.
68476-40-4	Hydrocarbons C3-C4 propane butane	No data.	No data.	No data.
<del>74-82-8</del>	<del>Methane</del>	<del>No data.</del>	<del>TLV: Simple asphyxiant ppm</del>	<del>No data.</del>

**Respiratory Equipment  
(Specify Type):**

Use air supplied respirator when working in confined space or where local exhaust or ventilation does not keep exposure or ventilation does not keep exposure below OEL. Respirators should be approved by NIOSH and MSHA. For emergencies or instances with unknown exposure levels, use self-contained breathing apparatus (SCBA).

**Eye Protection:****Protective Gloves:**

Wear safety glasses when handling cylinders, vapor-proof goggles and a face shield during cylinder change out or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133.

**Other Protective Clothing:**

Wear neoprene gloves during cylinder change out or wherever contact with product is possible. Wear metatarsal shoes for cylinder handling, and protective clothing where needed.

**Engineering Controls  
(Ventilation etc.):**

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility, and a safety shower is recommended. Ensure exposure is below occupational exposure limits. Provide local exhaust ventilation system.

**Work/Hygienic/Maintenance  
Practices:**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical States:**  Gas  Liquid  Solid  
**Appearance and Odor:** Appearance: colorless.  
**Freezing Point:** -279 F (-173 C)  
**Boiling Point:** -128.2 F (-89 C)  
**Autoignition Pt:** 472 C (882 F)  
**Flash Pt:** -211 F (-135 C) Method Used: Estimate  
**Explosive Limits:** LEL: 3% (V) UEL: 12.5% (V)  
**Specific Gravity (Water = 1):** 0.355 at 15.6 C (60.1 F)  
**Density:** NA  
**Vapor Pressure (vs. Air or mm Hg):** ~ 800 PSIA at 38.0 C (100 F)

**Vapor Density (vs. Air = 1):** 1.047  
**Evaporation Rate:** NA  
**Solubility in Water:** 61 mg/L  
**Solubility Notes:** Soluble in hydrocarbon solvents.  
**Saturated Vapor Concentration:** NA

**Viscosity:** 0.00852 cp  
**pH:** NA  
**Percent Volatile:** No data.  
**Molecular Formula & Weight:** CH<sub>4</sub> 30 g/mol

**10. STABILITY AND REACTIVITY**

**Reactivity:** High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.

**Stability:** Unstable  Stable

**Conditions To Avoid - Instability:** Heat, flames and sparks. Stable under recommended storage conditions.

**Incompatibility - Materials To Avoid:** Strong oxidizing agents.

**Hazardous Decomposition Or Byproducts:** High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide. Products- oxides of carbon

**Possibility of Hazardous Reactions:** Will occur  Will not occur

Keep away from heat/sparks/open

**Conditions To Avoid - Hazardous Reactions:** flames/hot surfaces- no smoking

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicological Information:</b>	Epidemiology: No information available. Teratogenicity: No information available. Reproductive Effects: No information available. Mutagenicity: No information available. Neurotoxicity: No information available.
<b>Irritation or Corrosion:</b>	No data available.
<b>Chronic Toxicological Effects:</b>	No data available.
<b>Carcinogenicity/Other Information:</b>	This product may contain detectable but varying quantities of the naturally occurring radioactive substance radon 222. The amount in the gas itself is not hazardous, but since radon rapidly decays (t/2 = 3.82 days) to form other radioactive elements including lead 210, polonium 210, and bismuth 210, equipment may be radioactive. The radon daughters are solids and therefore may attach to dust particles or form films and sludges in equipment. Inhalation, ingestion or skin contact with radon daughters can lead to the deposition of radioactive material in the lungs, bone, blood forming organs. intestinal tract, kidney, and colon. Occupational exposure to radon and radon daughters has been associated with an increased risk of lung cancer in underground uranium miners. Follow the Special Precautions contained in this document.
<b>Carcinogenicity:</b>	NTP? No      IARC Monographs? No      OSHA Regulated? No

## 12. ECOLOGICAL INFORMATION

<b>General Ecological Information:</b>	Environmental: No information available. Physical: No information available.
<b>Results of PBT and vPvB assessment:</b>	No data available.
<b>Persistence and Degradability:</b>	Biodegradable.
<b>Bioaccumulative Potential:</b>	Bioconcentration potential in aquatic organisms is low based on a BCF value of 5
<b>Mobility in Soil:</b>	Expected to have moderate mobility in soil.

## 13. DISPOSAL CONSIDERATIONS

<b>Waste Disposal Method:</b>	Do not attempt to dispose of residual or unused quantities. Return container to supplier. Dispose of contents/containers in accordance with local/regional/national/international regulations. Contact supplier for any special requirements
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## 14. TRANSPORT INFORMATION

### LAND TRANSPORT (US DOT):

<b>DOT Proper Shipping Name:</b>	Ethane.	
<b>DOT Hazard Class:</b>	2.1	FLAMMABLE GAS
<b>UN/NA Number:</b>	UN1035	



**AIR TRANSPORT (ICAO/IATA):** Un-No: 1035  
Shipping Name: Ethane  
Transport Hazard Class: 2.1

**Intermodal dangerous shipping**

**information:** Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

**AIR/SEA TRANSPORT**

**(IMDG/IATA)**

**Un-No (IMDG):** 1035

**Proper shipping name (IMDG):** ETHANE

**Class (IMDG):** 2-Gases

**MFAG-No:** 115

**Un-No(IATA):** 1035

**Proper Shipping name (IATA):** Ethane

**Class (IATA):** 2-Gases

**15. REGULATORY INFORMATION**

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
74-84-0	Ethane	No	No	No
68476-40-4	Hydrocarbons C3-C4 propane butane	No	No	No
74-82-8	Methane	No	No	No

**CAS # Hazardous Components (Chemical Name)**

**Other US EPA or State Lists**

74-84-0	Ethane	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 0834; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: No
68476-40-4	Hydrocarbons C3-C4 propane butane	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
74-82-8	Methane	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 1202; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: No

**CAS # Hazardous Components (Chemical Name)**

**International Regulatory Lists**

74-84-0	Ethane	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes - 1035; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - (2)-2; Korea ECL: Yes - KE-13138; Philippines ICCS: Yes; REACH: Yes - (R), (P)
68476-40-4	Hydrocarbons C3-C4 propane butane	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: No; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: No; Korea ECL: Yes - KE-20010; Philippines ICCS: Yes; REACH: Yes - (R), (P), C1, C2, M2

74-82-8 Methane

Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes - 1971; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - (2)-1; Korea ECL: Yes - KE-23181; Philippines ICCS: Yes; REACH: Yes - (R), (P)

## 16. OTHER INFORMATION

**Revision Date:** 07/18/2024

**Other Information:**

When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture.

Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product.

**Company Policy or Disclaimer:**

The information, recommendations, and suggestions herein were compiled from reference material and other sources believed to be reliable. However, the SDS's accuracy or completeness is not guaranteed by Gas Innovations or its affiliates, nor is any responsibility assumed or implied for any loss or damage resulting from inaccuracies or omissions. Since conditions of use are beyond our control, no warranties of merchantability or fitness for a particular purpose are expressed or implied. This SDS is not intended as a license to operate under, or a recommendation to infringe on, any patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.