

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 00013
Product Name: Ethane
Company Name: Gas Innovations
 18005 E. Hwy 225
 La Porte, TX 77571
Phone Number: +1 (281)471-2200
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

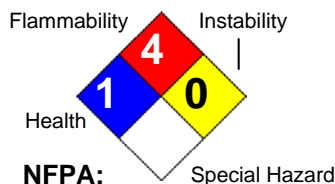
**GHS Signal Word:** Danger

GHS Hazard Phrases: H220 - Extremely flammable gas.
 H280 - Containers gas under pressure; 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	>95.0 %
68476-40-4	Hydrocarbons C3-C4 propane butane	<5.00 %
74-82-8	Methane	<2.00 %

4. FIRST AID MEASURES

Emergency and First Aid Procedures:	Consult a physician. Show this safety data sheet to the doctor in attendance.
In Case of Inhalation:	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
In Case of Skin Contact:	Wash off with soap and plenty of water. If skin irritation occurs, get medical advice/attention.
In Case of Eye Contact:	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.
In Case of Ingestion:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE FIGHTING MEASURES

Flash Pt:	-297 F (-183 C) Method Used: Estimate
Explosive Limits:	LEL: 2.9% (V) UEL: 13% (V)
Autoignition Pt:	472 C (882 F)
Suitable Extinguishing Media:	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.
Fire Fighting Instructions:	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.
Flammable Properties and Hazards:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures:	Use proper personal protective equipment as indicated in Section 8.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Steps To Be Taken In Case Material Is Released Or Spilled:	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. 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 from 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
---------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Ethane

Printed: 03/29/2015

Revision: 03/29/2015

Supersedes Revision: 12/15/2009

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.

Precautions To Be Taken in Storing:

Cylinders should be stored and used in dry, well-ventilated areas away from sources of heat 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	No data.	TLV: Simple asphyxiant ppm	No data.
68476-40-4	Hydrocarbons C3-C4 propane butane	No data.	No data.	No data.
74-82-8	Methane	No data.	TLV: Simple asphyxiant ppm	No data.

Respiratory Equipment (Specify Type):

No special respiratory protection equipment is required with adequate ventilation.

Eye Protection:

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.

Protective Gloves:

Wear neoprene gloves during cylinder change out or wherever contact with product is possible.

Other Protective Clothing:

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.

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:	[X] Gas [] Liquid [] Solid
Appearance and Odor:	Appearance: colorless.
Freezing Point:	-279 F (-173 C)
Boiling Point:	-127 F (-88.3 C)
Autoignition Pt:	472 C (882 F)
Flash Pt:	-297 F (-183 C) Method Used: Estimate
Explosive Limits:	LEL: 2.9% (V) UEL: 13% (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:	Insoluble at 0 C (32.0 F)
Solubility Notes:	Soluble in hydrocarbon solvents.
Saturated Vapor Concentration:	NA
Viscosity:	NA
pH:	NA
Percent Volatile:	No data.
Molecular Formula & Weight:	CH ₄ 16.04

10. STABILITY AND REACTIVITY

Reactivity:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.
Stability:	Unstable [] Stable [X]
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.
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information:	Epidemiology: No information available. Teratogenicity: No information available. Reproductive Effects: No information available. Mutagenicity: No information available. Neurotoxicity: No information available.
Irritation or Corrosion:	No data available.
Chronic Toxicological Effects:	No data available.
Carcinogenicity/Other Information:	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 (t1/2 = 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.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. ECOLOGICAL INFORMATION

General Ecological Information:	Environmental: No information available. Physical: No information available.
Results of PBT and vPvB assessment:	No data available.
Persistence and Degradability:	Not expected.
Bioaccumulative Potential:	Not expected.
Mobility in Soil:	No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	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.
-------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

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



AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not permitted on passenger aircraft.

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

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

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

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

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: 03/29/2015

Additional Information About No data available.

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 of 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.