

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 00008  
 Product Name: Butane

Company Name: Gas Innovations  
 18005 E. Hwy 225  
 La Porte, TX 77571

Web site address: www.gasinnovations.com Phone Number: +1 (281)471-2200  
 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: Liquified gas  
 Germ Cell Mutagenicity: Category 1B  
 Carcinogenicity: Category 1A  
 Specific Target Organ Toxicity - Single Exposure: Category 3 (Central nervous system)

Symbol:



GHS Signal Word: **Danger**

GHS Hazard Phrases: H220 - Extremely flammable gas.  
 H280 - Contains gas under pressure; may explode if heated.

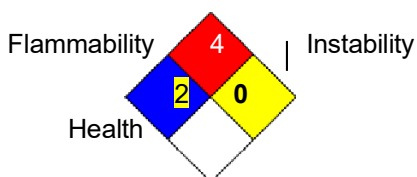
GHS Precaution Phrases: P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray.

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.  
 IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

GHS Storage and Disposal Phrases: P410+403 - Protect from sunlight and store in well-ventilated place.

Additional Hazards Information: Use a back flow preventative device in the piping. Do not open the valve until connected to equipment prepared for use. Close valve after each use and when empty.

Hazard Rating System:



NFPA: Special Hazard

<b>Potential Health Effects (Acute and Chronic):</b>	n-Butane is a simple asphyxiant. Inhalation of high concentration may cause rapid respiration, dizziness, fatigue, and nausea. Massive exposure may cause unconsciousness and death. Contact with the liquid phase or with the cold escaping from a cylinder may cause frostbite.
<b>Inhalation:</b>	May be harmful if inhaled. May cause respiratory tract irritation. This material can act as a simple asphyxiant by displacement of air.
<b>Skin Contact:</b>	May be harmful if absorbed through the skin. May cause skin irritation. May cause frostbite
<b>Eye Contact:</b>	May cause eye irritation.
<b>Ingestion:</b>	May be harmful if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
106-97-8	Butane	100 %

### 4. FIRST AID MEASURES

<b>Emergency and First Aid Procedures:</b>	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
<b>In Case of Inhalation:</b>	If breathed in, move a person into fresh air. If not breathing gives artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Consult a physician.
<b>In Case of Skin Contact:</b>	Wash skin with soap and water. If skin irritation occurs, get medical advice/attention. If frostbite or freezing occurs, 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.
<b>In Case of Eye Contact:</b>	Immediately flush your eyes with plenty of water for at least 15 minutes. Hold eyelids apart and flush eyes with plenty of water. After initial flushing, 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>	Not expected to be a primary route of exposure. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.

### 5. FIRE FIGHTING MEASURES

<b>Flash Pt:</b>	-60 C (-76 F)
<b>Method Used:</b>	Closed Cup
<b>Explosive Limits:</b>	Lower level:1.4% (Volume in air)      Upper-level EL:9.3 % (Volume in air)
<b>Autoignition Pt:</b>	405 C (761 F)
<b>Suitable Extinguishing Media:</b>	The only safe way to extinguish an n-butane fire is to 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. Do not direct water at source of leak or safety devices; icing may occur. Carbon dioxide, regular dry chemical, large fires: Flood with fine water spray.
<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. Small secondary fires may be brought under control by using carbon dioxide or a dry chemical fire extinguisher and stopping the flow. Cylinders exposed to fire may rupture with violent force. Extinguish 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. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Always stay away from tanks engulfed in fire.
<b>Flammable Properties and Hazards:</b>	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. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.

**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:**

Shut off all sources of ignition. Ventilate the area. For controlling larger flows, personnel may have to wear approach-type protective suits and self-contained breathing apparatus. Flammable vapors may spread from leak and could explode if reignited by sparks or flames. Explosive atmospheres may linger. Before entering areas, especially confined areas, check the atmosphere with an appropriate device. Keep unnecessary people away, isolate hazard areas and deny entry.

**7. HANDLING AND STORAGE****Precautions To Be  
Taken in Handling:**

Avoid inhalation of vapor or mist. Keep away from heat, sparks and flames. Keep away from sources of ignition - No smoking. Use spark-proof tools and explosion proof equipment. Use in a closed system. Secure all lines and equipment. Install check valves or traps to prevent sucking back to the cylinder. Ground all lines and equipment. Leak check the lines and equipment. Have an emergency plan covering 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 the cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder with 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. Never attempt to transfer gases from one container to another.

**Precautions To Be  
Taken in Storing:  
Other Precautions:**

Cylinders should be stored and used in dry, well-ventilated areas away from sources of heat or ignition. Store away from oxidizers.

When handling a product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; stored and used with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Others Limit
106-97-8	Butane	No data.	TLV: (800 ppm) STELs: 1000 ppm	NIOSH: 800 ppm Mexico: 1000 ppm

**Respiratory Equipment  
(Specify Type):**

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Gas displaces the air and causes a deficiency of oxygen and the possibility of asphyxiation. When allowed by a risk assessment Respiratory Protective Equipment (RPE) may be used the selection of the Respiratory Protective Device (RPD) must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected RPD.

**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.
<b>Protective Gloves:</b>	Wear appropriate gloves to prevent skin exposure.
<b>Other Protective Clothing:</b>	Not required under normal use conditions.
<b>Engineering Controls (Ventilation etc.):</b>	Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk.
<b>Work/Hygienic/Maintenance Practices:</b>	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

<b>Physical State:</b>	<input checked="" type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid
<b>Appearance and Odor:</b>	Colorless & unpleasant odor.		
<b>Specific Volume:</b>	0.400 m <sup>3</sup> /kg, 6.4 ft <sup>3</sup> /lb. @ 1 atm, 21.1C.		
<b>Solubility in Water:</b>	61 mg/l (20 °C)		
<b>Freezing Point:</b>	-138 C (-217 F)		
<b>Boiling Point:</b>	-0.5 C (31.1 F)		
<b>Decomposition Temperature:</b>	435 °C		
<b>Autoignition Pt:</b>	405 ° C (761 F)		
<b>Flash Pt:</b>	-60 C (-76 F)		
<b>Method used:</b>	Closed Cup		
<b>Explosive Limits:</b>	Lowerlevel:1.4% (Volume in air)	Upper-level EL:9.3 % (Volume in air)	
<b>Specific Gravity (Water = 1):</b>	0.599		
<b>Density:</b>	2.11 - @ 1 atm at 20.0 C (68.0 F)		
<b>Bulk Density:</b>	NA		
<b>Vapor Pressure (vs. Air or mm Hg):</b>	1557 mmHg @ 20 °C		
<b>Vapor Density(air=1)</b>	2.05		
<b>Evaporation Rate:</b>	NA		
<b>Solubility in Water:</b>	1557 mmHg @ 20 °C		
<b>Saturated Vapor Concentration:</b>	NA		
<b>Viscosity:</b>	NA		
<b>pH:</b>	NA		
<b>Percent Volatile:</b>	NA.		
<b>VOC / Volume:</b>	NA		
<b>Particle Size:</b>	NA		
<b>Heat Value:</b>	NA		
<b>Corrosion Rate:</b>	NA		
<b>Molecular Formula:</b>	C <sub>4</sub> H <sub>10</sub>		
<b>Molar mass:</b>	58.124 g/mol		

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.
<b>Stability:</b>	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
<b>Conditions To Avoid - Instability:</b>	Heat, flames and sparks. No smoking. Minimize contact with material. Containers may rupture or explode if exposed to heat.
<b>Incompatibility Materials to Avoid:</b>	Oxidizing agents, Air.
<b>Hazardous Decomposition or Byproducts:</b>	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.
<b>Possibility of Hazardous Reactions:</b>	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>

Conditions To Avoid - Hazardous Reactions: No data available.

## 11. TOXICOLOGICAL INFORMATION

**Epidemiology:** No information available  
**Teratogenicity:** No information available  
**Reproductive Effects:** No information available  
**Mutagenicity:** No information available  
**Neurotoxicity:** No information available  
**CAS#** **Acute toxicity**  
 106-97-8 LC50, Inhalation, Rat, 658 g/m<sup>3</sup>, 4H  
**Chronic Toxicological Effects:** No data available.

**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:** No data available.  
**Bio accumulative Potential:** No data available. The subject product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.  
**Mobility in Soil:** No data available. Because of its high volatility, the product is unlikely to cause ground or water pollution.

## 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. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor.

## 14. TRANSPORT INFORMATION

**LAND TRANSPORT (US DOT):**  
**DOT Proper Shipping name:** BUTANE  
**DOT Hazard Class:** 2.1 FLAMMABLE GAS  
**UN/NA number:** UN1011

**Label:**



**Sea Transport:**  
**Transport document description (IMDG):**

**UN-No. (IMDG):** UN1011

**Proper Shipping Name (IMDG):** BUTANE

**Transport Hazard Class:** 2.1

**Air Transport:**  
**Transport document description (IATA):**

**UN-No. (IATA):** UN1011

**Proper Shipping Name (IATA):** Butane

Transport Hazard Class: 2.1

**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)
106-97-8	Butane	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
106-97-8	Butane	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 0273; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: No; MN: Yes;

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
106-97-8	Butane	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes - 1011; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - (2)-4; Korea ECL: Yes - KE-03751; Philippines ICCS: Yes; REACH: No - (R), (P), C1, M2; TH- TECI: Yes; TW : Yes; CN: Yes; VN(Draft) : Yes;

**16. OTHER INFORMATION**

<b>Revision Date:</b>	08/22/2024
<b>Additional Information About This Product:</b>	No data available.
<b>NFPA Ratings:</b>	0= Minimal Hazard 1= Slight Hazard 2= Moderate Hazard 3= Serious Hazard 4= Severe Hazard

**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.