

Emergency Telephone Numbers:

Product Name: 13oz Butane But13

REVISION DATE: 28 June 2018

SECTION I PRODUCT IDENTIFICATION / COMPANY INFORMATION

Cas Registry #: 68476-86-8
Chemical Family: PARAFFIN SERIES HYDROCARBON
Chemical Name: n-BUTANE / ISOBUTANE
Chemical Formula: C4H10

SECTION II COMPOSITION / DATA ON COMPONENTS

GHS Classification: Flammable Gases, 1, H220
 Gases Under Pressure – Liquefied Gas, H280

**GHS Label Elements
 Symbol(s):**



Signal Words: Danger

GHS Hazard Statements: **Physical Hazards**
 H220: Extremely flammable gas.
 H280: Contains gas under pressure; may explode if heated.
Gas may reduce oxygen in confined spaces.

Health Hazards

Environmental Hazards

Other Hazards

Rapid evaporation of the liquid may cause frostbite. Vapors are heavier than air and can cause suffocation by reducing available oxygen. May cause cardiac arrhythmia.

GHS Precautionary Statements

Prevention: P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking

Response: P381: Eliminate all ignition sources if safe to do so.

Storage: P410+P403: Protect from sunlight. Store in a well-ventilated place.

SECTION III COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	CAS No.	EINICS No.	TARGET (WT%)
n-BUTANE	106-97-8	203-448-7	>18
ISOBUTANE	75-28-5	200-857-2	<80

SECTION IV FIRST AID MEASURES

Emergency First Aid Procedures

Eye Contact: For liquid contact, irrigate with running water for minimum of 15 minutes. Seek medical attention.

Skin Contact: For liquid contact, warm areas gradually and get medical attention if there is evidence of frost bite or tissue damage. Flush area with lukewarm water. Do not rub affected area. If blistering occurs, apply a sterile dressing. Seek medical attention.

Inhalation: Remove to fresh air. Artificial respiration and/or oxygen may be necessary. Consult a physician.

Ingestion: This material is a gas under normal atmospheric conditions and ingestion is unlikely.

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Most important symptoms and effects

Acute: Anesthetic effects at high concentrations.

Delayed: None known or anticipated. See Section 11 for information on effects from chronic exposure, if any.

Notes to Physician: Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

SECTION V FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, Water mist, Foam, Dry chemical or Carbon Dioxide. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely.

Unusual Fire and Explosion Hazards:

Extremely flammable. Contents under pressure. This material can be ignited by heat, sparks, flames, or other sources of ignition. The vapor is heavier than air. Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits.

NPCA - HMIS RATINGS

HEALTH	1
FLAMMABILITY	4
REACTIVITY	0
PERSONAL PROTECTION	-

(Personal Protection Information To Be Supplied By The User)

SECTION VI ACCIDENTAL RELEASE MEASURES

Steps To Be Taken If Material Is Released or Spilled

Avoid sources of ignition - ventilate area. Use water fog to evaporate or ventilate. Protect body against contact with liquid. Consult local fire authorities.

Personal Precautions: Extremely flammable. Beware of accumulation of gas in low areas or contained areas, where explosive concentrations may occur. Avoid direct contact with material.

Environmental Precautions: Water spray may be useful in minimizing or dispersing vapors

SECTION VII HANDLING AND STORAGE

Precautions for safe handling: Keep away from heat or sources of ignition. Prohibit smoking in areas of storage or use. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8).

Contents are under pressure. Use in well ventilated area.

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WARNING: Unless otherwise specifically indicated, no odorant is added to this product. You cannot depend upon your sense of smell for leak detection

Conditions for safe storage: Use and store this material in cool, dry, well ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area "No Smoking or Open Flame."

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Avoid exposing any part of a compressed-gas container to temperatures above 120F (48.8C).

SECTION VIII EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Component	ACIGH TLV (STEL)	OSHA PEL (TWA)
n-Butane	1000ppm	
Isobutane	1000ppm	

Engineering Controls: Well ventilated area.

Personal Protection:

Eye/Face Protection: The use of eye protection (such as splash goggles) is recommended when there is potential liquid contact to the eye.

Skin Protection: Impervious, insulated gloves recommended.

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor:	CLEAR COLORLESS LIQUEFIED GAS WITH SWEET PETROLEUM ODOR.	
Odor Threshold:	No data	
pH:	Not Applicable	
Melting / Freezing Point:	No data	Initial Boiling Point / Range: 15.5 TO +31.1 F
Flash Point (Method):	-117 F (ESTIMATED)	Evaporation Rate: > 1 (ETHYL ETHER = 1.0)
Lower Explosion Limit:	1.8% (vol.) Gas in air	Upper Explosion Limit: 8.5% (vol.) Gas in air
Vapor Pressure @ 70 °F:	35 PSIG	Vapor Density (air = 1.00): 2.006
Specific Gravity (H2O = 1.00):	0.569	Solubility in Water @ 70 °F: 0.008%
Percent Volatile by Volume:	100%	Auto-ignition temperature: No data
Decomposition Data:	No data	Viscosity: No data

SECTION X STABILITY AND REACTIVITY

Stability:	Stable
Hazardous Polymerization:	Can not occur
Incompatibility (Materials to Avoid):	None.
Hazardous Decomposition Products:	Carbon monoxide, volatile hydrocarbon vapors
Conditions to Avoid:	High heat, spark, and open flames

SECTION XI TOXICOLOGICAL INFORMATION

Effects Of Over Exposure

Ingestion: Aspiration hazard!

Inhalation: Inhalation of vapor may produce anesthetic effects and feeling of euphoria. Prolonged overexposure can cause rapid breathing, headache, dizziness, narcosis, unconsciousness, and death from

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asphyxiation, depending on concentration and time of exposure.

Skin Contact: Contact with evaporating liquid can cause frostbite.

Eye Contact: Liquid can cause severe irritation, redness, tearing, blurred vision, and possible freeze burns.

Specific Target Organ Toxicity (Single Exposure): Not expected to cause organ effects from single exposure.

Specific Target Organ Toxicity (Repeated Exposure): Not expected to cause organ effects from repeated exposure.

Carcinogenicity: Not expected to cause cancer. This substance is not listed as a carcinogen by IARC, NTP or OSHA.

Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.

Reproductive Toxicity: Not expected to cause reproductive toxicity.

Other Comments: High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus.

Information on Toxicological Effects of Components

n-Butane

Target Organs: No systemic or neurotoxic effects were noted in rats exposed to concentrations of butane as high as 9,000 ppm for 28 days.

Reproductive Toxicity: No adverse reproductive or developmental effects were observed in rats exposed to butane; no observed adverse effect level = 12,000 ppm.

Isobutane

Target Organs: No systemic or neurotoxic effects were noted in rats exposed to concentrations of isobutane as high as 9,000 ppm for 28 days.

Reproductive Toxicity: No adverse developmental effects were observed in rats exposed to concentrations of isobutane as high as 9000 ppm. Fertility and mating indices may have been affected at 9000 ppm but no effects were observed at 3000 ppm.

SECTION XII ECOLOGICAL INFORMATION

Toxicity: Petroleum gases will readily evaporate from the surface and would not be expected to have significant adverse effects in the aquatic environment. Classification: No classified hazards.

Persistence and Degradability: The hydrocarbons in this material are expected to be inherently biodegradable. In practice, hydrocarbon gases are not likely to remain in solution long enough for biodegradation to be a significant loss process.

Bioaccumulative Potential: Not expected as having the potential to bioaccumulate.

Mobility in Soil: Due to the extreme volatility of petroleum gases, air is the only environmental compartment in which they will be found. In air, these hydrocarbons undergo photodegradation by reaction with hydroxyl radicals with half-lives ranging from 3.2 days for n-butane to 7 days for propane.

Other Adverse Effects: None anticipated.

SECTION XIII DISPOSAL INFORMATION

Waste Disposal

- (1) Place in emptied container or in emptied trash or recycle bin.

**** Comply With All State and Local Regulations ****

SECTION XIV TRANSPORT INFORMATION

Transport Information

UN1075, 2.1 DOT Sp.10590, LIQUEFIED PETROLEUM GAS

2.1, FLAMMABLE GAS, UN1075 DOT SP-10590
LABELED / PLACARDED FLAMMABLE GAS

SECTION XV REGULATIONS

Regulatory Information

Chemical Inventories

USA TSCA: All components of this product are listed on the TSCA Inventory.

Europe Einecs: All components in this product are listed on EINECS

Canada Domestic Substances List (DSL): This product and/or all of its components are listed on the Canadian DSL.

Australia AICS: All components of this product are listed on AICS.

Korea ECL: All components in this product are listed on the Korean Existing Chemicals Inventory (KECI).

Japan Miti (ENCS): All components of this product are listed on MITI.

SARA Title III:

CERCLA/SARA (Section 302) Extremely Hazardous Substances and TPQs (in pounds):

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

SARA (311, 312) Hazard Class:

Acute Health:	Yes
Chronic Health:	No
Fire Hazard:	Yes
Pressure Hazard:	Yes

SARA (313) Chemicals: Not listed

California Proposition 65: This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65. By-products of combustion of this fuel, contain chemicals known to the state of California to cause cancer, birth defects, and other reproductive harm.

EC Classification:



F+ Extremely flammable

Risk phrases:

12 Extremely flammable.

Safety phrases:

9 Keep container in a well-ventilated place.

SECTION XVI OTHER INFORMATION

Comply with state and local regulations covering butane fuel. Store and use in well-ventilated areas, away from heat or sources of ignition. Prohibit smoking in areas of storage or use.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.