



# Zippo Butane

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Date of Issue: 04/02/2024

Version: 1.0

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Substance  
**Product Name:** Zippo Butane  
**CAS-No.:** 68476-86-8

#### 1.2. Intended Use of the Product

Fuel

#### 1.3. Name, Address, and Telephone of the Responsible Party

Zippo Manufacturing Company  
33 Barbour Street  
Bradford, PA 16701 USA  
Tel +1 814 368 2700  
email: [CR@zippo.com](mailto:CR@zippo.com)

#### 1.4. Emergency Telephone Number

**Emergency Number** : VelocityEHS  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

### SECTION 2: HAZARDS IDENTIFICATION



#### 2.1. Classification of the Substance or Mixture

##### GHS-US/CA Classification

Flammable gases Category 1 H220  
Gases under pressure Liquefied gas H280

#### 2.2. Label Elements

##### GHS-US/CA Labeling

**Hazard Pictograms (GHS-US/CA)** :    
GHS02 GHS04

**Signal Word (GHS-US/CA)** : Danger

**Hazard Statements (GHS-US/CA)** : H220 - Extremely flammable gas.  
H280 - Contains gas under pressure; may explode if heated.

**Precautionary Statements (GHS-US/CA)** : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381 - In case of leakage, eliminate all ignition sources.  
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

#### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Contact with gas escaping the container can cause frostbite.

#### 2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

| Name                                  | Synonyms   | Product Identifier   | % * | GHS Ingredient Classification                |
|---------------------------------------|--|----------------------|-----|--|
| Petroleum gases, liquefied, sweetened | Petroleum gases, liquified, sweetened / Petroleum gases, liquified, sweetened - petroleum gas / Petroleum gases, liquefied, sweetened (A complex combination of hydrocarbons obtained by | (CAS-No.) 68476-86-8 | 100 | Flam. Gas 1, H220<br>Press. Gas (Liq.), H280 |

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|  |   |  |  |  |
|--|---|--|--|--|
|  | <p>subjecting liquefied petroleum gas mix to a sweetening process to convert mercaptans or to remove acidic impurities. It consists of hydrocarbons having carbon numbers predominantly in the range of C3-7 and boiling in the range of approximately -40 to 80°C.) / Petroleum gases, liquefied, sweetened (A complex combination of hydrocarbons obtained by subjecting liquefied petroleum gas mix to a sweetening process to convert mercaptans or to remove acidic impurities. It consists of hydrocarbons having carbon numbers predominantly in the range of C3-7 and boiling in the range of approximately -40-80°C.) / Liquefied petroleum gas, sweetened / Petroleum gases, liquefied, sweetened; Petroleum gas [A complex combination of hydrocarbons obtained by subjecting liquefied petroleum gas mix to a sweetening process to convert mercaptans or to remove acidic impurities. It consists of hydrocarbons having carbon numbers predominantly in the range of C3 through C7 and boiling in the range of approximately -40°C to 80°C (-40°F to 176°F).]</p> |  |  |  |
|--|---|--|--|--|

Full text of H-statements: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First-aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** For brief contact with a small amount: Rewarm with body heat. Get immediate medical advice/attention. For extensive contact or a large amount: Immediately call a poison center/doctor and follow their advice. Specific treatment is urgent, incorrect first-aid practices will aggravate the injury. Protect affected area with a loose cover until proper medical treatment is received.

**Eye Contact:** Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Ingestion is an unlikely route of exposure for a gas. Though risk of ingestion is extremely unlikely, in case of frostbite or freeze burns due to oral exposure seek immediate medical attention.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** May cause frostbite on contact with the liquid.

**Inhalation:** Prolonged exposure may cause irritation.

**Skin Contact:** Prolonged exposure may cause skin irritation. Contact with gas/liquid escaping the container can cause frostbite and freeze burns.

**Eye Contact:** May cause slight irritation to eyes. Contact with gas/liquid escaping the container can cause frostbite, freeze burns, and permanent eye damage.

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**Ingestion:** Not considered a potential route of exposure, but contact with gas/liquid escaping the container can cause freeze burns and frostbite.

**Chronic Symptoms:** None known.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Do not extinguish burning gas if flow cannot be shut off immediately. Extinguish secondary FIRES with appropriate materials.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Extremely flammable gas.

**Explosion Hazard:** May form flammable/explosive vapor-air mixture. Container may explode in heat of fire.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Fight fire remotely due to the risk of explosion.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** May liberate toxic gases. Carbon oxides (CO, CO<sub>2</sub>).

**Other Information:** Use water spray to disperse vapors.

### 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Eliminate every possible source of ignition. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, gas).

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Eliminate ignition sources. Evacuate unnecessary personnel, isolate, and ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Remove ignition sources. Stop leak, if possible without risk. As an immediate precautionary measure, isolate spill or leak area in all directions.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Absorb liquid components with non-combustible liquid-binding material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Ruptured cylinders may rocket. Do not pressurize, cut, or weld containers. Handle empty containers with care because residual vapors are flammable.

**Precautions for Safe Handling:** Avoid prolonged contact with eyes, skin and clothing. Avoid breathing gas. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

**Storage Conditions:** Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Keep in fireproof place.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Halogens. Nitrogen dioxide. Metal Catalysts.

### 7.3. Specific End Use(s)

Fuel

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

### 8.2. Exposure Controls

**Appropriate Engineering Controls:** Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released.

**Personal Protective Equipment:** Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

**Hand Protection:** Wear protective gloves. If material is cold, wear thermally resistant protective gloves.

**Eye and Face Protection:** Chemical safety goggles.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Thermal Hazard Protection:** Wear thermally resistant protective clothing.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

|                                |                           |
|--------------------------------|---------------------------|
| Physical State                 | : Gas                     |
| Appearance                     | : Colorless               |
| Odor                           | : Odorless                |
| Odor Threshold                 | : No data available       |
| pH                             | : No data available       |
| Evaporation Rate               | : No data available       |
| Melting Point                  | : No data available       |
| Freezing Point                 | : No data available       |
| Boiling Point                  | : -24 °C (-11.2 °F)       |
| Flash Point                    | : -91 °C (-131.8 °F)      |
| Auto-ignition Temperature      | : No data available       |
| Decomposition Temperature      | : No data available       |
| Flammability (solid, gas)      | : Extremely flammable gas |
| Lower Flammable Limit          | : 1.8 %                   |
| Upper Flammable Limit          | : 9.5 %                   |
| Vapor Pressure                 | : 2814 hPa (2,110.7 mmHg) |
| Relative Vapor Density at 20°C | : 1.7237                  |
| Relative Density               | : 0.56                    |

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|   |  |
|---|--|
| <b>Specific Gravity</b>                       | : No data available                                  |
| <b>Solubility</b>                             | : Water: Not miscible or difficult to mix.           |
| <b>Partition Coefficient: N-Octanol/Water</b> | : No data available                                  |
| <b>Viscosity</b>                              | : No data available                                  |
| <b>Explosive Properties</b>                   | : Contains gas under pressure; may explode if heated |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity:

Hazardous reactions will not occur under normal conditions.

### 10.2. Chemical Stability:

Contains gas under pressure; may explode if heated.

### 10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

### 10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

### 10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers. Halogens. Nitrogen dioxide. Metal Catalysts.

### 10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: May liberate toxic gases. Carbon oxides (CO, CO<sub>2</sub>).

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

#### LD50 and LC50 Data:

No additional information available

**Skin Corrosion/Irritation:** Not classified

**Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation. Contact with gas/liquid escaping the container can cause frostbite and freeze burns.

**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes. Contact with gas/liquid escaping the container can cause frostbite, freeze burns, and permanent eye damage.

**Symptoms/Injuries After Ingestion:** Not considered a potential route of exposure, but contact with gas/liquid escaping the container can cause freeze burns and frostbite.

**Chronic Symptoms:** None known.

### 11.2. Information on Toxicological Effects - Ingredient(s)

#### LD50 and LC50 Data:

No additional information available

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General:** Not classified.

### 12.2. Persistence and Degradability

**Zippo Butane (68476-86-8)**

|                                      |                  |
|--------------------------------------|------------------|
| <b>Persistence and Degradability</b> | Not established. |
|--------------------------------------|------------------|

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### 12.3. Bioaccumulative Potential

|   |                  |
|---|------------------|
| <b>Zippo Butane (68476-86-8)</b>                          |                  |
| Bioaccumulative Potential                                 | Not established. |
| <b>Petroleum gases, liquefied, sweetened (68476-86-8)</b> |                  |
| Partition coefficient n-octanol/water (Log Pow)           | ≤ 2.8            |

### 12.4. Mobility in Soil

No additional information available

### 12.5. Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Additional Information:** Handle empty containers with care because residual vapors are flammable. Empty gas cylinders should be returned to the vendor for recycling or refilling. Do not puncture or incinerate container.

**Ecology - Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

### 14.1. In Accordance with DOT

Proper Shipping Name : BUTANE  
Hazard Class : 2.1  
Identification Number : UN1011  
Label Codes : 2.1  
ERG Number : 115



### 14.2. In Accordance with IMDG

Proper Shipping Name : BUTANE  
Hazard Class : 2.1  
Identification Number : UN1011  
Label Codes : 2.1  
EmS-No. (Fire) : F-D  
EmS-No. (Spillage) : S-U



### 14.3. In Accordance with IATA

Proper Shipping Name : BUTANE  
Hazard Class : 2.1  
Identification Number : UN1011  
Label Codes : 2.1  
ERG Code (IATA) : 10L



### 14.4. In Accordance with TDG

Proper Shipping Name : BUTANE  
Hazard Class : 2.1  
Identification Number : UN1011  
Label Codes : 2.1



## SECTION 15: REGULATORY INFORMATION

### 15.1. US Federal Regulations

|  |   |
|--|---|
| <b>Zippo Butane (68476-86-8)</b>   |   |
| SARA Section 311/312 Hazard Classes  | Physical hazard - Flammable (gases, aerosols, liquids, or solids)<br>Physical hazard - Gas under pressure |
| <b>Petroleum gases, liquefied, sweetened (68476-86-8)</b>                                  |   |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active |   |

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### 15.2. US State Regulations

Neither this product nor its chemical components appear on any US state lists, or its chemical components are not required to be disclosed.

### 15.3. Canadian Regulations

#### Petroleum gases, liquefied, sweetened (68476-86-8)

Listed on the Canadian DSL (Domestic Substances List)

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 04/02/2024

#### Revision

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

#### GHS Full Text Phrases:

|      |  |
|------|--|
| H220 | Extremely flammable gas                            |
| H280 | Contains gas under pressure; may explode if heated |

### Glossary of Data Source Abbreviations

ATSDR: Agency for Toxic Substances and Disease Registry (U.S. Department of Health and Human Services)

AU\_WES: Australia WES

CHEMVIEW: ChemView (U.S. Environmental Protection Agency)

EC\_RAR: European Commission Renewal Assessment Report

EC\_SCOEL: European Commission Scientific Committee on Occupational Exposure Limits

ECETOC: European Centre for Ecotoxicology and Toxicology of Chemicals Reports

ECHA\_API: European Chemicals Agency API

ECHA\_RAC: ECHA Committee for Risk Assessment

EFSA: European Food Safety Authority

EPA: U.S. Environmental Protection Agency

EPA\_AEGL: Acute Exposure Guideline Levels (U.S. Environmental Protection Agency)

EPA\_FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act Reregistration Eligibility Decision (U.S. Environmental Protection Agency)

EPA\_HPVC: High Production Volume Chemicals (U.S. Environmental Protection Agency)

EPA\_TRED: Risk Assessment for Tolerance Reassessment Eligibility Decision (U.S. Environmental Protection Agency)

EU\_CLH: European Union Harmonised Classification and Labelling Proposal

EU\_RAR: European Union Risk Assessment Report

FOOD\_JOURN: Food Research Journal (1956)

IARC: The International Agency for Research on Cancer

IDLH: National Institute for Occupational Health and Safety Immediately Dangerous to Life or Health Value Profiles

IUCLID: International Uniform Chemical Information Database

JAPAN\_GHS: Japan GHS Basis for Classification Data

JP\_J-CHECK: Japan J-Check

KR\_NIER: South Korea National Institute of Environmental Research Evaluations

NICNAS: Australia National Industrial Chemicals Notification and Assessment Scheme

NIOSH: National Institute for Occupational Health and Safety (U.S. Department of Health and Human Services)

NLM\_CIP: National Library of Medicine ChemID plus database

NLM\_HSDB: National Library of Medicine Hazardous Substance Data Bank

NLM\_PUBMED: National Library of Medicine PubMed database

NTP: National Toxicology Program

NZ\_CCID: New Zealand Chemical Classification and Information Database

OECD\_EHSP: Environment, Health, and Safety Publication (Organisation for Economic Co-operation and Development)

OECD\_SIDS: Screening Information Data Sets (Organisation for Economic Co-operation and Development)

WHO: World Health Organization

*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.*

NA GHS SDS 2015 (Can, US)