

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: September 17, 2018

Revision: September 17, 2018

1 Identification

- **Product identifier**
- **Trade name:** Zippo Butane Fuel
- **CAS Number:**
68476-86-8
- **Recommended use and restriction on use**
- **Recommended use:** Fuel
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Zippo Manufacturing Company
33 Barbour Street
Bradford, PA 16701
Phone: 814-368-2700
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)



2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Gas 1 H220 Extremely flammable gas.
Press. Gas H280 Contains gas under pressure; may explode if heated.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS02 GHS04
- **Signal word:** Danger
- **Hazard statements:**
H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.
- **Precautionary statements:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 Eliminate all ignition sources if safe to do so.
P410+P403 Protect from sunlight. Store in a well-ventilated place.
- **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- **Chemical characterization:** Substances

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- **CAS No. Description**
68476-86-8 Petroleum gases, liquified, sweetened

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Generally the product does not irritate the skin.
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Unlikely route of exposure.
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:** No relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
Treat frost-bitten areas appropriately.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Carbon dioxide
Gaseous extinguishing agents
Water fog / haze
Foam
- **For safety reasons unsuitable extinguishing agents:** Water stream.
- **Special hazards arising from the substance or mixture**
Extremely flammable gas.
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information:** Cool endangered receptacles with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Keep away from ignition sources.
- **Environmental precautions**

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Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Methods and material for containment and cleaning up**

Allow to evaporate.

Absorb liquid components with liquid-binding material.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling**

- **Precautions for safe handling:** Use only in well ventilated areas.

- **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect from heat.

Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

Avoid storage near extreme heat, ignition sources or open flame.

- **Information about storage in one common storage facility:** Store away from oxidizing agents.

- **Further information about storage conditions:** Protect from heat and direct sunlight.

- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Exposure controls**

- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

- **Engineering controls:** Provide adequate ventilation.

- **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.

- **Protection of hands:**

Not required under normal conditions of use.

Wear protective gloves to handle contents of damaged or leaking units.

- **Eye protection:** Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Not required.

- **Limitation and supervision of exposure into the environment**

No relevant information available.

- **Risk management measures** No relevant information available.

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9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Compressed liquefied gas

Color: Colorless

· Odor: Odorless

· Odor threshold: Not determined.

· pH-value: Not determined.

· Melting point/Melting range: Not determined.

· Boiling point/Boiling range: -24 °C (-11.2 °F)

· Flash point: -91 °C (-131.8 °F)

· Flammability (solid, gaseous): Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits

Lower: 1.8 Vol %

Upper: 9.5 Vol %

· Vapor pressure at 21 °C (69.8 °F): 2814 hPa (2,110.7 mm Hg)

· Density:

Relative density: 0.56

Vapor density: 1.7237

Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic: Not determined.

Kinematic: Not determined.

· Other information: No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.

· **Chemical stability:**

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

To avoid thermal decomposition, do not overheat.

· **Possibility of hazardous reactions**

Used empty containers may contain product gases which form explosive mixtures with air.

Reacts with strong oxidizing agents.

Danger of receptacles bursting because of high vapor pressure if heated.

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- Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** Oxidizers
- **Hazardous decomposition products** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:**
No irritant effect.
Contact with rapidly expanding gas may cause burns or frostbite.
Based on available data, the classification criteria are not met.
- **On the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **NTP (National Toxicology Program):**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

Substance is not listed.

· **Probable route(s) of exposure:**

Inhalation.
Eye contact.
Skin contact.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** Does not accumulate in organisms
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Negative ecological effects are, according to the current state of knowledge, not expected.
- **Results of PBT and vPvB assessment**

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- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|--------|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | UN1011 |
| · UN proper shipping name | |
| · DOT, IATA | Butane |
| · ADR, IMDG | BUTANE |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 2.1 |
| · Label | 2.1 |
| · ADR | |
|  | |
| · Class | 2.1 2F |
| · Label | 2.1 |
| · IMDG, IATA | |
|  | |
| · Class | 2.1 |

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· Label	2.1
· Packing group	This UN-number is not assigned a packing group.
· Environmental hazards	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· EMS Number:	F-D,S-U
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

· **Transport/Additional information:**

· **IATA**



Cargo Aircraft Only.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 302 (extremely hazardous substances):**

Substance is not listed.

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act)**

Substance is listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for females:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **EPA (Environmental Protection Agency):**

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Substance is not listed.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **Canadian Domestic Substances List (DSL) (Substances not listed.):**

Substance is listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1: Flammable gases – Category 1

Press. Gas: Gases under pressure – Compressed gas

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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