SAFETY DATA SHEET

1. Identification

Product identifier **Butane BF80**

Other means of identification

Product code WC059

Recommended use Cooking and Culinary Fuel

Recommended restrictions Uses other than the recommended use.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Enterprises

Address 200 Old Wilson Bridge Road
Columbus, OH 43085
United States

E-mail address: SDSRequest@WTHG.com

Telephone number: 1-866-928-2657

CHEMTREC - 24 HOURS: Within US and Canada 800-424-9300
Outside US and Canada +1 703-741-5970 (collect calls accepted)

2. Hazard identification

Physical hazards

Flammable gases	Category 1A
Gases under pressure	Liquefied gas
Simple asphyxiants	Category 1

Health hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statement

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only with adequate ventilation. Do not enter storage areas or confined spaces unless adequately ventilated.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leakage, eliminate all ignition sources.

Storage Keep container tightly closed. Protect from sunlight. Store in a well-ventilated place.

Disposal Not assigned.

Supplemental information Contact with liquefied gas may cause frostbite.

Other hazards None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
N-Butane		106-97-8	60
Iso-Butane		75-28-5	36
Propane		74-98-6	4

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.
Skin contact	Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.
Eye contact	Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Most important symptoms/effects, acute and delayed	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself.
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing respiratory disorders. Provide general supportive measures and treat symptomatically.
General information	First aid personnel must be aware of own risk during rescue. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical powder. Carbon dioxide (CO2). Water fog. Foam.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Extremely flammable gas. Gases may form explosive mixtures with air. Gas may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed such as: Carbon oxides. Hydrocarbons.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply. Keep away outside a 5-mile radius (1/3 mile) if fire is out of control or the container is exposed to a flame.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	Extremely flammable gas. Contents under pressure. Pressurised container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. In the event of a leak evacuate all personnel until ventilation can restore oxygen concentrations to safe levels. Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Wear appropriate personal protective equipment (See Section 8).
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.
Environmental precautions	Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. All equipment used when handling the product must be grounded. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Avoid breathing gas. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value
Iso-Butane (CAS 75-28-5)	STEL	1000 ppm
N-Butane (CAS 106-97-8)	STEL	1000 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended

Components	Type	Value
N-Butane (CAS 106-97-8)	TWA	1000 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Iso-Butane (CAS 75-28-5)	STEL	1000 ppm
N-Butane (CAS 106-97-8)	STEL	1000 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended

Components	Type	Value
Iso-Butane (CAS 75-28-5)	STEL	1000 ppm
N-Butane (CAS 106-97-8)	STEL	1000 ppm

Canada. New Brunswick OELs: Threshold Limit Values (TLVs) Based on the 1991 and 1997 ACGIH TLVs and BEIs Publication (New Brunswick Regulation 91-191)

Components	Type	Value
Iso-Butane (CAS 75-28-5)	STEL	1000 ppm
N-Butane (CAS 106-97-8)	STEL	1000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended

Components	Type	Value
Iso-Butane (CAS 75-28-5)	STEL	1000 ppm
N-Butane (CAS 106-97-8)	STEL	1000 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
N-Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
		1000 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

Components	Type	Value
Iso-Butane (CAS 75-28-5)	15 minute	1250 ppm
	8 hour	1000 ppm
N-Butane (CAS 106-97-8)	15 minute	1250 ppm
	8 hour	1000 ppm
Propane (CAS 74-98-6)	15 minute	1250 ppm
	8 hour	1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Follow standard monitoring procedures.

Appropriate engineering controls Provide adequate ventilation and minimize the risk of inhalation of gas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety glasses or goggles. Face shield is recommended.

Skin protection

Hand protection Wear cold insulating gloves.

Other Wear protective clothing appropriate for the risk of exposure.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4.
WARNING! Air-purifying respirators do not protect workers in oxygen deficient atmospheres.

Thermal hazards Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Physical state Gas.

Form Liquefied gas.

Colour Colourless

Odour May be odorized.

Melting point/freezing point -187 - -138.3 °C (-304.6 - -216.94 °F)

Boiling point or initial boiling point and boiling range -44 - -0.5 °C (-47.2 - 31.1 °F)

Flammability Extremely flammable gas.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) 1.8 % v/v

Explosive limit – upper (%) 8.4 % v/v

Flash point -106 - -70 °C (-158.8 - -94 °F)

Auto-ignition temperature 365 - 430 °C (689 - 806 °F)

Decomposition temperature Not available.

pH Not applicable.

Kinematic viscosity Not available.

Solubility

Solubility (water) 50 - 62 mg/l (25 °C (77 °F))

Partition coefficient (n-octanol/water) (log value)	Not applicable (The product is a mixture).
Vapour pressure	0.28 - 8 bar (21 °C (69.8 °F))
Density and/or relative density	
Relative density	0.501 - 0.549 (Water = 1) (20 °C (68 °F))
Vapour density	1.55 - 2.1 (air = 1)
Particle characteristics	Not available.
Other information	
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

10. Stability and reactivity

Reactivity	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur. May form explosive mixture with air. This product may react with oxidizing agents.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents. Strong acids. Halogens. Nitrates. Nitric acid. Chlorine dioxide. Carbonyl nickel & acid : Explode at 20~40°C.
Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Contact with compressed gas can cause damage (frostbite) due to rapid evaporative cooling.
Eye contact	Direct contact with compressed gas can cause damage (frostbite).
Ingestion	Not likely, due to the form of the product.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
N-Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Rat	658 mg/l, 4 Hours
Propane (CAS 74-98-6)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 80000 ppm, 15 Minutes

Skin corrosion/irritation	Contact with compressed gas can cause damage (frostbite) due to rapid evaporative cooling.
Serious eye damage/eye irritation	Contact with compressed gas can cause damage (frostbite) due to rapid evaporative cooling.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	The product is not expected to be hazardous to the environment.
Persistence and degradability	Not relevant, due to the form of the product.
Bioaccumulative potential	Not relevant, due to the form of the product.

Partition coefficient n-octanol / water (log Kow)

Iso-Butane (CAS 75-28-5)	2.76
N-Butane (CAS 106-97-8)	2.89

Mobility in soil	Not relevant, due to the form of the product.
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN2037
UN proper shipping name	RECEPTACLES, SMALL, CONTAINING GAS OR GAS CARTRIDGES (FLAMMABLE)
Transport hazard class(es)	
Class	2.1
Subsidiary hazard	-
Packing group	-
Environmental hazards	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN2037
UN proper shipping name	Receptacles, small, containing gas or gas cartridges (flammable)
Transport hazard class(es)	
Class	2.1
Subsidiary hazard	-
Label(s)	2.1
Packing group	-
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2037
UN proper shipping name	RECEPTACLES, SMALL, CONTAINING GAS OR GAS CARTRIDGES (FLAMMABLE)

Transport hazard class(es)

Class	2
Subsidiary hazard	-
Packing group	-
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
General information	Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 25-March-2025

Revision date -

Version No. 01

Disclaimer Worthington Enterprises cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.