



Safety Data Sheet

Hydrocarbon Gas Mixture, Liquefied Gas, n.o.s: N-Butane / Propane

SECTION 1: Identification

1.1 Product identifier

Product name Hydrocarbon Gas Mixture, Liquefied Gas, n.o.s: N-Butane / Propane

1.2 Other means of identification

Not available.

1.3 Recommended use of the chemical and restrictions on use

Synthetic/Analytical chemistry.

1.4 Supplier's details

Name	BVV
Address	1251 Frontenac Rd. Naperville, IL 60563 USA
Telephone	331-281-0154
email	support@shopbvv.com

1.5 Emergency phone number(s)

Chemtel
800-255-0154

SECTION 2: Hazard identification

General hazard statement

Extremely flammable gas.

Contains gas under pressure; may explode if heated. May cause frostbite.

May displace oxygen and cause rapid suffocation. May form explosive mixtures with air.

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Flammable gases, Cat. 1
- Gases under pressure, liquefied gas

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H220
H280

Extremely flammable gas
Contains gas under pressure; may explode if heated

Precautionary statement(s)

P210
P377
P381
P403
P410+P403

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
Eliminate all ignition sources if safe to do so.
Store in a well-ventilated place.
Protect from sunlight. Store in a well-ventilated place.

2.3 Other hazards which do not result in classification

Liquid can cause burns similar to frostbite.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. Propane gas

Concentration	Not specified
EC no.	200-827-9
CAS no.	74-98-6
Index no.	601-003-00-5

- Flammable gases, Cat. 1
- Press. Gas

H220	Extremely flammable gas
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2. N-BUTANE

Concentration	Not specified
EC no.	203-448-7
CAS no.	106-97-8
Index no.	601-004-01-8

- Flammable gases, Cat. 1
- Press. Gas
- Carcinogenicity, Cat. 1A

- Germ cell mutagenicity, Cat. 1B

H220	Extremely flammable gas
H340	May cause genetic defects [route]
H350	May cause cancer [route]

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
In case of skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.
In case of eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
If swallowed	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. As this product rapidly becomes a gas when released, refer to the inhalation section.

Personal protective equipment for first-aid responders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms/effects, acute and delayed

Eye contact : Liquid can cause burns similar to frostbite.

Inhalation : No known significant effects or critical hazards.

Ingestion : Ingestion of liquid can cause burns similar to frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Skin contact : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Eye contact : Adverse symptoms may include the following:, frostbite.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:, frostbite.

Ingestion : Adverse symptoms may include the following:, frostbite.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Specific hazards arising from the chemical

Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion.

5.3 Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel"

6.1 Environmental precautions

Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.2 Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Reference to other sections

Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical

(ventilating, lighting and material handling) equipment.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Propane gas (CAS: 74-98-6)

PEL (Inhalation): 1000 ppm (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 1800 mg/m³ (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 1000 ppm (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): 1000 ppm (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

2. N-BUTANE (CAS: 106-97-8 EC: 203-448-7)

8.2 Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields.

Skin protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Thermal hazards

If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely

low temperature materials.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Gas. [Liquefied gas]
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-138°C (-216.4°F) This is based on data for the following ingredient: n-butane. Weighted average: -161.87°C (-259.4°F)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability limits	Not available.
Vapor pressure	Not available.
Vapor density	Highest known value: 2.1 (Air = 1) (n-butane). Weighted average: 1.9 (Air = 1)
Relative density	Not applicable.
Solubility(ies)	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	
Oxidizing properties	

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

N-Butane: LC50 Inhalation Vapor Rat 658000 mg/m³ 4 hours

Skin corrosion/irritation

Contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

Serious eye damage/irritation

Exposure to liquid could result in freezing of the tissues or frostbite.

Respiratory or skin sensitization

No significant respiratory issues.

Germ cell mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

STOT-single exposure

Not available.

STOT-repeated exposure

Not available.

Aspiration hazard

Not available.

SECTION 12: Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Propane: Low

Mobility in soil

Not available.

Results of PBT and vPvB assessment

Not available.

Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

Disposal of the product

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal

legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty QEG-owned pressure vessels should be returned to QEG. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

DOT (US)

UN Number: UN1965

Class: 2.1

Packing Group: -

Proper Shipping Name: Hydrocarbon Gas Mixture, Liquefied Gas, n.o.s

Environmental hazards: No.

IMDG

UN Number: UN1965

Class: 2.1

Packing Group: -

Proper Shipping Name: Hydrocarbon Gas Mixture, Liquefied Gas, n.o.s

Environmental hazards: No.

IATA

UN Number: UN1965

Class: 2.1

Packing Group: -

Proper Shipping Name: Hydrocarbon Gas Mixture, Liquefied Gas, n.o.s

Environmental hazards: No.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

New Jersey Right To Know Components

Common name: PROPANE

CAS number: 74-98-6

Pennsylvania Right To Know Components

Chemical name: Propane

CAS number: 74-98-6

Canadian Domestic Substances List (DSL)

Chemical name: Propane

CAS: 74-98-6

New Jersey Right To Know Components

Common name: BUTANE

CAS number: 106-97-8

Pennsylvania Right To Know Components

Chemical name: Butane

CAS number: 106-97-8

Canadian Domestic Substances List (DSL)

Chemical name: Butane

CAS: 106-97-8

HMIS Rating

Hydrocarbon Gas Mixture, Liquefied Gas, n.o.s: N-Butane / Propane	
HEALTH	* 1
FLAMMABILITY	4
PHYSICAL HAZAR	3
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.