

QUALITY EXTRACTIONS GROUP, LLC

Safety Data Sheet Butane

SECTION 1: Identification

1.1 Product identifier

Product name Butane

Product number NBUT

Brand QEG - Diversified

1.2 Other means of identification

Butane, Normal Butane, N-butane

1.3 Recommended use of the chemical and restrictions on use

Instrument Grade 99.5+% pure solvent for botanical extraction, high purity specialty fuel additive

1.4 Supplier's details

Name Quality Extractions Group, LLC

Address 2533 Tracy Road

Northwood OH 43619

USA

Telephone 567-698-9802

email info@qualityextractions.com

1.5 Emergency phone number(s)

ChemTrec 1-800-424-9300

SECTION 2: Hazard identification

General hazard statement

Extremely flammable gas.

May form explosive mixtures with air.

Contains gas under pressure; may explode if heated.

May displace oxygen and cause rapid suffocation.

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)

H280 Contains gas under pressure; may explode if heated

H220 Extremely flammable gas

May displace oxygen and cause rapid suffocation

Precautionary statement(s)

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

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.

P403 Store in a well-ventilated place.

2.3 Other hazards which do not result in classification

In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula C4H10
Other names / synonyms N-Butane

Hazardous components

1. N-BUTANE

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

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

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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. 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 As this product is a gas, 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: No known significant effects or critical hazards. Inhalation: : No known significant effects or critical hazards. Skin Contact: : No known significant effects or critical hazards.

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

Injestion: Liquid may cause internal burns similar to frostbite.

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

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use extinguishing media appropriate for surrounding fire.

5.2 Specific hazards arising from the chemical

Contains gas under pressure. Extremely flammable. If exposed to heat or a fire, a pressure increase will occur and the container may release flammable gas, with the risk of subsequent 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

6.1 Personal precautions, protective equipment and emergency procedures

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. 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.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Contact emergency personnel immediately. Contain and stop leak if possible. Use only spark proof-and explosion-proof tools and equipment. Flammable vapors will rise from liquid product and are heavier than air.

Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. 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.

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. 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 sideshields.

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. 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

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. 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.

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. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)

Odor

Odor threshold

рΗ

Melting point/freezing point

Initial boiling point and boiling range

Flash point Evaporation rate

Flammability (solid, gas)

Upper/lower flammability limits

Vapor pressure Vapor density Relative density Solubility(ies)

Partition coefficient: n-octanol/water

Auto-ignition temperature Decomposition temperature

Liquefied gas under pressure, vapor under pressure

Not Available. Not Available. Not Available. -138 C / -216 F

-138 C / -216 F Not Available. Not Available. Not Available.

Extremely flammable vapors

Lower: 1.86 Upper: 8.41 17 psi 2.1

Not Available. Not Available. Not Available. Not Available. Not Available.

Viscosity Explosive properties Oxidizing properties Not Available. Not Available. Not Available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data available.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

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

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

LC50 Inhallation of vapor; Rat; 660,000 mg/m3; 4 hours.

Skin corrosion/irritation

Not available.

Serious eye damage/irritation

Not available.

Respiratory or skin sensitization

Not available.

Germ cell mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Summary of evaluation of the CMR properties

Not available.

STOT-single exposure

Not available.

STOT-repeated exposure

Not available.

Aspiration hazard

Not available.

Additional information

Not available.

SECTION 12: Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

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 Quality Extractions Group-owned pressure vessels should be returned to Quality Extractions Group. 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: UN1011

Class: 2.1

Packing Group: --

Proper Shipping Name: Butane

Reportable quantity (RQ): Not available.

Marine pollutant: No

Poison inhalation hazard: No

IMDG

UN Number: UN1011

Class: 2.1

Packing Group: --

EMS Number: Not available. Proper Shipping Name: Butane

IATA

UN Number: UN1011

Class: 2.1

Packing Group: --

Proper Shipping Name: Butane

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: BUTANE CAS number: 106-97-8

Pennsylvania Right To Know Components

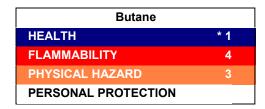
Chemical name: Butane CAS number: 106-97-8

Canadian Domestic Substances List (DSL)

Chemical name: Butane

CAS: 106-97-8

HMIS Rating



NFPA Rating



SECTION 16: Other information

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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.