



## QUALITY EXTRACTIONS GROUP, LLC

### Safety Data Sheet

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

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#### SECTION 1: Identification

##### 1.1 Product identifier

Product name Hydrocarbon Gas Mixture, Liquefied Gas, n.o.s: Isobutane / 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 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  
800-424-9300

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#### 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

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

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.

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

##### 1. Isobutane

Concentration	Not specified
EC no.	200-857-2
CAS no.	75-28-5
Index no.	601-004-01-8

- Flammable gases, Cat. 1
- Press. Gas
- Carcinogenicity, Cat. 1A
- Germ cell mutagenicity, Cat. 1B
- Flammable liquids, Cat. 2
- Flammable liquids, Cat. 1

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

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#### 2. 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

#### 3. 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]

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## 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.



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#### 6.1 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"

#### 6.2 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).

#### 6.3 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.

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## 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.

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## SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### 1. Isobutane (CAS: 75-28-5 EC: 200-857-2)

Limit val - 8 hr (Inhalation): 1000 ppm / 8 hours; USA (OSHA)

OSHA Annotated Table Z-1, [www.osha.gov](http://www.osha.gov)

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

Limit val - ST (Inhalation): 1000 ppm / 10 hours; USA (NIOSH)

#### **2. Propane gas (CAS: 74-98-6)**

PEL (Inhalation): 1000 ppm (OSHA)

OSHA Annotated Table Z-1, [www.osha.gov](http://www.osha.gov)

PEL (Inhalation): 1800 mg/m<sup>3</sup> (OSHA)

OSHA Annotated Table Z-1, [www.osha.gov](http://www.osha.gov)

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

OSHA Annotated Table Z-1, [www.osha.gov](http://www.osha.gov)

REL (Inhalation): 1000 ppm (NIOSH)

OSHA Annotated Table Z-1, [www.osha.gov](http://www.osha.gov)

#### **3. 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. 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**

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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.

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## 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	

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## 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.

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#### SECTION 11: Toxicological information

##### Information on toxicological effects

##### Acute toxicity

Isobutane: LC50 Inhalation Vapor Rat 658000 mg/m<sup>3</sup> 4 hours

N-Butane: LC50 Inhalation Vapor Rat 658000 mg/m<sup>3</sup> 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.

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#### SECTION 12: Ecological information

##### Toxicity

Not available.

##### Persistence and degradability

Not available.

##### Bioaccumulative potential

Isobutane: Low

Propane: Low

N-Butane: Low

##### Mobility in soil

Not available.



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#### Results of PBT and vPvB assessment

Not available.

#### Other adverse effects

No known significant effects or critical hazards.

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## 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.

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## 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.

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## 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: ISOBUTANE

CAS number: 75-28-5

#### Pennsylvania Right To Know Components

Chemical name: ISOBUTANE

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CAS number: 75-28-5

#### Canadian Domestic Substances List (DSL)

Chemical name: ISOUTANE, Propane, 2-methyl-

CAS: 75-28-5

#### 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: Isobutane / N-Butane / Propane	
<b>HEALTH</b>	<b>* 1</b>
<b>FLAMMABILITY</b>	<b>4</b>
<b>PHYSICAL HAZARD</b>	<b>3</b>
<b>PERSONAL PROTECTION</b>	

#### NFPA Rating

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## 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.