



QUALITY EXTRACTIONS GROUP, LLC

Safety Data Sheet Isobutane

SECTION 1: Identification

1.1 Product identifier

Product name	Isobutane
Product number	ISO
Brand	QEG - Diversified

1.2 Other means of identification

Propane, 2-methyl-; Propane, 2-methyl- (isobutane); 2-Methylpropane; Propane, 2-methyl; Methyl-2 propane; Trimethylmethane; 1,1-Dimethylethane

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
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 cause frostbite.
May displace oxygen and cause rapid suffocation.

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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
P308+P313
P377
P381
P403
P410+P403

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
IF exposed or concerned: Get medical advice/attention.
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

3.1 Substances

Formula	C4H10
Molecular weight	58.12
Other names / synonyms	ISOBUTANE

Hazardous components

1. Isobutane

Concentration	99.5 % (weight)
EC no.	200-857-2
CAS no.	75-28-5
Index no.	601-004-01-8

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

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General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Liquid can cause burns similar to frostbite.

Inhalation: No known significant effects or critical hazards.

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

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

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

Over-exposure signs/symptoms

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.

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

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

Specific treatments : No specific treatment.

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Protection of first-aiders : 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.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use extinguishing agent appropriate for 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. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

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. 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.

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. Note: see

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

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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. 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

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.

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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.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Liquefied gas under pressure, vapor under pressure
Odor	Not available.
Odor threshold	Not Available.
pH	Not Available.
Melting point/freezing point	-138 C / -216 F
Initial boiling point and boiling range	Not Available.
Flash point	Not Available.
Evaporation rate	Not Available.
Flammability (solid, gas)) : Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials
Upper/lower flammability limits	Lower: 1.86% Upper: 8.41%
Vapor pressure	17 psi
Vapor density	2.1
Relative density	Not Available.
Solubility(ies)	Not Available.
Partition coefficient: n-octanol/water	Not Available.
Auto-ignition temperature	Not Available.
Decomposition temperature	Not Available.
Viscosity	Not Available.
Explosive properties	Not Available.
Oxidizing properties	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. Do not allow gas to accumulate in low or confined areas.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

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

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

LC50 Inhalation Vapor Rat 658000 mg/m³ 4 hours

Skin corrosion/irritation

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

Serious eye damage/irritation

Liquid can cause burns similar to frostbite.

Respiratory or skin sensitization

No significant respiratory issues

Germ cell mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Summary of evaluation of the CMR properties

No known significant effects or critical hazards.

STOT-single exposure

No known significant effects or critical hazards

STOT-repeated exposure

No known significant effects or critical hazards

Aspiration hazard

No known significant effects or critical hazards

SECTION 12: Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Low.

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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.

Disposal of contaminated packaging

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: 1969

Class: 2.1

Packing Group: --

Proper Shipping Name: ISOBUTANE

Reportable quantity (RQ): Not available.

Marine pollutant: No

Poison inhalation hazard: No

IMDG

UN Number: 1969

Class: 2.1

Packing Group: --

EMS Number: Not available.

Proper Shipping Name: ISOBUTANE

IATA

UN Number: 1969

Class: 2.1

Packing Group: --

Proper Shipping Name: ISOBUTANE

SECTION 15: Regulatory information

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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

CAS number: 75-28-5

Canadian Domestic Substances List (DSL)

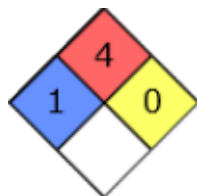
Chemical name: ISOBUTANE, Propane, 2-methyl-

CAS: 75-28-5

HMIS Rating

Isobutane	
HEALTH	* 1
FLAMMABILITY	4
PHYSICAL HAZARD	3
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Quality Extraction Group, LLC be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Quality Extraction Group, LLC has been advised of the possibility of such damages.