Isobutane (Commercial Grade)

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Date of Issue: 08/16/2024 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Isobutane (Commercial Grade)

Synonyms: 2-Methylpropane

1.2. Intended Use of the Product

Industrial Uses

1.3. Name, Address, and Telephone of the Responsible Party

Company

Williams Inc.
One Williams Center
Tulsa, OK 74172
855-945-5762
www.williams.com
ehs@williams.com

1.4. Emergency Telephone Number

CHEMTREC:
1-800-424-9300 (US/Canada)
+01 703-527-3887 (International)
Security.OperationsCenter@williams.com

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Flammable gases Category 1	H220
Gases under pressure Liquefied gas	H280
Simple Asphyxiant	
Hazardous to the aquatic environment - Acute Hazard Category 3	H402
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :

GHS02 GHS04

Signal Word (GHS-US/CA) : Danger

Hazard Statements (GHS-US/CA) : H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.
H402 - Harmful to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.
May displace oxygen and cause rapid suffocation.

Precautionary Statements (GHS-US/CA) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - In case of leakage, eliminate all ignition sources.
P403 - Store in a well-ventilated place.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Contact with gas escaping the container can cause frostbite.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Isobutane	2-Methylpropane / Propane, 2-methyl- / ISOBUTANE / R600a / isobutane	(CAS-No.) 75-28-5	> 95	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Simple Asphyxiant
n-Butane	Butane / BUTANE	(CAS-No.) 106-97-8	< 5	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Simple Asphyxiant
Propane	Normal propane / PROPANE / n-Propane / R290	(CAS-No.) 74-98-6	< 3	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Simple Asphyxiant
Ethanethiol	Ethyl mercaptan / Ethyl hydrosulfide / Ethyl sulfhydrate / Ethyl thioalcohol / Thioethanol / Thioethyl alcohol / ethanethiol	(CAS-No.) 75-08-1	< 0.1	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:vapor), H332 Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%). Composition is variable.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). First aid personnel should wear appropriate protective equipment during any rescue.

Inhalation: First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. If frostbite or freezing from exposure to gas/liquid escaping the container occurs: For brief contact with a small amount: Rewarm with body heat. Get immediate medical advice/attention. For extensive contact or a large amount: Immediately call a poison center/doctor and follow their advice. Specific treatment is urgent, incorrect first-aid practices will aggravate the injury. Protect affected area with a loose cover until proper medical treatment is received.

Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists. If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Asphyxia by lack of oxygen: risk of death. May cause frostbite on contact with the liquid.

Inhalation: In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death.

Skin Contact: Contact with gas/liquid escaping the container can cause frostbite and freeze burns.

Eye Contact: Contact with gas/liquid escaping the container can cause frostbite, freeze burns, and permanent eye damage.

Ingestion: Not considered a potential route of exposure, but contact with gas/liquid escaping the container can cause freeze burns and frostbite.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Do not extinguish burning gas if flow cannot be shut off immediately. Extinguish secondary FIRES with appropriate materials.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Extremely flammable gas. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.

Explosion Hazard: May form flammable/explosive vapor-air mixture. Container may explode in heat of fire. Vapors are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks) and form explosive mixtures with air.

Reactivity: May react violently with halogens.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Fight fire remotely due to the risk of explosion. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Remove containers from fire area if this can be done without risk. Use water spray or fog for cooling exposed containers. If possible, avoid spraying cold areas of equipment to avoid rapid freezing of water, which can result in heavy icing and possible blockage of pressure release valves. Withdraw immediately if the venting safety device is operating or there is any discoloration of tank due to fire. After the fire has been extinguished, explosive, toxic atmospheres may linger. Before entering such an area, especially confined areas, check the atmosphere with an appropriate monitoring device.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Sulfur oxides.

Other Information: Use water spray to disperse vapors. Do not allow run-off from fire fighting to enter drains or water courses.

5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Eliminate every possible source of ignition. Do not get in eyes, on skin, or on clothing. Do not breathe Gas, vapors. Ensure adequate ventilation: gas will displace oxygen and cause rapid suffocation in confined areas.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Non-emergency personnel should evacuate the area of the spill and only enter after emergency peresonnel have declared the area safe to enter.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: First, eliminate ignition sources, evacuate unnecessary personnel, isolate, and ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: As an immediate precautionary measure, isolate spill or leak area in all directions. Stop leak, if possible without risk.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Use only non-sparking tools. Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Absorb any liquid components with non-combustible liquid-binding material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Asphyxiating gas at high concentrations. Do not pressurize, cut, or weld containers. Ruptured cylinders may rocket. Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Do not breathe gas/vapors. Avoid prolonged contact with eyes, skin and clothing. Keep away from heat, sparks, and flame. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion. Close valve after each use and when empty. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Keep in fireproof place. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Halogens.

7.3. Specific End Use(s)

Industrial Uses

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Propane (74-98-6)		
USA ACGIH	ACGIH chemical category	Simple asphyxiant See Appendix F: Minimal Oxygen Content
USA OSHA	OSHA PEL (TWA) [1]	1800 mg/m³
USA OSHA	OSHA PEL (TWA) [2]	1000 ppm
USA NIOSH	NIOSH REL (TWA)	1800 mg/m³
USA NIOSH	NIOSH REL TWA [ppm]	1000 ppm
USA IDLH	IDLH [ppm]	2100 ppm (10% LEL)
Alberta	OEL TWA [ppm]	1000 ppm
Nunavut	OEL STEL [ppm]	1250 ppm
Nunavut	OEL TWA [ppm]	1000 ppm
Northwest Territories	OEL STEL [ppm]	1250 ppm
Northwest Territories	OEL TWA [ppm]	1000 ppm
Québec	VEMP (OEL TWA)	1800 mg/m³
Québec	VEMP (OEL TWA) [ppm]	1000 ppm
Saskatchewan	OEL STEL [ppm]	1250 ppm
Saskatchewan	OEL TWA [ppm]	1000 ppm

Ethanethiol (75-08-1)		
USA ACGIH	ACGIH OEL TWA [ppm]	0.5 ppm
USA OSHA	OSHA PEL (Ceiling)	25 mg/m³
USA OSHA	OSHA PEL C [ppm]	10 ppm
USA NIOSH	NIOSH REL (Ceiling)	1.3 mg/m³
USA NIOSH	NIOSH REL C [ppm]	0.5 ppm
USA IDLH	IDLH [ppm]	500 ppm
Alberta	OEL TWA	1.3 mg/m³
Alberta	OEL TWA [ppm]	0.5 ppm
British Columbia	OEL TWA [ppm]	0.5 ppm
Manitoba	OEL TWA [ppm]	0.5 ppm
New Brunswick	OEL TWA	1.3 mg/m³

New Brunswick	OEL TWA [ppm]	0.5 ppm
Newfoundland & Labrador	OEL TWA [ppm]	0.5 ppm
Nova Scotia	OEL TWA [ppm]	0.5 ppm
Nunavut	OEL STEL [ppm]	1.5 ppm
Nunavut	OEL TWA [ppm]	0.5 ppm
Northwest Territories	OEL STEL [ppm]	1.5 ppm
Northwest Territories	OEL TWA [ppm]	0.5 ppm
Ontario	OEL TWA [ppm]	0.5 ppm
Prince Edward Island	OEL TWA [ppm]	0.5 ppm
Québec	VEMP (OEL TWA)	1.3 mg/m³
Québec	VEMP (OEL TWA) [ppm]	0.5 ppm
Saskatchewan	OEL STEL [ppm]	1.5 ppm
Saskatchewan	OEL TWA [ppm]	0.5 ppm
Yukon	OEL C	7.6 mg/m³
Yukon	OEL Ceiling [ppm]	3 ppm

Isobutane (75-28-5)		
USA ACGIH	ACGIH OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
USA NIOSH	NIOSH REL (TWA)	1900 mg/m³
USA NIOSH	NIOSH REL TWA [ppm]	800 ppm
British Columbia	OEL STEL [ppm]	1000 ppm (Butane, all isomers)
Manitoba	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
Newfoundland & Labrador	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
Nova Scotia	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
Nunavut	OEL STEL [ppm]	1250 ppm (Butane, all isomers)
Nunavut	OEL TWA [ppm]	1000 ppm (Butane, all isomers)
Northwest Territories	OEL STEL [ppm]	1250 ppm (Butane, all isomers)
Northwest Territories	OEL TWA [ppm]	1000 ppm (Butane, all isomers)
Ontario	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, all isomers)
Prince Edward Island	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
Saskatchewan	OEL STEL [ppm]	1250 ppm (Butane, all isomers)
Saskatchewan	OEL TWA [ppm]	1000 ppm (Butane, all isomers)

n-Butane (106-97-8)		
USA ACGIH	ACGIH OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
USA NIOSH	NIOSH REL (TWA)	1900 mg/m³
USA NIOSH	NIOSH REL TWA [ppm]	800 ppm
USA IDLH	IDLH [ppm]	1600 ppm (>10% LEL)
Alberta	OEL TWA [ppm]	1000 ppm
British Columbia	OEL STEL [ppm]	1000 ppm (Butane, all isomers)
Manitoba	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
New Brunswick	OEL TWA	1900 mg/m³
New Brunswick	OEL TWA [ppm]	800 ppm
Newfoundland & Labrador	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
Nova Scotia	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
Nunavut	OEL STEL [ppm]	1250 ppm (Butane, all isomers)
Nunavut	OEL TWA [ppm]	1000 ppm (Butane, all isomers)
Northwest Territories	OEL STEL [ppm]	1250 ppm (Butane, all isomers)
Northwest Territories	OEL TWA [ppm]	1000 ppm (Butane, all isomers)
Ontario	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, all isomers)
Prince Edward Island	OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, isomers)
Québec	VEMP (OEL TWA)	1900 mg/m³
Québec	VEMP (OEL TWA) [ppm]	800 ppm

Saskatchewan	OEL STEL [ppm]	1250 ppm (Butane, all isomers)
Saskatchewan	OEL TWA [ppm]	1000 ppm (Butane, all isomers)
Yukon	OEL STEL	1600 mg/m³
Yukon	OEL STEL [ppm]	750 ppm
Yukon	OEL TWA	1400 mg/m³
Yukon	OEL TWA [ppm]	600 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released. Oxygen detectors should be used when asphixiating gases may be released. Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection. Respiratory protection of the dependent type.

Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles. Faceshield as determined by task.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: An NIOSH-approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.

Thermal Hazard Protection: Wear thermally resistant protective clothing. If material is cold, wear thermally resistant protective gloves.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	:	Gas
Appearance	:	Colorless
Odor	:	Normally odorless, pungent odor if odorizing agent is added
Odor Threshold	:	No data available
pH	:	No data available
Evaporation Rate	:	20.6 (Air = 1)
Melting Point	:	No data available
Freezing Point	:	No data available
Boiling Point	:	-12 °C (10.4 °F)
Flash Point	:	-83 °C (-117.4 °F)
Auto-ignition Temperature	:	> 460 °C (860 °F)
Decomposition Temperature	:	No data available
Flammability (solid, gas)	:	Extremely Flammable Gas
Lower Flammable Limit	:	1.8 %
Upper Flammable Limit	:	8.4 %
Vapor Pressure	:	2350 mm Hg (45.4 psi)
Relative Vapor Density at 20°C	:	No data available
Relative Density	:	0.563 (Water = 1)
Specific Gravity	:	No data available
Solubility	:	Water: Not miscible or difficult to mix
Partition Coefficient: N-Octanol/Water	:	No data available
Viscosity	:	No data available
Explosive Properties	:	Contains gas under pressure; may explode if heated

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

May react violently with halogens.

10.2. Chemical Stability:

Contains gas under pressure; may explode if heated.

10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers. Halogens.

10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Carbon oxides (CO, CO_2). Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data:

No additional information available

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death.

Symptoms/Injuries After Skin Contact: Contact with gas/liquid escaping the container can cause frostbite and freeze burns.

Symptoms/Injuries After Eye Contact: Contact with gas/liquid escaping the container can cause frostbite, freeze burns, and permanent eye damage.

Symptoms/Injuries After Ingestion: Not considered a potential route of exposure, but contact with gas/liquid escaping the container can cause freeze burns and frostbite.

Chronic Symptoms: None expected under normal conditions of use.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Propane (74-98-6)	
LC50 Inhalation Rat	> 800000 ppm (Exposure time: 15 min)
Ethanethiol (75-08-1)	
LD50 Oral Rat	682 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	11.23 mg/l/4h
n-Butane (106-97-8)	
LC50 Inhalation Rat	30957 mg/m³ (Exposure time: 4 h)
LC50 Inhalation Rat	276798.8 ppm

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Harmful to aquatic life with long lasting effects.

Ethanethiol (75-08-1)	
LC50 Fish 1	2.2 mg/l
EC50 - Crustacea [1]	90 – 280 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 - Crustacea [2]	0.09 – 0.28 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
NOEC Chronic Crustacea	0.009 mg/l

12.2. Persistence and Degradability

Isobutane (Commercial Grade)	
Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

Isobutane (Commercial Grade)	
Bioaccumulative Potential	Not established.

Propane (74-98-6)	
Partition coefficient n-octanol/water (Log Pow)	1.09 at 20 °C (at pH 7)

Ethanethiol (75-08-1)	
Partition coefficient n-octanol/water (Log Pow)	1.5 at 20 °C (at pH 7)

Isobutane (75-28-5)	
BCF Fish 1	1.57 – 1.97
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 at 20 °C (at pH 7)

n-Butane (106-97-8)	
Partition coefficient n-octanol/water (Log Pow)	2.31 at 20 °C (at pH 7)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable. Empty gas cylinders should be returned to the vendor for recycling or refilling. Do not puncture or incinerate container.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : LIQUEFIED PETROLEUM GAS, NON-DORIZED
Hazard Class : 2.1
Identification Number : UN1075
Label Codes : 2.1
ERG Number : 115

14.2. In Accordance with IMDG

Proper Shipping Name : LIQUEFIED PETROLEUM GAS, NON-ODORIZED
Hazard Class : 2.1
Identification Number : UN1075
Label Codes : 2.1
EmS-No. (Fire) : F-D
EmS-No. (Spillage) : S-U

14.3. In Accordance with IATA

Proper Shipping Name : LIQUEFIED PETROLEUM GAS, NON-ODORIZED
Hazard Class : 2.1
Identification Number : UN1075
Label Codes : 2.1
ERG Code (IATA) : 10L

14.4. In Accordance with TDG

Proper Shipping Name : LIQUEFIED PETROLEUM GAS, NON-ODORIZED
Hazard Class : 2.1
Identification Number : UN1075
Label Codes : 2.1

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Isobutane (Commercial Grade)	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Physical hazard - Gas under pressure Health hazard - Simple asphyxiant

Propane (74-98-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Ethanethiol (75-08-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Isobutane (75-28-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

n-Butane (106-97-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

15.2. US State Regulations

Propane (74-98-6)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Massachusetts - Right To Know List

Ethanethiol (75-08-1)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Massachusetts - Right To Know List

Isobutane (75-28-5)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Massachusetts - Right To Know List

n-Butane (106-97-8)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Massachusetts - Right To Know List

15.3. Canadian Regulations

Propane (74-98-6)
Listed on the Canadian DSL (Domestic Substances List)

Ethanethiol (75-08-1)
Listed on the Canadian DSL (Domestic Substances List)

Isobutane (75-28-5)
Listed on the Canadian DSL (Domestic Substances List)

n-Butane (106-97-8)
Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 01/27/2023

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

H220	Extremely flammable gas
H224	Extremely flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)