Iso-butane

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015.

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SECTION 1: Identification

1.1. Product identifier

Product form : Substance

Substance name : Iso-butane

CAS No : 75-28-5

Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Petroleum distillate.

1.3. Details of the supplier of the safety data sheet

NGL Supply Co., Ltd.
550, 435 – 4th Avenue SW
Calgary, Alberta T2P 3A8 - Canada

1.4. Emergency telephone number

Emergency number : CHEMTREC 1 (800) 424-9300
CANUTEC (613) 996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Simple Asphyxiant

Flammable Gas 1

Gases under pressure – Liquefied gas

2.2. Label elements

GHS-US and GHS-CA labeling

Hazard pictograms (GHS-US and GHS-CA) :

GHS02 GHS04

Signal word (GHS-US and GHS-CA) : Danger

Hazard statements (GHS-US and GHS-CA) : May displace oxygen and cause rapid suffocation. Extremely flammable gas. Contains gas under pressure; may explode if heated.

Precautionary statements (GHS-US and GHS-CA) : 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. Protect from sunlight. Store in a well-ventilated place.

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS US and GHS-CA)

Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%
Isobutane	(CAS No) 75-28-5	100

3.2. Mixture

Not applicable.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water.Thaw frosted parts with lukewarm water. If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory tract irritation. Excessive inhalation may cause central nervous system effects (headache, dizziness, tremors, loss of consciousness). May cause asphyxiation.

Symptoms/injuries after skin contact : Not a normal route of exposure. May cause frostbite burns to the skin and eyes.

Symptoms/injuries after eye contact : Not a normal route of exposure. May cause frostbite burns to the skin and eyes.

Symptoms/injuries after ingestion : Not a normal route of exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Powder. Water spray. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable gas. Products of combustion may include, and are not limited to: oxides of carbon.

Explosion hazard : May form flammable/explosive vapor-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

Firefighting instructions : Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Fight fire remotely due to the risk of explosion.

Protection during firefighting : Containers may explode when heated. Use water spray to keep fire-exposed containers cool. For large fires, flood fire area with large quantities of water, while knocking down vapours with water fog. Vapours may be heavier than air and may travel along the ground to a distant ignition source and flash back. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use special care to avoid static electric charges. Eliminate every possible source of ignition. Ruptured cylinders may rocket. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Eliminate sources of ignition. Stop leak if safe to do so. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for cleaning up : Provide ventilation. Keep upwind. Evacuate area and remove ignition sources.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Keep away from sources of ignition - No smoking.

Precautions for safe handling	:	Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharge. Use explosion-proof equipment. Use only non-sparking tools. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Use only in well-ventilated areas. When using do not eat, drink or smoke.
Hygiene measures	:	Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	:	Keep out of the reach of children. Store away from direct sunlight or other heat sources. Keep container tightly closed and in a well-ventilated place. Keep cool.
Storage area	:	Store in a well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Isobutane (75-28-5)		
ACGIH	ACGIH STEL (ppm)	1000 ppm
OSHA	Not applicable.	
NIOSH	NIOSH REL (TWA) (mg/m³)	1900 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	800 ppm

8.2. Exposure controls

Appropriate engineering controls	:	Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Hand protection	:	Wear suitable gloves.
Eye protection	:	Safety glasses or goggles are recommended when using product.
Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment. 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.
Environmental exposure controls	:	Maintain levels below Community environmental protection thresholds.
Other information	:	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Gas
Appearance	:	No data available.
Color	:	Colourless
Odor	:	Odourless
Odor threshold	:	No data available
pH	:	Not applicable
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	< -20 °C (< -4 °F)
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Flammable gases
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	2100 hPa at 20 °C (68 °F)
Relative density	:	0.523 - 0.524 g/cm3 @ 15 °C (59 °F)
Relative vapor density at 20 °C	:	2.06

Solubility	:	Water: 54.6 mg/l
Partition coefficient: n-octanol/water	:	2.88 @ 20 °C (68 °F)
Auto-ignition temperature	:	≈ 460 °C (≈ 860 °F)
Decomposition temperature	:	No data available
Viscosity	:	Not applicable.
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Extremely flammable gas. Contains gas under pressure; may explode if heated.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use. Explosion hazard when exposed to nickel carbonyl/oxygen mixtures.

10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Sparks. Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Iso-butane (75-28-5)	
LD50 oral rat	No data available
LD50 dermal rabbit	No data available
LC50 inhalation rat	658 mg/l/4h

Skin corrosion/irritation	:	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	:	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	:	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	:	Based on available data, the classification criteria are not met.
Carcinogenicity	:	Based on available data, the classification criteria are not met.
Reproductive toxicity	:	Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	:	Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	:	Based on available data, the classification criteria are not met.
Aspiration hazard	:	Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	:	May cause respiratory tract irritation. Excessive inhalation may cause central nervous system effects (headache, dizziness, tremors, loss of consciousness). May cause asphyxiation.
Symptoms/injuries after skin contact	:	Not a normal route of exposure. May cause frostbite burns to the skin and eyes.
Symptoms/injuries after eye contact	:	Not a normal route of exposure. May cause frostbite burns to the skin and eyes.
Symptoms/injuries after ingestion	:	Not a normal route of exposure.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Iso-butane (75-28-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Iso-butane (75-28-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Handle empty containers with care because residual vapors are flammable.

SECTION 14: Transport information

In accordance with DOT/TDG

UN-No.(DOT/TDG) : UN1969

Proper Shipping Name (DOT/TDG) : Isobutane

Class (DOT/TDG) : 2.1

Hazard labels (DOT/TDG) :

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

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

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

15.3. US State regulations

Iso-butane	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm

SECTION 16: Other information

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Other information : None.

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