Isobutane

Safety Data Sheet

according to SOR/2015-17, Hazardous Products Regulations (HPR) , as amended by SOR/2022-272
Issue date: 07-07-2026 Version: 1.0

SECTION 1 Identification

1.1. GHS Product identifier

Product form : Mixture
Trade name : Isobutane
Product code : 0107MAR019

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Chemical intermediate
Restrictions on use : All other uses not recommended above

1.4. Supplier's details

Supplier
Alliance Energy Services
1828 Swift St. Suite 401
North Kansas City, MO 64116
T 816-421-5192
info@allianceC3.com

Distributor
Alliance Energy Services
30 Cushman Rd
St. Catharines, ON L2M 6S8
Canada

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 612383
Back-up Emergency Number: +1 703-741-5970 (Washington, DC)

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Flammable gases, Category 1A	H220	Extremely flammable gas.
Gases under pressure: Liquefied gas	H280	Contains gas under pressure; may explode if heated.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.
Simple asphyxiant, Category 1		May displace oxygen and cause rapid suffocation.

Full text of H statements : see section 16

2.2. GHS label elements, including precautionary statements

GHS CA labeling

Hazard pictograms (GHS CA) :

Signal word (GHS CA) : Danger
Hazard statements (GHS CA) : Extremely flammable gas
Contains gas under pressure; may explode if heated
Suspected of damaging fertility or the unborn child
May displace oxygen and cause rapid suffocation

Precautionary statements (GHS CA) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear protective gloves, protective clothing, eye and face protection.
IF exposed or concerned: Get medical advice or attention.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
In case of leakage, eliminate all ignition sources.
Store in a well-ventilated place.
Store locked up.
Protect from sunlight. Store in a well-ventilated place.
Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Isobutane (containing < 0,1 % butadiene)	Isobutane	CAS-No.: 75-28-5	25 – 100	Flam. Gas 1, H220 Press. Gas (Comp.), H280
Butane	Butane	CAS-No.: 106-97-8	≤ 65	Flam. Gas 1A, H220 Press. Gas (Comp.), H280 Simple Asphy. 1
Butene	Butene	CAS-No.: 25167-67-3	≤ 16	Flam. Gas 1A, H220 Press. Gas (Liq.), H280 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Propane	Propane	CAS-No.: 74-98-6	≤ 10	Flam. Gas 1A, H220 Press. Gas (Comp.), H280 Simple Asphy. 1
Pentane (mixed isomers)	2-Methylbutane	CAS-No.: 78-78-4	≤ 9	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Isobutylene	2-methylpropene	CAS-No.: 115-11-7	≤ 4	Flam. Gas 1A, H220 Press. Gas, H280 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Pentane	pentane	CAS-No.: 109-66-0	≤ 2.5	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
2,2-dimethylpropane	2,2-dimethylpropane, neopentane	CAS-No.: 463-82-1	≤ 2	Flam. Gas 1, H220 Press. Gas, H280 Aquatic Chronic 2, H411
Propene	-	CAS-No.: 115-07-1	≤ 2	Flam. Gas 1A, H220 Press. Gas, H280 Simple Asphy. 1
Hexane	n-Hexane ; Hexane	CAS-No.: 110-54-3	≤ 0.8	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Comments : The concentration ranges are provided due to batch-to-batch variability.

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : If the victim is unconscious: Lay in a stable manner on victim's side. Give oxygen or artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. Call a physician immediately.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin areas with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

First-aid measures general : First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but, not mouth-to-mouth. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : In high concentrations may cause asphyxiation. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination.

Symptoms/effects after skin contact : Contact with the liquefied gas may cause frostbite.

Symptoms/effects after eye contact : Contact with the liquefied gas may cause severe ocular lesions.

Symptoms/effects after ingestion : Ingestion is not a likely route of exposure.

Chronic symptoms : Suspected of damaging fertility or the unborn child.

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

Other medical advice or treatment : IF exposed or concerned: Get medical advice/attention. If inhaled, remove to fresh air. If necessary, supply oxygen.

SECTION 5 Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	:	Use extinguishing agent suitable for surrounding fire. Dry chemical, CO2, or water spray or regular foam.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Extremely flammable gas.
Explosion hazard	:	Chemical under pressure: May explode if heated.
Reactivity in case of fire	:	Toxic and corrosive vapors may be released.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released. Carbon monoxide. Carbon dioxide. Sulfur oxides. Nitrogen oxides.

5.3. Special protective actions for fire-fighters

Firefighting instructions	:	Evacuate area. Fight fire from safe distance and protected location. Eliminate all ignition sources if safe to do so. Small fires: Do not extinguish a leaking gas flame unless absolutely necessary. Contain and let burn. If fire must be fought, water spray or fog is recommended. Move containers from fire area if it can be done without personal risk. Large fires: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Do not direct water at source of leak or at safety devices as freezing could occur. Withdraw immediately in case of rising sound from venting devices or discoloration from tank. ALWAYS stay away from tanks engulfed in fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Evacuate area. Do not enter without an appropriate protective equipment. Avoid all personal contact including breathing in the gas, vapors. Absorb spillage to prevent material-damage. Stop leak if safe to do so. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Environmental precautions	:	Avoid release to the environment. Notify authorities if the product reaches soil, drains, sewers, surface waters or groundwater.

6.2. Methods and materials for containment and cleaning up

For containment	:	Stop leak, if possible without risk. If the leak cannot be stopped, allow the gas to release in place or remove to a safe, well-ventilated area and allow the release. For large spills, use water spray to disperse vapors, flush spill area.
Methods for cleaning up	:	Ventilate spillage area. Do not touch or walk on the spilled product.
Other information	:	Damaged cylinders should be handled by specialists only. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

For further information refer to section 8: "Exposure controls/personal protection",For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Keep reduction valves free from grease and oil. Do not breathe fume, gas, vapors. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Avoid contact with skin, eyes and clothing.
Hygiene measures	:	Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	:	Containers should be stored in the vertical position and properly secured to prevent toppling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Use self-contained breathing apparatus and chemically protective clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Ground/bond container and receiving equipment. Take precautionary measures against static discharge.
Storage conditions	:	Always keep container in upright position. Keep away from heat, sparks, and flame. Protect from sunlight. Store in a well-ventilated place. Containers should be kept dry. Keep container closed when not in use. Protect from physical damage.
Incompatible materials	:	Strong oxidizing agents.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Isobutane (containing < 0,1 % butadiene) (75-28-5)

Canada (British Columbia) - Occupational Exposure Limits	
Local name	Butane, all isomers: isobutane
OEL STEL	1000 ppm
Notations and remarks	EX (the substance is a flammable asphyxiant or excursions above the exposure limit could approach 10% of the lower explosive limit)
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Isobutane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Butane, all isomers
OEL STEL	1000 ppm
Regulatory reference	ACGIH
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Isobutane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)

Isobutane (containing < 0,1 % butadiene) (75-28-5)	
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Isobutane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Isobutane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Butane. All isomers
OEL TWA	1000 ppm
OEL STEL	1250 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10
Butane (106-97-8)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Butane
OEL TWA	1000 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Butane, all isomers: n-butane
OEL STEL	1000 ppm
Notations and remarks	EX (the substance is a flammable asphyxiant or excursions above the exposure limit could approach 10% of the lower explosive limit)
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Butane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair

Butane (106-97-8)	
Regulatory reference	ACGIH 2025
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Butane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Butane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Butane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Butane. All isomers
OEL TWA	1000 ppm
OEL STEL	1250 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

Butene (25167-67-3)	
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Butene, mixture of isomers
OEL TWA	574 mg/m³
	250 ppm
Notations and remarks	TLV® Basis: Body weight
Regulatory reference	ACGIH 2025
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Butenes, all isomers
OEL TWA	250 ppm
Regulatory reference	ACGIH

Butene (25167-67-3)	
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Butene, mixture of isomers
OEL TWA	574 mg/m³
	250 ppm
Notations and remarks	TLV® Basis: Body weight
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Butene, mixture of isomers
OEL TWA	574 mg/m³
	250 ppm
Notations and remarks	TLV® Basis: Body weight
Regulatory reference	ACGIH 2025
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Butene, mixture of isomers
OEL TWA	574 mg/m³
	250 ppm
Notations and remarks	TLV® Basis: Body weight
Regulatory reference	ACGIH 2025

Propane (74-98-6)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Propane
OEL TWA	1000 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Propane
Notations and remarks	Simple asphyxiant. EX (the substance is a flammable asphyxiant or excursions above the exposure limit could approach 10% of the lower explosive limit)
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Propane
Notations and remarks	TLV® Basis: Asphyxia
Regulatory reference	ACGIH 2025
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Propane
Notations and remarks	TLV® Basis: Asphyxia
Regulatory reference	ACGIH 2025

Propane (74-98-6)	
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Propane
Notations and remarks	TLV® Basis: Asphyxia
Regulatory reference	ACGIH 2025
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Propane
OEL TWA	1000 ppm
OEL STEL	1250 ppm
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-124-2018) # Règlement sur la santé et la sécurité au travail R-039-2015 (R-124-2018)
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Propane
Notations and remarks	TLV® Basis: Asphyxia
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Propane
OEL TWA	1000 ppm
OEL STEL	1250 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

Pentane (mixed isomers) (78-78-4)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Isopentane (Pentane, all isomers)
OEL TWA	1770 mg/m³
	600 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	1000 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Isopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025

Pentane (mixed isomers) (78-78-4)	
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Pentane, all isomers (1989)
OEL TWA	1000 ppm
Regulatory reference	ACGIH
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Isopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Isopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Isopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm
OEL STEL	750 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

Isobutylene (115-11-7)	
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Isobutene
OEL TWA	574 mg/m³
	250 ppm
Notations and remarks	TLV® Basis: URT irr; Body weight. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Isobutene

Isobutylene (115-11-7)	
OEL TWA	574 mg/m³
	250 ppm
Notations and remarks	TLV® Basis: URT irr; Body weight. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Isobutene
OEL TWA	574 mg/m³
	250 ppm
Notations and remarks	TLV® Basis: URT irr; Body weight. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Isobutene
OEL TWA	574 mg/m³
	250 ppm
Notations and remarks	TLV® Basis: URT irr; Body weight. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
Pentane (109-66-0)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	1770 mg/m³
	600 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	1000 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Pentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Pentane
OEL TWA	2950 mg/m³
	1000 ppm

Pentane (109-66-0)	
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Pentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Pentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm
OEL STEL	750 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10
2,2-dimethylpropane (463-82-1)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	1770 mg/m³
	600 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	1000 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Neopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025

2,2-dimethylpropane (463-82-1)	
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Pentane, all isomers (1989)
OEL TWA	1000 ppm
Regulatory reference	ACGIH
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Neopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Neopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Neopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm
OEL STEL	750 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

Propene (115-07-1)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Propylene
OEL TWA	860 mg/m³
	500 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
Local name	Propylene
VEMP (OEL TWAEV)	500 ppm

Propene (115-07-1)	
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Propylene
OEL TWA	500 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Propylene
OEL TWA	860 mg/m³
	500 ppm
Notations and remarks	TLV® Basis: Asphyxia; URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Propylene
OEL TWA	860 mg/m³
	500 ppm
Notations and remarks	TLV® Basis: Asphyxia; URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Propylene
OEL TWA	860 mg/m³
	500 ppm
Notations and remarks	TLV® Basis: Asphyxia; URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
Canada (Ontario) - Occupational Exposure Limits	
Local name	Propylene
OEL TWAEV	500 ppm
Regulatory reference	Occupational Health and Safety Act, R.S.O. 1990, c. O.1 - R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Propylene
OEL TWA	860 mg/m³
	500 ppm
Notations and remarks	TLV® Basis: Asphyxia; URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025

Hexane (110-54-3)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	n-Hexane
OEL TWA	176 mg/m³
	50 ppm
Notations and remarks	Substance may be readily absorbed through intact skin.
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
Local name	n-Hexane
OEL TWA	20 ppm
Notations and remarks	Skin (the substance that contribute significantly to the overall exposure by the skin route)
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	n-Hexane
OEL TWA	176 mg/m³
	50 ppm
Notations and remarks	TLV® Basis: CNS impair; Peripheral neuropathy; Eye & URT irr. Notations: Skin; BEI
Regulatory reference	ACGIH 2025
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	n-Hexane
OEL TWA	176 mg/m³
	50 ppm
Notations and remarks	TLV® Basis: CNS impair; Peripheral neuropathy; Eye & URT irr. Notations: Skin; BEI
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	n-Hexane
OEL TWA	176 mg/m³
	50 ppm
Notations and remarks	TLV® Basis: CNS impair; Peripheral neuropathy; Eye & URT irr. Notations: Skin; BEI
Regulatory reference	ACGIH 2025
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Hexane (n-Hexane)
OEL TWA	50 ppm
OEL STEL	62.5 ppm
Notations and remarks	Skin # Peau
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-124-2018) # Règlement sur la santé et la sécurité au travail R-039-2015 (R-124-2018)

Hexane (110-54-3)	
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	n-Hexane
OEL TWA	176 mg/m³
	50 ppm
Notations and remarks	TLV® Basis: CNS impair; Peripheral neuropathy; Eye & URT irr. Notations: Skin; BEI
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Hexane (n-Hexane)
OEL TWA	50 ppm
OEL STEL	62.5 ppm
Notations and remarks	Skin
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Gas detectors should be used when flammable gases/vapours may be released. Use general ventilation, local exhaust ventilation, or process enclosure to keep the airborne concentrations below the permissible exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:
Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

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

Hand protection:
Wear chemical resistant gloves.

Eye protection:
Chemical goggles or safety glasses

Skin and body protection:
Wear suitable protective clothing. Wear safety shoes while handling containers.

Respiratory protection:
In case of inadequate ventilation wear respiratory protection. Self-contained breathing apparatus

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Gas
Appearance	:	Liquefied gas.
Color	:	Colorless
Odor	:	Faint Petroleum (not odorized)
Odor threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Extremely flammable gas
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Density	:	70-75 psia (Reid VP) @ 100 °F / 37.8 °C
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

Isobutane (containing < 0,1 % butadiene)	
Particle characteristics	No data available

Butane	
Particle characteristics	No data available

Butene	
Particle characteristics	No data available

Propane	
Particle characteristics	No data available

Pentane (mixed isomers)	
Particle characteristics	No data available

Isobutylene	
Particle characteristics	No data available

Pentane	
Particle characteristics	No data available

2,2-dimethylpropane	
Particle characteristics	No data available

Propene	
Particle characteristics	No data available

Hexane	
Particle characteristics	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

Reactivity : Extremely flammable gas.
Chemical stability : Contains gas under pressure; may explode if heated.
Possibility of hazardous reactions : Polymerisation may occur at elevated temperatures.
Conditions to avoid : Incompatible materials. Sparks, heat, open flame and other sources of ignition.
Incompatible materials : Strong oxidizing agents.
Hazardous decomposition products : Thermal decomposition generates: toxic and corrosive vapors. Carbon monoxide. Carbon dioxide. Nitrogen oxides. Sulfur oxides.
Hardening time: : No additional information available

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Butane	
LC50 Inhalation - Rat	658 mg/l/4h

Butene	
LD50 oral rat	> 5000 mg/kg
LC50 Inhalation - Rat (Vapors)	300 mg/l

Pentane (mixed isomers)	
LD50 oral rat	> 2000 mg/kg body weight
LD50 oral	> 2000 mg/kg body weight

Pentane (mixed isomers)	
LC50 Inhalation - Rat	> 25.3 mg/l air
Isobutylene	
LC50 Inhalation - Rat [ppm]	270000 ppm
Pentane	
LD50 oral rat	> 2000 mg/kg body weight
LC50 Inhalation - Rat	> 25.3 mg/l air
Hexane	
LD50 oral rat	24 ml/kg
LD50 dermal rabbit	> 3350 mg/kg
LC50 Inhalation - Rat (Vapors)	259.354 mg/l

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Propene	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Pentane	
NOAEL (animal/male, F0/P)	300 mg/kg body weight
NOAEL (animal/female, F0/P)	≥ 1000 mg/kg body weight

STOT-single exposure : Not classified

Pentane (mixed isomers)	
STOT-single exposure	May cause drowsiness or dizziness.
Pentane	
STOT-single exposure	May cause drowsiness or dizziness.
Hexane	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

Pentane (mixed isomers)	
NOAEC (inhalation,rat,vapor,90 days)	30 mg/l air
Isobutylene	
NOAEL (oral,rat,90 days)	148.6 mg/kg body weight
Pentane	
NOAEC (inhalation,rat,vapor,90 days)	30 mg/l air

Hexane	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not applicable

Pentane	
Viscosity, kinematic	0.356 mm²/s

Symptoms/effects after inhalation : In high concentrations may cause asphyxiation. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination.

Symptoms/effects after skin contact : Contact with the liquefied gas may cause frostbite.

Symptoms/effects after eye contact : Contact with the liquefied gas may cause severe ocular lesions.

Symptoms/effects after ingestion : Ingestion is not a likely route of exposure.

Chronic symptoms : Suspected of damaging fertility or the unborn child.

SECTION 12 Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Toxic to aquatic life

Hazardous to the aquatic environment, long–term (chronic) : Very toxic to aquatic life with long lasting effects

Butene	
LC50 - Fish [1]	6 mg/l
LC50 - Fish [2]	19 mg/l
EC50 96h - Algae [1]	14.882 mg/l
EC50 96h - Algae [2]	6.9 mg/l
NOEC chronic fish	2.286 mg/l
NOEC (chronic)	1.349 mg/l

Pentane (mixed isomers)	
EC50 - Crustacea [1]	2.3 mg/l
NOEC chronic algae	2.04 mg/l

Isobutylene	
LC50 - Fish [1]	29.908 mg/l
EC50 96h - Algae [1]	13.607 mg/l
NOEC chronic fish	2.048 mg/l
NOEC (chronic)	1.225 mg/l

Hexane	
LC50 - Fish [1]	> 1 mg/l
EC50 - Crustacea [1]	3.9 mg/l

12.2. Persistence and degradability

Isobutane	
Persistence and degradability	Not rapidly degradable

Isobutane (containing < 0,1 % butadiene)	
Persistence and degradability	Not rapidly degradable

Butane	
Persistence and degradability	Not rapidly degradable

Butene	
Persistence and degradability	Not rapidly degradable

Propane	
Persistence and degradability	The product evaporates readily.

Pentane (mixed isomers)	
Persistence and degradability	Rapidly degradable

Isobutylene	
Persistence and degradability	Not rapidly degradable

Pentane	
Persistence and degradability	Not rapidly degradable

2,2-dimethylpropane	
Persistence and degradability	Not rapidly degradable

Propene	
Persistence and degradability	Not rapidly degradable

Hexane	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Butene	
Partition coefficient n-octanol/water (Log Pow)	2.4

Propene	
Partition coefficient n-octanol/water (Log Pow)	1.77

Hexane	
Partition coefficient n-octanol/water (Log Pow)	3.9

12.4. Mobility in soil

Butene	
Mobility in soil	788.86

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation	:	Disposal must be done according to official regulations.
Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	:	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	:	Disposal must be done according to official regulations. Dispose of this material and its container at hazardous or special waste collection point. Refer to all applicable national, international and local regulations or provisions.
Additional information	:	Do not re-use empty containers.
Ecological waste information	:	Avoid release to the environment.

SECTION 14 Transport information

In accordance with TDG / IMDG / IATA

TDG	IMDG	IATA
14.1. UN Number		
UN1969	1969	1969
14.2. UN Proper Shipping Name		
ISOBUTANE	ISOBUTANE	Isobutane
14.3. Transport hazard class(es)		
2.1	2.1	2.1
		
14.4. Packing group, if applicable		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available		

14.6. Special precautions for user

TDG

UN-No. (TDG)	:	UN1969
ERAP Index	:	3000
Explosive Limit and Limited Quantity Index	:	0.125 L
Excepted quantities (TDG)	:	E0
Passenger Carrying Vessel Index	:	Forbidden
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	Forbidden
Emergency Response Guide (ERG) Number	:	115

IMDG

Special provision (IMDG)	:	392
Limited quantities (IMDG)	:	0
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P200

Tank instructions (IMDG)	:	T50
EmS-No. (Fire)	:	F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage)	:	S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG)	:	E
Stowage and handling (IMDG)	:	SW2
Properties and observations (IMDG)	:	Flammable hydrocarbon. Heavier than air.

IATA

PCA Excepted quantities (IATA)	:	E0
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	Forbidden
PCA max net quantity (IATA)	:	Forbidden
CAO packing instructions (IATA)	:	200
CAO max net quantity (IATA)	:	150kg
ERG code (IATA)	:	10L

14.7. Transport in bulk according to Annex II of MARPOL 73/78[9] and the IBC Code[10]

Not applicable

SECTION 15 Regulatory information

Isobutane (containing < 0,1 % butadiene) (75-28-5)

Listed on the Canadian DSL (Domestic Substances List)

Butane (106-97-8)

Listed on the Canadian DSL (Domestic Substances List)

Butene (25167-67-3)

Listed on the Canadian DSL (Domestic Substances List)

Propane (74-98-6)

Listed on the Canadian DSL (Domestic Substances List)

Pentane (mixed isomers) (78-78-4)

Listed on the Canadian DSL (Domestic Substances List)

Isobutylene (115-11-7)

Listed on the Canadian DSL (Domestic Substances List)

Pentane (109-66-0)

Listed on the Canadian DSL (Domestic Substances List)

2,2-dimethylpropane (463-82-1)

Listed on the Canadian DSL (Domestic Substances List)

Propene (115-07-1)

Listed on the Canadian DSL (Domestic Substances List)

Hexane (110-54-3)

Listed on the Canadian DSL (Domestic Substances List)

Isobutane (containing < 0,1 % butadiene) (75-28-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Butane (106-97-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Butene (25167-67-3)

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

Propane (74-98-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Pentane (mixed isomers) (78-78-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Isobutylene (115-11-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Pentane (109-66-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

2,2-dimethylpropane (463-82-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Propene (115-07-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Hexane (110-54-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16 Other Information

Issue date : 07-07-2026

Full text of hazard classes and H-statements:

H220	Extremely flammable gas
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H411	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.