Demthanized Mix Y 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).

Revision Date: 07/26/2024 Date of Issue: 08/16/2024 Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Demthanized Mix Y Grade

1.2. Intended Use of the Product

Feedstock for fractionation / distillation

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)

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
Contains refrigerated gas; may cause cryogenic burns or injury	H281
Skin corrosion/irritation Category 2	H315
Germ cell mutagenicity Category 1B	H340
Carcinogenicity Category 1A	H350
Reproductive toxicity Category 2	H361
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Specific target organ toxicity (repeated exposure) Category 2 Simple Asphyxiant	H373
Hazardous to the aquatic environment – Acute Hazard Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard Category 2	H411

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :

GHS02 GHS04 GHS07 GHS08 GHS09

Signal Word (GHS-US/CA) : Danger

Hazard Statements (GHS-US/CA) : H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H340 - May cause genetic defects.
H350 - May cause cancer.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
H400 - Very toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

May displace oxygen and cause rapid suffocation.

Precautionary Statements (GHS-US/CA) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see section 4 on this SDS).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - In case of leakage, eliminate all ignition sources.
P391 - Collect spillage.
P403 - Store in a well-ventilated place.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
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
Propane	Normal propane / n-Propane / R290	(CAS-No.) 74-98-6	< 70	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Simple Asphyxiant
Ethane	Ethyl hydride	(CAS-No.) 74-84-0	< 65	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Simple Asphyxiant
n-Butane	Butane	(CAS-No.) 106-97-8	< 35	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Simple Asphyxiant
Isobutane	2-Methylpropane / Propane, 2-methyl- / R600a	(CAS-No.) 75-28-5	< 15	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Simple Asphyxiant
Isopentane	Butane, 2-methyl- / 2-Methylbutane / Methylbutane	(CAS-No.) 78-78-4	< 10	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401

				Aquatic Chronic 2, H411
n-Pentane	Pentane / Normal pentane / Pentane, n- / Pentane isopentane	(CAS-No.) 109-66-0	< 10	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Methylcyclohexane	Cyclohexane, methyl- / Cyclohexylmethane / Methyl cyclohexane	(CAS-No.) 108-87-2	< 4.5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
n-hexane	Hexane, n- / Normal hexane / n-Hexane	(CAS-No.) 110-54-3	< 3.5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2-Methylpentane	Hexane (containing <5% n-Hexane (203-777-6)) / Pentane, 2-methyl- / Isohexane	(CAS-No.) 107-83-5	< 3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
n-Heptane	Heptane (n-) / Heptane / Normal heptane / Heptane, n-	(CAS-No.) 142-82-5	< 2.5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Cyclohexane	Benzene, hexahydro- / Hexahydrobenzene	(CAS-No.) 110-82-7	< 2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Methylcyclopentane	Cyclopentane, methyl-	(CAS-No.) 96-37-7	< 2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
3-Methylpentane	3-Methyl pentane / Diethylmethylmethane / Methylpentane, 3- / 1,2,3-Trimethylpropane / Pentane, 3-methyl-	(CAS-No.) 96-14-0	< 1.5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
3-Methylhexane	3-methylhexane / Methylhexane, 3- / Hexane, 3-methyl-	(CAS-No.) 589-34-4	< 1.5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Isoheptane	2-Methylhexane / Isoheptane, mixed isomers	(CAS-No.) 31394-54-4	< 1.5	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Benzene	Cyclohexatriene / Benzol	(CAS-No.) 71-43-2	< 1	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Muta. 1B, H340 Carc. 1A, H350 STOT SE 3, H336 STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 3, H412
Cyclopentane	-	(CAS-No.) 287-92-3	< 1	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Methanethiol	Methyl mercaptan / Thiomethanol	(CAS-No.) 74-93-1	< 1	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 3 (Inhalation:gas), H331 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Neohexane	2,2-Dimethylbutane / Butane, 2,2-dimethyl-	(CAS-No.) 75-83-2	< 0.5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
2-Propanethiol	Isopropyl mercaptan / Isopropanethiol / Propane-2-thiol	(CAS-No.) 75-33-2	< 0.5	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2, H319 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%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Rescuers must don respiratory protection before approaching exposed persons. Hydrogen sulfide has a characteristic rotten egg “sulfurous” odor with an odor threshold of less than 10 parts per billion. However, this odor should not be used as a warning property of toxic levels because H2S can overwhelm and deaden the sense of smell. Therefore, the smell of H2S should not be used as an indicator of a hazardous condition – a H2S meter or colorimetric indicating tubes are typically used to determine the concentration of H2S. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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: Immediately remove contaminated clothing. Immediately drench affected area with soap and water for at least 15 minutes. 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: Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists. Rinse cautiously with water for at least 15 minutes.
Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention. If vomiting occurs have person lean forward. If vomiting occurs, keep head below waistline.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Contains a small amount of Hydrogen Sulfide, symptoms of overexposure are headaches, dizziness, nausea, coughing, respiratory irritation, eye irritation, skin irritation, pain in the nose, and loss of consciousness. Heating of the product may release higher amounts of Hydrogen Sulfide (H_2S). May cause frostbite on contact with the liquid. May cause drowsiness and dizziness. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Causes skin irritation. May cause genetic defects. Asphyxia by lack of oxygen: risk of death.

Inhalation: Hydrogen sulfide may cause respiratory paralysis. High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. 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: Redness, pain, swelling, itching, burning, dryness, and dermatitis. 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: Contains a small amount of Hydrogen Sulfide, symptoms of chronic exposure that may manifest as long-term or permanent effects are: headaches, dizziness, nausea, coughing, respiratory irritation, eye irritation, skin irritation, pain in the nose, and loss of consciousness. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. May cause genetic defects.

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.
Explosion Hazard: Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. May form flammable/explosive vapor-air mixture. Container may explode in heat of fire.
Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Use water spray or fog for cooling exposed containers. 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: Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products: Carbon Oxides, Sulfur Oxides, Hydrocarbon Vapors, Smoke. Contains Sulfur, may release small amounts of hydrogen sulfide. Hydrogen sulfide is a highly flammable, explosive gas under certain conditions, is a toxic gas, and may be fatal. Gas can accumulate in the headspace of closed containers, use caution when opening sealed containers. Heating the product or containers can cause thermal decomposition of the product and release hydrogen sulfide.
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. Isolate from fire, if possible, without unnecessary risk. Hydrogen sulfide has a characteristic rotten egg "sulfurous" odor with an odor threshold of less than 10 parts per billion. However, this odor should not be used as a warning property of toxic levels because H2S can overwhelm and deaden the sense of smell. Therefore, the smell of H2S should not be used as an indicator of a hazardous condition – a H2S meter or colorimetric indicating tubes are typically used to determine the concentration of H2S. Do not get in eyes, on skin, or on clothing. Do not breathe gas.

6.1.1. For Non-Emergency Personnel

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

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: 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. Collect spillage.

6.3. Methods and Materials for Containment and Cleaning Up

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

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. 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. 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: Contains a small amount of hydrogen sulfide. Hydrogen sulfide is a fatal, and highly flammable gas with a rotten egg odor that quickly causes odor fatigue. Heating of this product and storage under elevated temperatures or over long periods of time may release higher amounts of hydrogen sulfide. Hydrogen sulfide is also an asphyxiant. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H2S) and flammability. The inherent toxic and olfactory (sense of smell) fatiguing properties of hydrogen sulfide require that air monitoring alarms be used if concentrations are expected to reach harmful levels, such as in enclosed spaces, heated transport vessels and spill or leak situations. Handle empty containers with care because residual vapors are flammable. Ruptured cylinders may rocket. Do not pressurize, cut, or weld containers. Asphyxiating gas at high concentrations.

Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe gas. Do not get in eyes, on skin, or on clothing. 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. Store locked up/in a secure area.

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

7.3. Specific End Use(s)

Feedstock for fractionation / distillation

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	1800 mg/m³
USA OSHA	OSHA PEL TWA	1000 ppm
USA NIOSH	NIOSH REL TWA	1800 mg/m³
USA NIOSH	NIOSH REL TWA	1000 ppm
USA IDLH	IDLH	2100 ppm (10% LEL)
Alberta	OEL TWA	1000 ppm
Nunavut	OEL STEL	1250 ppm
Nunavut	OEL TWA	1000 ppm
Northwest Territories	OEL STEL	1250 ppm
Northwest Territories	OEL TWA	1000 ppm
Québec	VEMP OEL TWAEV	1800 mg/m³
Québec	VEMP OEL TWAEV	1000 ppm
Saskatchewan	OEL STEL	1250 ppm
Saskatchewan	OEL TWA	1000 ppm
n-Heptane (142-82-5)		
USA ACGIH	ACGIH OEL TWA	400 ppm (Heptane, all isomers)
USA ACGIH	ACGIH OEL STEL	500 ppm (Heptane, all isomers)
USA OSHA	OSHA PEL TWA	2000 mg/m³
USA OSHA	OSHA PEL TWA	500 ppm
USA NIOSH	NIOSH REL TWA	350 mg/m³
USA NIOSH	NIOSH REL TWA	85 ppm
USA NIOSH	NIOSH REL (Ceiling)	1800 mg/m³
USA NIOSH	NIOSH REL C	440 ppm
USA IDLH	IDLH	750 ppm
Alberta	OEL STEL	2050 mg/m³
Alberta	OEL STEL	500 ppm
Alberta	OEL TWA	1640 mg/m³
Alberta	OEL TWA	400 ppm
British Columbia	OEL STEL	500 ppm (Heptane, isomers)
British Columbia	OEL TWA	400 ppm (Heptane, isomers)
Manitoba	OEL STEL	500 ppm (Heptane, all isomers)
Manitoba	OEL TWA	400 ppm (Heptane, all isomers)
New Brunswick	OEL STEL	500 ppm (Heptane, all isomers)
New Brunswick	OEL TWA	400 ppm (Heptane, all isomers)
Newfoundland & Labrador	OEL STEL	500 ppm (Heptane, all isomers)
Newfoundland & Labrador	OEL TWA	400 ppm (Heptane, all isomers)
Nova Scotia	OEL STEL	500 ppm (Heptane, all isomers)
Nova Scotia	OEL TWA	400 ppm (Heptane, all isomers)
Nunavut	OEL STEL	500 ppm
Nunavut	OEL TWA	400 ppm
Northwest Territories	OEL STEL	500 ppm
Northwest Territories	OEL TWA	400 ppm
Ontario	OEL STEL	500 ppm (Heptane, all isomers)
Ontario	OEL TWA	400 ppm
Prince Edward Island	OEL STEL	500 ppm (Heptane, all isomers)

Prince Edward Island	OEL TWA	400 ppm (Heptane, all isomers)
Québec	VECD OEL STEV	500 ppm (Heptane (all isomers))
Québec	VEMP OEL TWAEV	400 ppm (Heptane (all isomers))
Saskatchewan	OEL STEL	500 ppm
Saskatchewan	OEL TWA	400 ppm
Yukon	OEL STEL	2000 mg/m³
Yukon	OEL STEL	500 ppm
Yukon	OEL TWA	1600 mg/m³
Yukon	OEL TWA	400 ppm
n-Butane (106-97-8)		
USA ACGIH	ACGIH OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
USA NIOSH	NIOSH REL TWA	1900 mg/m³
USA NIOSH	NIOSH REL TWA	800 ppm
USA IDLH	IDLH	1600 ppm (>10% LEL)
Alberta	OEL TWA	1000 ppm
British Columbia	OEL STEL	1000 ppm (Butane, all isomers)
Manitoba	OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
New Brunswick	OEL STEL	1000 ppm
Newfoundland & Labrador	OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
Nova Scotia	OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
Nunavut	OEL STEL	1250 ppm (Butane, all isomers)
Nunavut	OEL TWA	1000 ppm (Butane, all isomers)
Northwest Territories	OEL STEL	1250 ppm (Butane, all isomers)
Northwest Territories	OEL TWA	1000 ppm (Butane, all isomers)
Ontario	OEL STEL	1000 ppm (explosion hazard (Butane, all isomers)
Prince Edward Island	OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
Québec	VEMP OEL TWAEV	1900 mg/m³
Québec	VEMP OEL TWAEV	800 ppm
Saskatchewan	OEL STEL	1250 ppm (Butane, all isomers)
Saskatchewan	OEL TWA	1000 ppm (Butane, all isomers)
Yukon	OEL STEL	1600 mg/m³
Yukon	OEL STEL	750 ppm
Yukon	OEL TWA	1400 mg/m³
Yukon	OEL TWA	600 ppm
Isopentane (78-78-4)		
USA ACGIH	ACGIH OEL TWA	1000 ppm (Pentane, all isomers)
Alberta	OEL TWA	1770 mg/m³ (Pentane, all isomers)
Alberta	OEL TWA	600 ppm (Pentane, all isomers)
British Columbia	OEL TWA	1000 ppm (Pentane, all isomers)
Manitoba	OEL TWA	1000 ppm (Pentane, all isomers)
New Brunswick	OEL TWA	1000 ppm (Pentane, all isomers)
Newfoundland & Labrador	OEL TWA	1000 ppm (Pentane, all isomers)
Nova Scotia	OEL TWA	1000 ppm (Pentane, all isomers)
Nunavut	OEL STEL	750 ppm (Pentane, all isomers)
Nunavut	OEL TWA	600 ppm (Pentane, all isomers)
Northwest Territories	OEL STEL	750 ppm (Pentane, all isomers)
Northwest Territories	OEL TWA	600 ppm (Pentane, all isomers)
Ontario	OEL TWA	1000 ppm (Pentane, all isomers)
Prince Edward Island	OEL TWA	1000 ppm (Pentane, all isomers)
Québec	VEMP OEL TWAEV	1000 ppm (Pentane (all isomers))
Saskatchewan	OEL STEL	750 ppm (Pentane, all isomers)

Saskatchewan	OEL TWA	600 ppm (Pentane, all isomers)
Isobutane (75-28-5)		
USA ACGIH	ACGIH OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
USA NIOSH	NIOSH REL TWA	1900 mg/m³
USA NIOSH	NIOSH REL TWA	800 ppm
British Columbia	OEL STEL	1000 ppm (Butane, all isomers)
Manitoba	OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
New Brunswick	OEL STEL	1000 ppm
Newfoundland & Labrador	OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
Nova Scotia	OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
Nunavut	OEL STEL	1250 ppm (Butane, all isomers)
Nunavut	OEL TWA	1000 ppm (Butane, all isomers)
Northwest Territories	OEL STEL	1250 ppm (Butane, all isomers)
Northwest Territories	OEL TWA	1000 ppm (Butane, all isomers)
Ontario	OEL STEL	1000 ppm (explosion hazard (Butane, all isomers)
Prince Edward Island	OEL STEL	1000 ppm (explosion hazard (Butane, isomers)
Saskatchewan	OEL STEL	1250 ppm (Butane, all isomers)
Saskatchewan	OEL TWA	1000 ppm (Butane, all isomers)
Ethane (74-84-0)		
USA ACGIH	ACGIH chemical category	Simple asphyxiant See Appendix F: Minimal Oxygen Content
Alberta	OEL TWA	1000 ppm
Nunavut	OEL STEL	1250 ppm
Nunavut	OEL TWA	1000 ppm
Northwest Territories	OEL STEL	1250 ppm
Northwest Territories	OEL TWA	1000 ppm
Saskatchewan	OEL STEL	1250 ppm
Saskatchewan	OEL TWA	1000 ppm
n-Pentane (109-66-0)		
USA ACGIH	ACGIH OEL TWA	1000 ppm (Pentane, all isomers)
USA OSHA	OSHA PEL TWA	2950 mg/m³
USA OSHA	OSHA PEL TWA	1000 ppm
USA NIOSH	NIOSH REL TWA	350 mg/m³
USA NIOSH	NIOSH REL TWA	120 ppm
USA NIOSH	NIOSH REL Ceiling	1800 mg/m³
USA NIOSH	NIOSH REL C	610 ppm
USA IDLH	IDLH	1500 ppm (10% LEL)
Alberta	OEL TWA	1770 mg/m³
Alberta	OEL TWA	600 ppm
British Columbia	OEL TWA	1000 ppm (Pentane, all isomers)
Manitoba	OEL TWA	1000 ppm (Pentane, all isomers)
New Brunswick	OEL TWA	1000 ppm (Pentane, all isomers)
Newfoundland & Labrador	OEL TWA	1000 ppm (Pentane, all isomers)
Nova Scotia	OEL TWA	1000 ppm (Pentane, all isomers)
Nunavut	OEL STEL	750 ppm (Pentane, all isomers)
Nunavut	OEL TWA	600 ppm (Pentane, all isomers)
Northwest Territories	OEL STEL	750 ppm (Pentane, all isomers)
Northwest Territories	OEL TWA	600 ppm (Pentane, all isomers)
Ontario	OEL TWA	1000 ppm
Prince Edward Island	OEL TWA	1000 ppm (Pentane, all isomers)
Québec	VEMP OEL TWAEV	1000 ppm (Pentane (all isomers))

Saskatchewan	OEL STEL	750 ppm
Saskatchewan	OEL TWA	600 ppm
Yukon	OEL STEL	2250 mg/m³
Yukon	OEL STEL	750 ppm
Yukon	OEL TWA	1800 mg/m³
Yukon	OEL TWA	600 ppm
n-hexane (110-54-3)		
USA ACGIH	ACGIH OEL TWA	50 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA ACGIH	BEI BLV	0.5 mg/l Parameter: 2,5-Hexanedione without hydrolysis - Medium: urine - Sampling time: end of shift
USA OSHA	OSHA PEL TWA	1800 mg/m³
USA OSHA	OSHA PEL TWA	500 ppm
USA NIOSH	NIOSH REL TWA	180 mg/m³
USA NIOSH	NIOSH REL TWA	50 ppm
USA IDLH	IDLH	1100 ppm (10% LEL)
Alberta	OEL TWA	176 mg/m³
Alberta	OEL TWA	50 ppm
British Columbia	OEL TWA	20 ppm
Manitoba	OEL TWA	50 ppm
New Brunswick	OEL TWA	50 ppm
Newfoundland & Labrador	OEL TWA	50 ppm
Nova Scotia	OEL TWA	50 ppm
Nunavut	OEL STEL	62.5 ppm
Nunavut	OEL TWA	50 ppm
Northwest Territories	OEL STEL	62.5 ppm
Northwest Territories	OEL TWA	50 ppm
Ontario	OEL TWA	50 ppm
Prince Edward Island	OEL TWA	50 ppm
Québec	VEMP OEL TWAEV	176 mg/m³
Québec	VEMP OEL TWAEV	50 ppm
Saskatchewan	OEL STEL	62.5 ppm
Saskatchewan	OEL TWA	50 ppm
Yukon	OEL STEL	450 mg/m³
Yukon	OEL STEL	125 ppm
Yukon	OEL TWA	360 mg/m³
Yukon	OEL TWA	100 ppm
2-Methylpentane (107-83-5)		
USA ACGIH	ACGIH OEL TWA	500 ppm (Hexane isomers other than n-Hexane)
USA ACGIH	ACGIH OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Alberta	OEL STEL	3500 mg/m³ (Hexane (all isomers except n-Hexane))
Alberta	OEL STEL	1000 ppm (Hexane (all isomers except n-Hexane))
Alberta	OEL TWA	1760 mg/m³ (Hexane (all isomers except n-Hexane))
Alberta	OEL TWA	500 ppm (Hexane (all isomers except n-Hexane))
British Columbia	OEL TWA	200 ppm (Hexane, all isomers except n-Hexane)
Manitoba	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Manitoba	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
New Brunswick	OEL STEL	1000 ppm (Hexane isomers other than n-Hexane)
New Brunswick	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Newfoundland & Labrador	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)

Newfoundland & Labrador	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Nova Scotia	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Nova Scotia	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Ontario	OEL STEL	1000 ppm (Hexane, isomers, other than n-Hexane)
Ontario	OEL TWA	500 ppm (Hexane, isomers, other than n-Hexane)
Prince Edward Island	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Prince Edward Island	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
3-Methylpentane (96-14-0)		
USA ACGIH	ACGIH OEL TWA	500 ppm (Hexane isomers other than n-Hexane)
USA ACGIH	ACGIH OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Alberta	OEL STEL	3500 mg/m³
Alberta	OEL STEL	1000 ppm
Alberta	OEL TWA	1760 mg/m³ (Hexane (all isomers except n-Hexane))
Alberta	OEL TWA	500 ppm (Hexane (all isomers except n-Hexane))
British Columbia	OEL TWA	200 ppm (Hexane, all isomers except n-Hexane)
Manitoba	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Manitoba	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
New Brunswick	OEL STEL	1000 ppm (Hexane isomers other than n-Hexane)
New Brunswick	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Newfoundland & Labrador	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Newfoundland & Labrador	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Nova Scotia	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Nova Scotia	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Ontario	OEL STEL	1000 ppm (Hexane, isomers, other than n-Hexane)
Ontario	OEL TWA	500 ppm (Hexane, isomers, other than n-Hexane)
Prince Edward Island	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Prince Edward Island	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Neohexane (75-83-2)		
USA ACGIH	ACGIH OEL TWA	500 ppm (Hexane isomers other than n-Hexane)
USA ACGIH	ACGIH OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Alberta	OEL STEL	3500 mg/m³ (Hexane (all isomers except n-Hexane))
Alberta	OEL STEL	1000 ppm (Hexane (all isomers except n-Hexane))
Alberta	OEL TWA	1760 mg/m³ (Hexane (all isomers except n-Hexane))
Alberta	OEL TWA	500 ppm (Hexane (all isomers except n-Hexane))
British Columbia	OEL TWA	200 ppm (Hexane, all isomers except n-Hexane)
Manitoba	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Manitoba	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
New Brunswick	OEL STEL	1000 ppm (Hexane isomers other than n-Hexane)
New Brunswick	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Newfoundland & Labrador	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Newfoundland & Labrador	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Nova Scotia	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Nova Scotia	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Ontario	OEL STEL	1000 ppm (Hexane, isomers, other than n-Hexane)
Ontario	OEL TWA	500 ppm (Hexane, isomers, other than n-Hexane)
Prince Edward Island	OEL STEL	1000 ppm (Hexane isomers other than n-hexane)
Prince Edward Island	OEL TWA	500 ppm (Hexane isomers other than n-hexane)
Benzene (71-43-2)		
USA ACGIH	ACGIH OEL TWA	0.5 ppm
USA ACGIH	ACGIH OEL STEL	2.5 ppm
USA ACGIH	ACGIH chemical category	Confirmed Human Carcinogen,Skin - potential significant

		contribution to overall exposure by the cutaneous route
USA ACGIH	BEI BLV	25 µg/g Kreatinin Parameter: S-Phenylmercapturic acid - Medium: urine - Sampling time: end of shift (background) 500 µg/g Kreatinin Parameter: t,t-Muconic acid - Medium: urine - Sampling time: end of shift (background)
USA OSHA	OSHA PEL TWA	10 ppm 1 ppm
USA OSHA	OSHA PEL STEL	5 ppm (see 29 CFR 1910.1028)
USA OSHA	OSHA PEL C	25 ppm
USA OSHA	Acceptable Maximum Peak Above The Acceptable Ceiling Concentration For An 8-Hr Shift	50 ppm Peak (10 minutes)
USA OSHA	OSHA Action Level/Excursion Limit	0.5 ppm (Action Level, see 29 CFR 1910.1028)
USA NIOSH	NIOSH REL TWA	0.1 ppm
USA NIOSH	NIOSH REL STEL	1 ppm
USA IDLH	IDLH	500 ppm
Alberta	OEL STEL	8 mg/m³
Alberta	OEL STEL	2.5 ppm
Alberta	OEL TWA	1.6 mg/m³
Alberta	OEL TWA	0.5 ppm
British Columbia	OEL STEL	2.5 ppm
British Columbia	OEL TWA	0.5 ppm
Manitoba	OEL STEL	2.5 ppm
Manitoba	OEL TWA	0.5 ppm
New Brunswick	OEL STEL	2.5 ppm
New Brunswick	OEL TWA	0.5 ppm
Newfoundland & Labrador	OEL STEL	2.5 ppm
Newfoundland & Labrador	OEL TWA	0.5 ppm
Nova Scotia	OEL STEL	2.5 ppm
Nova Scotia	OEL TWA	0.5 ppm
Ontario	OEL STEL	2.5 ppm (designated substances regulation) 2.5 ppm (applies to workplaces to which the designated substances regulation does not apply)
Ontario	OEL TWA	0.5 ppm (applies to workplaces to which the designated substances regulation does not apply) 0.5 ppm (designated substances regulation)
Prince Edward Island	OEL STEL	2.5 ppm
Prince Edward Island	OEL TWA	0.5 ppm
Québec	VECD OEL STEV	2.5 ppm
Québec	VEMP OEL TWAEV	0.5 ppm
Yukon	OEL C	32 mg/m³
Yukon	OEL C	10 ppm
Nonanes		
Alberta	OEL TWA	1050 mg/m³
Alberta	OEL TWA	200 ppm
Nunavut	OEL STEL	250 ppm
Nunavut	OEL TWA	200 ppm
Northwest Territories	OEL STEL	250 ppm
Northwest Territories	OEL TWA	200 ppm
Saskatchewan	OEL STEL	250 ppm
Saskatchewan	OEL TWA	200 ppm
Aliphatic hydrocarbon gases: Alkanes (C1-4)		

Nunavut	OEL STEL	1250 ppm
Nunavut	OEL TWA	1000 ppm
Northwest Territories	OEL STEL	1250 ppm
Northwest Territories	OEL TWA	1000 ppm
Saskatchewan	OEL STEL	1250 ppm
Saskatchewan	OEL TWA	1000 ppm
Aliphatic hydrocarbon gases, alkane (C2-4)		
Alberta	OEL TWA	1000 ppm
Heptane isomers		
USA ACGIH	ACGIH OEL TWA	400 ppm
USA ACGIH	ACGIH OEL STEL	500 ppm
Manitoba	OEL STEL	500 ppm
Manitoba	OEL TWA	400 ppm
New Brunswick	OEL STEL	500 ppm
New Brunswick	OEL TWA	400 ppm
Newfoundland & Labrador	OEL STEL	500 ppm
Newfoundland & Labrador	OEL TWA	400 ppm
Nova Scotia	OEL STEL	500 ppm
Nova Scotia	OEL TWA	400 ppm
Prince Edward Island	OEL STEL	500 ppm
Prince Edward Island	OEL TWA	400 ppm
Octanes (Not Applicable)		
USA ACGIH	ACGIH OEL TWA	300 ppm
Alberta	OEL TWA	1400 mg/m³
Alberta	OEL TWA	300 ppm
British Columbia	OEL TWA	300 ppm
Manitoba	OEL TWA	300 ppm
New Brunswick	OEL TWA	300 ppm
Newfoundland & Labrador	OEL TWA	300 ppm
Nova Scotia	OEL TWA	300 ppm
Nunavut	OEL STEL	375 ppm
Nunavut	OEL TWA	300 ppm
Northwest Territories	OEL STEL	375 ppm
Northwest Territories	OEL TWA	300 ppm
Prince Edward Island	OEL TWA	300 ppm
Saskatchewan	OEL STEL	375 ppm
Saskatchewan	OEL TWA	300 ppm
Methylcyclohexane (108-87-2)		
USA ACGIH	ACGIH OEL TWA	400 ppm
USA OSHA	OSHA PEL TWA	2000 mg/m³
USA OSHA	OSHA PEL TWA	500 ppm
USA NIOSH	NIOSH REL TWA	1600 mg/m³
USA NIOSH	NIOSH REL TWA	400 ppm
USA IDLH	IDLH	1200 ppm (10% LEL)
Alberta	OEL TWA	1610 mg/m³
Alberta	OEL TWA	400 ppm
British Columbia	OEL TWA	400 ppm
Manitoba	OEL TWA	400 ppm
New Brunswick	OEL TWA	400 ppm
Newfoundland & Labrador	OEL TWA	400 ppm
Nova Scotia	OEL TWA	400 ppm

Nunavut	OEL STEL	500 ppm
Nunavut	OEL TWA	400 ppm
Northwest Territories	OEL STEL	500 ppm
Northwest Territories	OEL TWA	400 ppm
Ontario	OEL TWA	400 ppm
Prince Edward Island	OEL TWA	400 ppm
Québec	VEMP OEL TWAEV	1610 mg/m³
Québec	VEMP OEL TWAEV	400 ppm
Saskatchewan	OEL STEL	500 ppm
Saskatchewan	OEL TWA	400 ppm
Yukon	OEL STEL	2000 mg/m³
Yukon	OEL STEL	500 ppm
Yukon	OEL TWA	1600 mg/m³
Yukon	OEL TWA	400 ppm
Cyclohexane (110-82-7)		
USA ACGIH	ACGIH OEL TWA	100 ppm
USA ACGIH	BEI BLV	50 mg/g Kreatinin Parameter: 1,2-Cyclohexanediol - Medium: urine - Sampling time: end of shift at end of workweek (nonspecific)
USA OSHA	OSHA PEL TWA	1050 mg/m³
USA OSHA	OSHA PEL TWA	300 ppm
USA NIOSH	NIOSH REL TWA	1050 mg/m³
USA NIOSH	NIOSH REL TWA	300 ppm
USA IDLH	IDLH	1300 ppm (10% LEL)
Alberta	OEL TWA	344 mg/m³
Alberta	OEL TWA	100 ppm
British Columbia	OEL TWA	100 ppm
Manitoba	OEL TWA	100 ppm
New Brunswick	OEL TWA	100 ppm
Newfoundland & Labrador	OEL TWA	100 ppm
Nova Scotia	OEL TWA	100 ppm
Nunavut	OEL STEL	150 ppm
Nunavut	OEL TWA	100 ppm
Northwest Territories	OEL STEL	150 ppm
Northwest Territories	OEL TWA	100 ppm
Ontario	OEL TWA	100 ppm
Prince Edward Island	OEL TWA	100 ppm
Québec	VEMP OEL TWAEV	1030 mg/m³
Québec	VEMP OEL TWAEV	300 ppm
Saskatchewan	OEL STEL	150 ppm
Saskatchewan	OEL TWA	100 ppm
Yukon	OEL STEL	1300 mg/m³
Yukon	OEL STEL	375 ppm
Yukon	OEL TWA	1050 mg/m³
Yukon	OEL TWA	300 ppm
3-Methylhexane (589-34-4)		
USA ACGIH	ACGIH OEL TWA	400 ppm (Heptane, all isomers)
USA ACGIH	ACGIH OEL STEL	500 ppm (Heptane, all isomers)
Alberta	OEL STEL	2050 mg/m³ (Heptane, all isomers)
Alberta	OEL STEL	500 ppm (Heptane, all isomers)
Alberta	OEL TWA	1640 mg/m³ (Heptane, all isomers)

Alberta	OEL TWA	400 ppm (Heptane, all isomers)
British Columbia	OEL STEL	500 ppm (Heptane, isomers)
British Columbia	OEL TWA	400 ppm (Heptane, isomers)
Manitoba	OEL STEL	500 ppm (Heptane, all isomers)
Manitoba	OEL TWA	400 ppm (Heptane, all isomers)
New Brunswick	OEL STEL	500 ppm (Heptane, all isomers)
New Brunswick	OEL TWA	400 ppm (Heptane, all isomers)
Newfoundland & Labrador	OEL STEL	500 ppm (Heptane, all isomers)
Newfoundland & Labrador	OEL TWA	400 ppm (Heptane, all isomers)
Nova Scotia	OEL STEL	500 ppm (Heptane, all isomers)
Nova Scotia	OEL TWA	400 ppm (Heptane, all isomers)
Ontario	OEL STEL	500 ppm (Heptane, all isomers)
Ontario	OEL TWA	400 ppm (Heptane, all isomers)
Prince Edward Island	OEL STEL	500 ppm (Heptane, all isomers)
Prince Edward Island	OEL TWA	400 ppm (Heptane, all isomers)
Québec	VECD OEL STEV	500 ppm (Heptane (all isomers))
Québec	VEMP OEL TWAEV	400 ppm (Heptane (all isomers))
Cyclopentane (287-92-3)		
USA ACGIH	ACGIH OEL TWA	1000 ppm (explosion hazard)
USA NIOSH	NIOSH REL TWA	1720 mg/m³
USA NIOSH	NIOSH REL TWA	600 ppm
Alberta	OEL TWA	1720 mg/m³
Alberta	OEL TWA	600 ppm
British Columbia	OEL TWA	600 ppm
Manitoba	OEL TWA	1000 ppm (explosion hazard)
New Brunswick	OEL TWA	600 ppm
Newfoundland & Labrador	OEL TWA	1000 ppm (explosion hazard)
Nova Scotia	OEL TWA	1000 ppm (explosion hazard)
Nunavut	OEL STEL	900 ppm
Nunavut	OEL TWA	600 ppm
Northwest Territories	OEL STEL	900 ppm
Northwest Territories	OEL TWA	600 ppm
Ontario	OEL TWA	600 ppm
Prince Edward Island	OEL TWA	1000 ppm (explosion hazard)
Québec	VEMP OEL TWAEV	1720 mg/m³
Québec	VEMP OEL TWAEV	600 ppm
Saskatchewan	OEL STEL	900 ppm
Saskatchewan	OEL TWA	600 ppm
Methanethiol (74-93-1)		
USA ACGIH	ACGIH OEL TWA	0.5 ppm
USA OSHA	OSHA PEL (Ceiling)	20 mg/m³
USA OSHA	OSHA PEL C	10 ppm
USA NIOSH	NIOSH REL (Ceiling)	1 mg/m³
USA NIOSH	NIOSH REL C	0.5 ppm
USA IDLH	IDLH	150 ppm
Alberta	OEL TWA	1 mg/m³
Alberta	OEL TWA	0.5 ppm
British Columbia	OEL TWA	0.5 ppm
Manitoba	OEL TWA	0.5 ppm
New Brunswick	OEL TWA	0.5 ppm
Newfoundland & Labrador	OEL TWA	0.5 ppm

Nova Scotia	OEL TWA	0.5 ppm
Nunavut	OEL STEL	1.5 ppm
Nunavut	OEL TWA	0.5 ppm
Northwest Territories	OEL STEL	1.5 ppm
Northwest Territories	OEL TWA	0.5 ppm
Ontario	OEL TWA	0.5 ppm
Prince Edward Island	OEL TWA	0.5 ppm
Québec	VEMP OEL TWAEV	0.98 mg/m³
Québec	VEMP OEL TWAEV	0.5 ppm
Saskatchewan	OEL STEL	1.5 ppm
Saskatchewan	OEL TWA	0.5 ppm
Yukon	OEL C	5.9 mg/m³
Yukon	OEL C	3 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. 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.

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. If material is cold, wear thermally resistant protective gloves.

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

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Thermal Hazard Protection: Wear thermally resistant protective clothing.

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 observed if mercaptans are present.
Odor Threshold	:	No data available
pH	:	No data available
Evaporation Rate	:	No data available
Melting Point	:	No data available
Freezing Point	:	No data available
Boiling Point	:	-153.9 °C (-245 °F)
Flash Point	:	-51.5 °C (-60.7 °F)
Auto-ignition Temperature	:	215.6 °C (420 °F)
Decomposition Temperature	:	No data available
Flammability (solid, gas)	:	Extremely flammable gas
Lower Flammable Limit	:	1.8 %
Upper Flammable Limit	:	9.2 %
Vapor Pressure	:	7173 mm Hg (138.7 psia)
Relative Vapor Density at 20°C	:	No data available
Relative Density	:	1.754 @ 20 °C (68 °F); 0.54 @ 15.6 °C (60 °F) (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:

Hazardous reactions will not occur under normal conditions.

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.

10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Carbon Oxides, Sulfur Oxides, Hydrocarbon Vapors, Smoke. Contains Sulfur, may release small amounts of hydrogen sulfide. Hydrogen sulfide is a highly flammable, explosive gas under certain conditions, is a toxic gas, and may be fatal. Gas can accumulate in the headspace of closed containers, use caution when opening sealed containers. Heating the product or containers can cause thermal decomposition of the product and release hydrogen sulfide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Likely routes of exposure: Dermal. Eye contact. Inhalation.

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: Causes skin irritation.

Eye Damage/Irritation: Not classified.

Respiratory or Skin Sensitization: Not classified.

Germ Cell Mutagenicity: May cause genetic defects.

Carcinogenicity: May cause cancer.

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

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

Specific Target Organ Toxicity (Single Exposure): May cause drowsiness or dizziness.

Aspiration Hazard: Not classified.

Symptoms/Injuries After Inhalation: Hydrogen sulfide may cause respiratory paralysis. High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. 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: Redness, pain, swelling, itching, burning, dryness, and dermatitis. 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: Contains a small amount of Hydrogen Sulfide, symptoms of chronic exposure that may manifest as long-term or permanent effects are: headaches, dizziness, nausea, coughing, respiratory irritation, eye irritation, skin irritation, pain in the nose, and loss of consciousness. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. May cause genetic defects.

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 Source: ECHA_API)
n-Heptane (142-82-5)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	3000 mg/kg (Source: IUCLID)
LC50 Inhalation Rat	> 73.5 mg/l/4h
n-Butane (106-97-8)	
LC50 Inhalation Rat	30957 mg/m³ (Exposure time: 4 h)
LC50 Inhalation Rat	276798.8 ppm
ATE US/CA (vapors)	30.96 mg/l/4h
ATE US/CA (dust, mist)	30.96 mg/l/4h
Isobutane (75-28-5)	
LC50 Inhalation Rat	> 800000 ppm (Exposure time: 15 min Source: ECHA_API)
Ethane (74-84-0)	
LC50 Inhalation Rat	> 800000 ppm/4h
n-Pentane (109-66-0)	
LD50 Oral Rat	> 2000 mg/kg (Source: EU_RAR)
LD50 Dermal Rabbit	3000 mg/kg (Source: OECD_SIDS)
LC50 Inhalation Rat	364 g/m³ (Exposure time: 4 h Source: NLM_CIP)
LC50 Inhalation Rat	> 20 mg/l/4h
n-hexane (110-54-3)	
LD50 Oral Rat	25 g/kg (Source: NLM_CIP)
LD50 Dermal Rabbit	3000 mg/kg (Source: NLM_CIP)
LC50 Inhalation Rat	48000 ppm/4h
Neohexane (75-83-2)	
LD50 Dermal Rabbit	> 5 ml/kg (Source: ECHA_API)
Benzene (71-43-2)	
LD50 Oral Rat	810 mg/kg
LD50 Dermal Rabbit	> 8200 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation Rat	44.66 mg/l/4h
Methylcyclohexane (108-87-2)	
LD50 Oral Rat	> 3200 mg/kg (Source: NLM_CIP)
LD50 Dermal Rabbit	> 86700 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation Rat	28.4 mg/l/4h
Cyclohexane (110-82-7)	
LD50 Oral Rat	12705 mg/kg (Source: NLM_CIP)
LD50 Dermal Rabbit	> 2000 mg/kg (Source: EU_RAR)
LC50 Inhalation Rat	> 32880 mg/m³ (Exposure time: 4 h Source: ECHA_API)
LC50 Inhalation Rat	32.88 mg/l/4h
Cyclopentane (287-92-3)	
LD50 Oral Rat	11400 mg/kg (Source: NLM_CIP)
LC50 Inhalation Rat	> 25.3 mg/l/4h
Methanethiol (74-93-1)	
LD50 Oral Rat	109.6 mg/kg (Source: IUCLID)
LD50 Dermal Rat	> 84.8 mg/kg (Source: IUCLID)
LC50 Inhalation Rat	675 ppm/4h
2-Propanethiol (75-33-2)	
LD50 Oral Rat	2000 – 5000 mg/kg (Source: NLM_HSDB)
LD50 Dermal Rabbit	> 2000 mg/kg (Source: NLM_HSDB)

LC50 Inhalation Rat	> 1792 mg/m³ (Exposure time: 4 h Source: NLM_HSDB)
Benzene (71-43-2)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens, Evidence of Carcinogenicity.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
OSHA Specifically Regulated Carcinogen List	In OSHA Specifically Regulated Carcinogen list.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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

n-Heptane (142-82-5)	
LC50 Fish	375 mg/l (Exposure time: 96 h - Species: Cichlid fish)
EC50 Crustacea	0.1 mg/l
Isopentane (78-78-4)	
EC50 Crustacea	2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
n-Pentane (109-66-0)	
LC50 Fish	9.87 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Crustacea	9.74 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish	11.59 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
NOEC Chronic Algae	2 mg/l
n-hexane (110-54-3)	
LC50 Fish	2.1 – 2.98 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
EC50 Crustacea	3.88 mg/l
Benzene (71-43-2)	
LC50 Fish	10.7 – 14.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
EC50 Crustacea	8.76 – 15.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish	5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)
EC50 Crustacea	10 mg/l (Exposure time: 48 h - Species: Daphnia magna)
ErC50 Algae	29 mg/l
NOEC Chronic Fish	0.8 mg/l
Methylcyclohexane (108-87-2)	
LC50 Fish	2.07 mg/l (96 h - Oryzias laties)
EC50 Crustacea	0.33 mg/l
NOEC Chronic Algae	0.067 mg/l
Cyclohexane (110-82-7)	
LC50 Fish	3.96 – 5.18 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
EC50 Crustacea	0.9 mg/l
LC50 Fish	23.03 – 42.07 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
NOEC Chronic Algae	0.94 mg/l
Cyclopentane (287-92-3)	
EC50 Crustacea	10.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and Degradability

Demthanized Mix Y Grade	
Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

Demthanized Mix Y Grade	
Bioaccumulative Potential	Not established.

Propane (74-98-6)	
Partition coefficient n-octanol/water (Log Pow)	1.09 at 20 °C (at pH 7)
n-Heptane (142-82-5)	
Partition coefficient n-octanol/water (Log Pow)	4.66
n-Butane (106-97-8)	
Partition coefficient n-octanol/water (Log Pow)	2.31 at 20 °C (at pH 7)
Isopentane (78-78-4)	
Partition coefficient n-octanol/water (Log Pow)	4 at 25 °C (at pH 6.6)
Isobutane (75-28-5)	
BCF Fish	1.57 – 1.97
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 at 20 °C (at pH 7)
Ethane (74-84-0)	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 at 20 °C (at pH 7)
n-Pentane (109-66-0)	
Partition coefficient n-octanol/water (Log Pow)	3.45 at 25 °C (at pH 7)
n-hexane (110-54-3)	
Partition coefficient n-octanol/water (Log Pow)	4 at 20 °C (at pH 7)
Neohexane (75-83-2)	
Partition coefficient n-octanol/water (Log Pow)	3.8
Benzene (71-43-2)	
BCF Fish	3.5 – 4.4
Partition coefficient n-octanol/water (Log Pow)	2.13
Cyclohexane (110-82-7)	
Partition coefficient n-octanol/water (Log Pow)	3.44 at 25 °C (at pH 7)
Cyclopentane (287-92-3)	
Partition coefficient n-octanol/water (Log Pow)	3 at 25 °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 : **PETROLEUM GASES, LIQUEFIED**
Reportable Quantity : **>14,286 lbs, RQ (Hexane) : 2.1**
Hazard Class : **UN1075**
Identification Number : **2.1**
Label Codes : **Marine pollutant**
Marine Polluntant : **115**
ERG Number

14.2 In Accordance with IMDG

Proper Shipping name : **PETROLEUM GASES, LIQUEFIED**
Reportable Quantity : **>14,286 lbs, RQ (Hexane)**
Hazard Class : **2.1**
Identification Number : **UN1075**
Label Codes : **2.1**
EmS-No. (Fire) : **F-D**
EmS-No. (Spillage) : **S-U**
Marine Polluntant : **Marine pollutant**
ERG Number : **115**

14.3 In Accordance with IATA

Proper Shipping name : **PETROLEUM GASES, LIQUEFIED**
Reportable Quantity : **>14,286 lbs, RQ (Hexane)**
Hazard Class : **2.1**
Identification Number : **UN1075**
Label Codes : **2.1**
ERG Code (IATA) : **10L**

14.4 In Accordance with TDG

Proper Shipping name : **PETROLEUM GASES, LIQUEFIED**
Reportable Quantity : **>14,286 lbs, RQ (Hexane)**
Hazard Class : **2.1**
Identification Number : **UN1075**
Label Codes : **2.1**
Marine Pollutant (TDG) : **Marine Pollutant**

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Demthanized Mix Y Grade	
SARA Section 311/312 Hazard Classes	Health hazard - Carcinogenicity Health hazard - Germ cell mutagenicity Health hazard - Reproductive toxicity Health hazard - Simple asphyxiant Health hazard - Skin corrosion or Irritation Health hazard - Specific target organ toxicity (single or repeated exposure) Physical hazard - Flammable (gases, aerosols, liquids, or solids) Physical hazard - Gas under pressure
Propane (74-98-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
n-Heptane (142-82-5)	
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	
Isopentane (78-78-4)	
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	
Ethane (74-84-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
n-Pentane (109-66-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
n-hexane (110-54-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
SARA Section 313 - Emission Reporting	1 %
2-Methylpentane (107-83-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
3-Methylpentane (96-14-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Neohexane (75-83-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Benzene (71-43-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb
SARA Section 313 - Emission Reporting	0.1 %
D018-Unlisted hazardous wastes characteristic of toxicity (benzene) (Not Applicable)	
CERCLA RQ	10 lb
Methylcyclohexane (108-87-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Cyclohexane (110-82-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb
SARA Section 313 - Emission Reporting	1 %
Methylcyclopentane (96-37-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
3-Methylhexane (589-34-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Isoheptane (31394-54-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Cyclopentane (287-92-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
Methanethiol (74-93-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.
CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 313 - Emission Reporting	1 %
2-Propanethiol (75-33-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	

15.2. US State Regulations

State or local regulations

California Proposition 65

WARNING: This product can expose you to Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
n-hexane (110-54-3)				X
Benzene (71-43-2)	X	X		X

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
n-Heptane (142-82-5)
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
Isopentane (78-78-4)
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
Ethane (74-84-0)
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-Pentane (109-66-0)
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-hexane (110-54-3)
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
2-Methylpentane (107-83-5)
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
3-Methylpentane (96-14-0)
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
Neohexane (75-83-2)
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
Benzene (71-43-2)
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
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Methylcyclohexane (108-87-2)
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
Cyclohexane (110-82-7)
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
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Methylcyclopentane (96-37-7)
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
3-Methylhexane (589-34-4)
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
Isoheptane (31394-54-4)
U.S. - Pennsylvania - RTK (Right to Know) List
Cyclopentane (287-92-3)
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
Methanethiol (74-93-1)
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
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
2-Propanethiol (75-33-2)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Massachusetts - Right To Know List

15.3. Canadian Regulations

Propane (74-98-6)
Listed on the Canadian DSL (Domestic Substances List)
n-Heptane (142-82-5)
Listed on the Canadian DSL (Domestic Substances List)
n-Butane (106-97-8)
Listed on the Canadian DSL (Domestic Substances List)
Isopentane (78-78-4)
Listed on the Canadian DSL (Domestic Substances List)
Isobutane (75-28-5)
Listed on the Canadian DSL (Domestic Substances List)

Ethane (74-84-0)
Listed on the Canadian DSL (Domestic Substances List)
n-Pentane (109-66-0)
Listed on the Canadian DSL (Domestic Substances List)
n-hexane (110-54-3)
Listed on the Canadian DSL (Domestic Substances List)
2-Methylpentane (107-83-5)
Listed on the Canadian DSL (Domestic Substances List)
3-Methylpentane (96-14-0)
Listed on the Canadian DSL (Domestic Substances List)
Neohexane (75-83-2)
Listed on the Canadian DSL (Domestic Substances List)
Benzene (71-43-2)
Listed on the Canadian DSL (Domestic Substances List)
Methylcyclohexane (108-87-2)
Listed on the Canadian DSL (Domestic Substances List)
Cyclohexane (110-82-7)
Listed on the Canadian DSL (Domestic Substances List)
Methylcyclopentane (96-37-7)
Listed on the Canadian DSL (Domestic Substances List)
3-Methylhexane (589-34-4)
Listed on the Canadian NDSL (Non-Domestic Substances List)
Isoheptane (31394-54-4)
Listed on the Canadian DSL (Domestic Substances List)
Cyclopentane (287-92-3)
Listed on the Canadian DSL (Domestic Substances List)
Methanethiol (74-93-1)
Listed on the Canadian DSL (Domestic Substances List)
2-Propanethiol (75-33-2)
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 : 07/26/2024

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
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled

H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Glossary of Data Source Abbreviations

ATSDR: Agency for Toxic Substances and Disease Registry (U.S. Department of Health and Human Services)
AU_WES: Australia WES
CHEMVIEW: ChemView (U.S. Environmental Protection Agency)
EC_RAR: European Commission Renewal Assessment Report
EC_SCOEL: European Commission Scientific Committee on Occupational Exposure Limits
ECETOC: European Centre for Ecotoxicology and Toxicology of Chemicals Reports
ECHA_API: European Chemicals Agency API
ECHA_RAC: ECHA Committee for Risk Assessment
EFSA: European Food Safety Authority
EPA: U.S. Environmental Protection Agency
EPA_AEGL: Acute Exposure Guideline Levels (U.S. Environmental Protection Agency)
EPA_FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act Reregistration Eligibility Decision (U.S. Environmental Protection Agency)
EPA_HPV: High Production Volume Chemicals (U.S. Environmental Protection Agency)
EPA_TRED: Risk Assessment for Tolerance Reassessment Eligibility Decision (U.S. Environmental Protection Agency)
EU_CLH: European Union Harmonised Classification and Labelling Proposal
EU_RAR: European Union Risk Assessment Report
FOOD_JOURN: Food Research Journal (1956)
IARC: The International Agency for Research on Cancer
IDLH: National Institute for Occupational Health and Safety Immediately Dangerous to Life or Health Value Profiles
IUCLID: International Uniform Chemical Information Database
JAPAN_GHS: Japan GHS Basis for Classification Data
JP_J-CHECK: Japan J-Check
KR_NIER: South Korea National Institute of Environmental Research Evaluations
NICNAS: Australia National Industrial Chemicals Notification and Assessment Scheme
NIOSH: National Institute for Occupational Health and Safety (U.S. Department of Health and Human Services)
NLM_CIP: National Library of Medicine ChemID plus database
NLM_HSDB: National Library of Medicine Hazardous Substance Data Bank
NLM_PUBMED: National Library of Medicine PubMed database
NTP: National Toxicology Program
NZ_CCID: New Zealand Chemical Classification and Information Database
OECD_EHSP: Environment, Health, and Safety Publication (Organisation for Economic Co-operation and Development)
OECD_SIDS: Screening Information Data Sets (Organisation for Economic Co-operation and Development)
WHO: World Health Organization

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)