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# SAFETY DATA SHEET

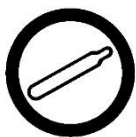
Class: A – Compressed Gas  
B – Flammable/Combustible Material  
2 – Flammable Gas

Division: 2.1 – Flammable Gas

# Natural Gas, Refrigerated Liquid (Cryogenic Liquid) Safety Data Sheet

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**A** (Compressed Gas)



**B1** (Flammable/Combustible Material) – Division 1 Flammable Gas

### NFPA 704:

HEALTH HAZARD	(Blue - left)	3
FLAMMABILITY HAZARD	(Red - top)	4
PHYSICAL HAZARD	(Yellow - right)	0
OTHER	(White - bottom)	SA



### GHS:

Classification:	Simple Asphy.	H380
	Flam. Gas 1	H220
	Compressed Gas	H280
	Repr. 2	H361
	STOT RE 2	H373

### Labeling:



Signal word: Danger

Hazard statements: H220 – Extremely flammable gas.

H280 – Contains gas under pressure; may explode if heated.

H361 – May damage the unborn child (inhalation).

H373 – May cause damage to organs (central nervous system) through prolonged or repeated exposure.

H280 – May displace oxygen and cause rapid suffocation.

H401 – Toxic to aquatic life.

Precautionary statements: P201 – Obtain special instructions before use.

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P202 – Do not handle until all safety precautions have been read and understood.

P210 – Keep away from heat, sparks, open flames, hot surfaces. – No smoking.

P260 – Do not breathe vapours/gas.

P273 – Avoid release to the environment.

P280 – Wear gloves, protective clothing, eye protection, face protection.

P308+P313 – if exposed or concerned: Get medical advice/attention.

P314 – Get medical advice and attention if you feel unwell.

P377 – Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 – Eliminate all ignition sources if safe to do so.

P405 – Store locked up.

P410+P403 – Protect from sunlight. Store in a well-ventilated place.

P501 – Dispose of contents/container according to local, regional, national, and international regulations.

### WARNING!

Odourless, colourless liquid. This product is NOT odourized.

Once vapourized, product is extremely flammable within 5-15% concentration. Methane gas burns at high temperature and may cause combustibles in the area to catch fire.

Potential asphyxiant. Methane is lighter than air and will rise unless at cryogenic temperatures. Extremely cold vapour will fall and spread along the ground and as it warms will begin to rise.

Skin contact with liquid or vapours can cause severe cryogenic burns.

When in contact with cryogenic liquids or vapours, many materials become brittle and are likely to fail without warning.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS RN	CONCENTRATION
Methane	74-82-8	>98%
Ethane	74-84-0	0-1%

Trade Name: Methane

Chemical Name: Methane

Common Name: Liquid natural gas, Liquid methane, Marsh gas, Methyl hydride, Fire damp, UN1971, UN1972, R50, Biogas

Formula: CH<sub>4</sub>

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### 4. FIRST AID MEASURES

**GENERAL:** Remove the victim from the source of contamination. Medical attention should be prompt in all cases of over-exposure to Natural Gas. Rescue personnel should be equipped with Self-Contained Breathing Apparatus. Also note that there is no specific antidote and treatment of over-exposure should be directed at the control of symptoms and the clinical condition. Take a copy of the label and SDS to physician or other health professional with victim(s).

**EYES:** Remove victim from the source of contamination. Never introduce oil or ointment into the eyes without medical advice. Irrigate exposed eyes with copious amounts of room temperature water for at least 15 minutes. If the victim cannot tolerate light, protect eyes with dark glasses. The use of bandages is not recommended for keeping the eyelids closed as exerting pressure on the eyelid may cause further damage. If irritation, pain, swelling, or other symptoms persist, the patient should be seen by a health care physician.

**SKIN:** Clothing frozen to the skin should be thawed prior to removal. Remove contaminated clothing and flush affected area with lukewarm water. DO NOT USE HOT WATER. Keep victim warm and quiet. A physician should see the patient promptly if frostbite has occurred.

**INGESTION:** A physician should see the patient promptly if frostbite has occurred.

**INHALATION:** RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Quick removal from the contaminated area is most important. Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Unconscious persons should be moved to an uncontaminated area, given assisted resuscitation and supplemental oxygen. PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO NATURAL GAS. Further treatment should be symptomatic and supportive.

### SUMMARY OF EXPOSURE (ACUTE EXPOSURES)

Simple asphyxiants are inert gases or vapours that displace oxygen from the air and as such may result in hypoxia. Four stages are described, depending on the arterial oxygen saturation.

- 1.) **INDIFFERENT STAGE (Oxygen saturation: 90%):** Decreased night vision.
- 2.) **COMPENSATORY STAGE (Oxygen saturation: 82% to 90 %):** Compensatory increase in respiratory rate, compensatory increase in heart rate, night vision is decreased further, mildly reduced performance ability, mildly reduced alertness, other symptoms may develop in those with significant pre-existing cardiac, pulmonary, or hematologic diseases.
- 3.) **DISTURBANCE STAGE (Oxygen saturation: 64% to 82%):** Compensatory mechanisms become inadequate, air hunger, fatigue, tunnel vision, dizziness,

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headache, belligerence, euphoria, reduced visual acuity, numbness and tingling of extremities, hyperventilation, poor judgment, memory loss, cyanosis, decreased ability for escape from toxic environment.

**4.) CRITICAL STAGE (Oxygen saturation: 60% to 70% or less):** Deterioration in judgment and coordination may occur in 3 to 5 minutes or less. Total incapacitation and unconsciousness follow rapidly.

**CARDIOVASCULAR:** An increased pulse rate may occur. Cardiac manifestations of prolonged or severe hypoxia may include atrial or ventricular dysrhythmias, hypotension, myocardial ischemia, myocardial infarction, and eventual asystole. "Sudden sniffing death", or cardiac arrest, has been reported following intentional inhalation of hydrocarbons.

**RESPIRATORY:** Hyperventilation may develop. Cyanosis may occur. Bronchoconstriction and respiratory depression may be seen. Pulmonary edema and lung congestion may occur.

**NEUROLOGIC:** Various disturbances including headache, dizziness, mood disturbances, numbness of the extremities, sleepiness, mental confusion, poor judgment and coordination, and memory loss may occur. Prolonged or severe hypoxia has resulted in unconsciousness. Prolonged asphyxia may produce CNS injury. Hemiparesis has been reported with volatile substance abuse. Cerebral edema with brainstem herniation may occur. Seizures have been reported following intentional inhalation.

**GASTROINTESTINAL:** Nausea, vomiting, and gastrointestinal hemorrhage may develop.

**ACID-BASE:** Hypercapnia may be seen.

**DERMATOLOGIC:** Dermal exposure may cause frostbite injury. Severe tissue burns have been reported.

**MUSCULOSKELETAL:** Rhabdomyolysis and seizures have been reported.

**REPRODUCTIVE HAZARDS:** Sequelae of oxygen deprivation in the unborn are controversial. Cerebral palsy, previously thought to be due to acute hypoxia during labor and/or childbirth, remains poorly understood.

### SUMMARY OF EXPOSURE (CHRONIC EXPOSURES)

**CARCINOGENICITY:** 74-82-8 is not listed as a carcinogen (IARC, 2004).

## 5. FIREFIGHTING MEASURES

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**EXTINGUISHING MEDIA:** Water, foam, carbon dioxide, dry chemical. Use water (as fog) in flooding quantities. Dry chemical is preferred as firefighting agent. If safe to do so, allow flame to burn out. If flames are accidentally extinguished, explosive re-ignition may occur. Use extinguishing media appropriate for surrounding fire.

**SPECIAL CONSIDERATIONS:** If tank, rail car or tank truck is involved in a fire, **ISOLATE** for 1600 meters (1 mile) in all directions established under ERG 115. If fire becomes uncontrollable or container is exposed to direct flame, consider **EVACUATION** of 530 meters (1/3 mile) in all directions established under ERG 115. The flammable mixture of gas and air may extend far beyond the distances that are regarded as adequate for normal safety purposes, with the result that the flammable mixture may become ignited by a household fire or automobile engine well outside the specified danger zone. Vapour may thus be set alight over a very large area and flame propagation through the mixture may reach explosive violence.

**FIREFIGHTING:** Self-contained breathing apparatus with a full face-piece operated in pressure-demand or other positive pressure mode, full bunker gear, and other proper protective equipment.

Approach area from up-wind. Do not extinguish fire unless flow can be stopped. Cool all affected containers with flooding quantities of water to prevent impingement and potential BLEVE of the container. Apply water from as far a distance as possible. Under prolonged exposure to fire or intense heat, the containers may rupture violently and rocket. Flashback along vapour trail may occur. Due to the high heat radiation from a natural gas fire, it is important to ensure other combustibles in the vicinity do not catch fire.

Avoid application of water to pooled product as water may create rapid phase transition of the material, creating small concussion-like explosions and increase the vaporization rate which may migrate downwind faster than expected.

## 6. ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:** Large spill – Consider initial downwind evacuation for at least 800 meters (1/2 mile) in all directions. Use appropriate protective clothing and wear a Self-Contained Breathing Apparatus when entering the area. Eliminate all ignition sources. Shut off the flow of product if safe to do so. Clear the affected area and allow the liquid to evaporate and gas to dissipate. Test for sufficient oxygen and ensure oxygen level is at least 19.5% prior to re-entry.

Prevent entry to sewers and public waters. Clean up spills immediately and dispose of waste safely.

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### 7. HANDLING AND STORAGE

**HANDLING PRECAUTIONS:** Use only in well-ventilated areas. Do not heat cylinder or vessels by any means to increase the discharge rate of product. Avoid inhalation of vapours when venting the gas. Use check valve or trap in discharge line to prevent hazardous backflow into the cylinder. Always stay upstream of the venting and stay out of low lying areas where gas pockets could accumulate at cryogenic temperatures. Avoid any contact of unprotected parts of the body with un-insulated pipes or vessels containing cryogenic fluids. Grounding/bonding procedures used. Remove ignition sources and no smoking.

**STORAGE PRECAUTIONS:** Proper grounding procedures to avoid static electricity should be followed. Store and use with adequate ventilation and isolate from oxidizing agents. Outside or detached storage is preferred only if adequately protected from the weather and direct sunlight. Avoid high temperatures. Storage areas should be located at a safe distance from occupied premises and neighboring dwellings. Protect against physical damage. Prohibit open flame, and inspect for leakage. Containers are equipped with a safety relief valve.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**USA ACGIH TWA:** 1,000 ppm

Gas detectors should be used when flammable gases/vapours may be released.

#### **RESPIRATOR RECOMMENDATIONS:**

**EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR WHERE OXYGEN CONCENTRATION IS BELOW 19.5%:** OSHA-approved self-contained breathing apparatus that has a full face-piece and is operated in a pressure-demand or other positive-pressure mode; or supplied-air respirator that has a full face-piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

**ESCAPE CONDITIONS:** Self-contained breathing apparatus that has a full face-piece and is operated in a pressure-demand or other positive-pressure mode; or supplied-air respirator that has a full face-piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

#### **VENTILATION/ENGINEERING CONTROLS:**

**LOCAL EXHAUST** – Preferred. Use local exhaust to control air contaminants to at or below acceptable exposure guidelines and maintain atmospheric oxygen at 19.5%.

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**MECHANICAL (general)** – Explosion proof ventilation systems may be acceptable if it can maintain an adequate supply of air to maintain LEL levels. Grounding and bonding of equipment is required during the transfer of product to eliminate potential of static discharge.

**SPECIAL** – Not applicable.

**OTHER** – Not applicable.

**EYE/FACE PROTECTION:** OSHA approved safety glasses or splash goggles, and full face shields are required to be used at all times when working with or around this product.

**SKIN PROTECTION:** Protective gloves resistant to tears of any material appropriate for the job. Low-temperature insulated gloves are recommended for cryogenic liquids.

**OTHER/GENERAL PROTECTION:** Safety footwear and coveralls/other suitable protective clothing and equipment are to be used in accordance with the hazards of the task and site.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Liquid/vapour.

**COLOUR:** Colourless.

**TASTE:** Tasteless.

**ODOUR:** Odourless.

**pH:** Not Applicable.

**MELTING/FREEZING POINT:** -297°F (-183°C)

**BOILING POINT:** -256°F (-160°C)

**FLASHPOINT:** -306°F (-187°C)

**EVAPORATION RATE (nBuAc=1):** Not Applicable.

**CONDITIONS OF FLAMMABILITY:** Vapour may ignite if exposed to ignition source. If vapours are ignited at a distance away from the liquid spill or release, and there is no confinement of the vapours, the vapours may burn back to the liquid source as a “flash fire”. Flash fire duration is dependent on the distance of the vapours from the liquid and the air/fuel mixture of the vapour cloud.



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**UPPER FLAMMABILITY / EXPLOSIVE LIMIT:** 15% by volume

**LOWER FLAMMABILITY / EXPLOSIVE LIMIT:** 5% by volume

**VAPOUR PRESSURE:**  $4.66 \times 10^5$  mm Hg @ 77°F (25°C)

**RELATIVE DENSITY (AIR=1):** 0.55 (0.55 – 0.64)

**DENSITY:** 0.044 lb/ft<sup>3</sup>

**SOLUBILITIES:** 0.60 ml in 1 g ethyl alcohol @ 20°C; soluble in benzene, methanol, toluene; slightly soluble in acetone; 0.91 ml in 1 g ether @ 20°C; in water 22 mg/liter @ 25°C.

**COEFFICIENT WATER/OIL DISTRIBUTION (Gas @ 15°C or 59°F):** Not Applicable.

**AUTOIGNITION TEMPERATURE:** 999°F (537°C)

**DECOMPOSITION:** When ignited in the presence of oxygen, will burn to produce carbon monoxide, carbon dioxide.

**MOLECULAR WEIGHT:** 16.04 g / mol

**VISCOSITY:** 34.8 uP @ -181.6°C; 76.0 uP @ -78.5°C; 102.6 uP @ 0°C; 108.7 uP @ 20°C; 133.1 uP @ 100°C; 160.5 uP @ 200.5°C; 181.3 uP @ 284°C; 202.6 uP @ 380°C; 226.4 uP @ 499°C

**EXPLOSION SENSITIVITY TO MECHANICAL IMPACT:** Not sensitive.

**EXPLOSION SENSITIVITY TO STATIC DISCHARGE:** Static discharge may cause methane vapour/gas to ignite explosively.

## 10. STABILITY AND REACTIVITY

**CHEMICAL STABILITY:** Extremely flammable gas.

**POSSIBILITY OF HAZARDOUS REACTIONS:** Highly flammable. Will form explosive mixtures with air. Vapours are initially heavier than air and spread along ground until warmed. Hazardous polymerization will not occur.

**CONDITIONS OF REACTIVITY TO AVOID:** Exposure of cryogenic containers to high temperatures or direct flame can cause container to rupture or burst. LNG contact with water may result in vigorous or violent boiling of the product and extremely rapid vaporization.

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**INCOMPATIBLE MATERIALS:** Halogens (F, Cl, Br, I). Strong acids and bases. Strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur. Hydrogen sulfide and other sulfur-containing gases can evolve from this product particularly at elevated temperatures.

### 11. TOXICOLOGICAL INFORMATION

**INHALATION:** Methane is an asphyxiant with effects due to lack of oxygen. It is also physiologically active, affecting circulation and breathing. Moderate concentrations may cause headache, drowsiness, dizziness, stinging of the nose and throat, excitation, rapid breathing and heart rate, excess salivation, vomiting, and unconsciousness. It is the most powerful cerebral vasodilator known. The acute LC50 inhalation toxicity for ethane (in rats) is 658 mg/L with an exposure time of 4hr.

**SKIN CONTACT:** Contact with methane may cause frostbite.

**INGESTION:** An unlikely route of exposure as this product is a gas at normal pressure and temperature. Exposure may result in severe frostbite of the lips and mouth.

**EYE CONTACT:** Contact with methane may cause severe frostbite.

**EFFECTS OF ACUTE EXPOSURE TO PRODUCT:** The effects of frostbite include a change in the skin colour to gray or white, possibly followed by blistering.

**EFFECTS OF CHRONIC EXPOSURE TO PRODUCT:** No harm expected to healthy individuals. Where competent medical authority deems that such illness would be aggravated by exposure to methane, persons in ill health should be restricted from working with or handling this product.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Acute or chronic respiratory conditions may be aggravated by large concentrations are inhaled. May cause damage to organs (central nervous system) through prolonged or repeated exposure (inhalation).

#### LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH

**HAZARD EVALUATION:** No comprehensive population-based studies of the health effects of natural gas operations exist as of yet.

**TERATOGENICITY:** Not listed as a teratogen.

**CARCINOGENICITY:** Not listed as a carcinogen.

**MUTAGENICITY:** Not listed as a mutagen.

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**REPRODUCTIVE TOXICITY:** May damage the unborn child (inhalation).

**IRRITANCY OF PRODUCT:** None.

**SENSITIZATION TO PRODUCT:** None.

**NAME OF TOXIOLOGICAL SYNERGISTIC PRODUCTS:** None.


### 12. ECOLOGICAL INFORMATION

Methane occurs naturally in the atmosphere, and is a greenhouse gas. This gas will be dissipated rapidly in well-ventilated areas. Any adverse effect on animals would be related to oxygen-deficient environments. No adverse effect is anticipated to occur to plant-life, except for frost produced in the presence of rapidly expanding gases. The bioaccumulative potential is not established. Methane is not listed as a marine pollutant by DOT. The octanol-water partition coefficient for ethane is  $\leq 2.8$ .

### 13. DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:** Dispose of waste material in accordance with all local, regional, national, and international regulations. Any product, residue, disposable container, or liner should be recycled or discarded in an environmentally safe manner.

### 14. TRANSPORT INFORMATION

<b>PROPER SHIPPING NAME:</b>	Natural gas, refrigerated liquid Methane, refrigerated liquid
<b>SHIPPING LABEL(S):</b>	
<b>PRIMARY CLASS:</b>	2.1
<b>PACKING GROUP:</b>	Not Applicable
<b>UN NUMBER:</b>	1972
<b>ERG (2012) NUMBER:</b>	115

**TRANSPORT BY SEA:** E – the material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded. 40 – Stow “clear of living quarters”

**PASSENGER AIRCRAFT / RAIL:** Forbidden.

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**CARGO AIRCRAFT ONLY:** 150 kg.

### 15. REGULATORY INFORMATION

**U.S. TOXIC SUBSTANCE CONTROL ACT:** Methane and ethane are on the TSCA Section 8(b) inventory.

**OTHER U.S. FEDERAL REGULATIONS:** Methane is subject to the reporting requirements of Section 112® of the Clean Air Act.

#### Methane

U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Delaware - Volatile Organic Compounds Exempt from Requirements  
U.S. - Maine - Air Pollutants - Greenhouse Gases (GHG)  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Volatile Organic Compounds Exempt From Requirements  
U.S. - Minnesota - Hazardous Substance List  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Excluded Volatile Organic Compounds  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities  
U.S. - Oregon - Permissible Exposure Limits – TWAs  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Washington - Permissible Exposure Limits - Simple Asphyxiants

#### Ethane

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities

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U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Delaware - Volatile Organic Compounds Exempt from Requirements  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Volatile Organic Compounds Exempt From Requirements  
U.S. - Minnesota - Hazardous Substance List  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Excluded Volatile Organic Compounds  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities  
U.S. - Oregon - Permissible Exposure Limits – TWAs  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Washington - Permissible Exposure Limits - Simple Asphyxiants

**CANADIAN DOMESTIC SUBSTANCES LIST:** Methane is listed on the DSL inventory.

**CANADIAN ENVIRONMENTAL PROTECTION ACT:** Methane is not listed on the CEPA priorities substances list.

**OTHER CANADIAN REGULATIONS:** This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

## 16. PREPARATION INFORMATION

**PREPARED BY:** Ferus Natural Gas Fuels, Inc.  
Suite 1220, 401 9th Avenue SW  
Calgary, Alberta T2P 3C5  
403-517-8777

**REVISION DATE:** 11/20/2018

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### DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:

(1) Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

(2) Ferus Inc. asks users of this product to study this SDS and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.