

**Section 1: Identification of the substance or mixture and of the supplier**

<b>Product Name:</b>	Liquified Natural Gas
<b>CAS Number:</b>	169200
<b>Synonyms/Other Means of Identification:</b>	LNG Liquid Methane
<b>Intended Use:</b>	Fuel
<b>Manufacturer:</b>	Northern Natural Gas Company 1111 South 103rd Street Omaha, Nebraska 68124
<b>24 Hour Contact/Operations Communication Center</b>	888-367-6671
<b>Emergency Health and Safety Number:</b>	Chemtrec: 800-424-9300 (24 Hours)
<b>SDS Information:</b>	Phone: 402-398-7000

**Section 2: Hazard(s) Identification****GHS Classification**

Flammable gases – Category 1 H220\*  
Gases under pressure – Refrigerated liquified gas H280\*

**Label Elements****Signal word**

DANGER

**Hazard Statement**

Extremely flammable gas. (H220)\*  
Contains refrigerated gas under; may cause cryogenic burns or injury. (H281)\*  
Gas may displace oxygen and cause rapid suffocation. (H280)\*

**Precautionary Statement(s):**

Do not handle until all safety precautions have been read and understood. (P202)\*  
Keep away from heat/sparks/open flames/hot surfaces. No smoking. (P210)\*  
Take precautionary measure against static discharge. (P243)\*  
Wear cold insulating gloves/face shield/eye protection. (P282)\*  
Get immediate medical advice/attention. (P315)\*  
Thaw frosted parts with lukewarm water. Do not rub affected area. (P336)\*  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely. (P377)\*  
Eliminate all ignition sources if safe to do so. (P381)\*  
Protect from sunlight. Store in a well-ventilated place. (P410+P403)\*

**Other Hazards**

This product is hazardous according to OSHA 29 CFR §1910.1200. This product normally contains no hazardous components, other than ethane, as defined in OSHA 29 CFR §1910.1200 (i.e., greater than 1%). This product may contain small amounts of heavier hydrocarbons. This product and/or components present at concentrations greater than 0.1% are not carcinogenic according to OSHA, IARC, or NTP. Components of this product are normally within the ranges listed in Section 3: Composition/Information on Ingredients; however, depending on the geographical source, gas composition may vary.

*\*(Applicable GHS hazard code.)*

**Section 3: Composition/Information on Ingredients**

Component	CAS Number	Concentration <sup>1</sup>
Natural gas, dried	68410-63-9	100

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**Section 4: First Aid Measures**

**Eye Contact:** For contact with the liquified gas, remove contact lenses if present and easy to do, hold eyelids apart and gently flush the affected eye(s) with lukewarm water. Seek immediate medical attention.

**Skin Contact:** Liquified gases may cause cryogenic burns or injury. Treat burned or frostbitten skin by flushing or immersing the affected area(s) in lukewarm water. Do not rub affected area. Do not remove clothing that adheres due to freezing. After sensation has returned to the frostbitten skin, keep skin warm, dry, and clean. If blistering occurs, apply a sterile dressing. Seek immediate medical attention.

**Inhalation (Breathing):** If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

**Ingestion (Swallowing):** This material is a gas under normal atmospheric conditions and ingestion is unlikely.

**Most important symptoms and effects**

**Acute:** Anesthetic effects at high concentrations.

**Delayed:** None known or anticipated See Section 11 for information on effects from chronic exposure, if any.

**Notes to Physician:** Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

**Section 5: Fire-Fighting Measures**

**NFPA 704 Hazard Class**



**Health: 3**      **Flammability: 4**      **Instability: 0**  
(0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

**Unusual Fire & Explosion Hazards:** Extremely flammable. This material can be ignited by heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices, such as cellphones, computers, calculators, and pagers that have not been certified as intrinsically safe). Vapors may

travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. If container is not properly cooled, it can rupture in the heat of a fire. Drains can be plugged and valves made inoperable by the formation of ice if rapid evaporation of large quantities of the liquefied gas occurs. Do not allow run-off from fire fighting to enter drains or water courses – may cause explosion hazard in drains and may reignite.

**Extinguishing Media:** Dry chemical or carbon dioxide is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

**Fire Fighting Instructions:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done safely. Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors and protecting personnel. Cool equipment exposed to fire with water, if it can be done safely.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide and other products of incomplete combustion. Oxides of nitrogen and sulfur also may be formed.

**See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits**

## Section 6: Accidental Release Measures

**Personal Precautions:** Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. Eliminate all potential sources of ignition. The use of explosion-proof electrical equipment is recommended. Beware of accumulation of gas in low areas or contained areas, where explosive concentrations may occur. Prevent from entering drains or any place where accumulation may occur. Ventilate the area to prevent formation of flammable or oxygen-deficient atmospheres and allow the gas to evaporate. Stay away and upwind from the spill/release. Avoid direct contact with material. For large spillages, notify persons downwind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop spill/release if it can be done safely. Water spray may be useful in minimizing or dispersing vapors. If spill occurs on water, notify appropriate authorities and advise shipping of any hazard.

**Methods for Containment and Clean-Up:** Notify relevant authorities in accordance with all applicable regulations. Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

## Section 7: Handling and Storage

**Precautions for safe handling:** Keep away from ignition sources such as heat/sparks/open flame – No smoking. Take precautionary measures against static discharge. Use good personal hygiene practices and wear appropriate personal protective equipment (see Section 8).

**Contents under pressure.** Gas can accumulate in confined spaces and limit oxygen available for breathing. Use only with adequate ventilation. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Handling equipment and tools must be grounded to prevent sparking. Refer to NFPA-70 and/or API RP 2003 for specific bonding/grounding requirements. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR

1910.146. Cold burns may occur during filling operations. Containers and delivery lines may become cold enough to present cold burn hazard.

The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of incomplete combustion products (e.g., carbon monoxide, oxides of sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post “No Smoking or Open Flame” signs in the area. Keep away from any incompatible material (see Section 10). Protect containers against physical damage. Follow standard procedures for handling cylinders, tanks and loading/unloading. Refer to NFPA 58 and API 2510. Fixed storage containers must be grounded and bonded during transfer of product. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

“Empty” containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks or other sources of ignition. They may explode and cause injury or death. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Avoid exposing any part of a compressed-gas cylinder to temperatures above 125°F (51.6°C). Gas cylinders should be stored outdoors or in well-ventilated storerooms at no lower than ground level and should be quickly removable in an emergency.

### Section 8: Exposure Controls/Personal Protection

Component	ACGIH	OSHA	Other
Natural gas, dried	1000 ppm TWA As Aliphatic Hydrocarbons C1-4	----	----

**Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.**

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection (such as splash goggles) that meets or exceeds ANSI Z.87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** Wear thermal insulating gloves and face shield or eye protection when working with materials that present thermal hazards (hot or cold).

**Respiratory Protection:** A NIOSH-approved, self-contained breathing apparatus (SCBA), or equivalent, operated in a pressure demand or other positive pressure mode should be used in situations of oxygen deficiency (oxygen content less than 19.5%), unknown exposure concentrations, or situations that are immediately dangerous to life or health (IDLH).

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety or engineering professionals.**

## Section 9: Physical and Chemical Properties

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

<b>Appearance:</b>	Colorless; Water-white
<b>Physical Form:</b>	Refrigerated Gas
<b>Odor:</b>	No distinct odor.
<b>Odor Threshold:</b>	No data available
<b>pH:</b>	Not applicable
<b>Vapor Pressure:</b>	>1000 mm Hg @ 77°F / 25°C
<b>Vapor Density (air=1):</b>	0.5
<b>Initial Boiling Point/Range:</b>	-259°F / -162°C
<b>Melting/Freezing Point:</b>	No data available
<b>Solubility in Water:</b>	Negligible
<b>Partition Coefficient (N-octanol/water) (Kow):</b>	No data available
<b>Specific Gravity (water=1)</b>	0.426 @ 60°F / 15.6°C
<b>Percent Volatile:</b>	100%
<b>Evaporation Rate (nBuAc=1):</b>	>1
<b>Flash Point:</b>	<-306°F / < -188°C
<b>Lower Explosive Limits (vol % in air):</b>	4.5
<b>Upper Explosive Limits (vol % in air):</b>	14.0
<b>Auto-ignition Temperature:</b>	999°F / 537°C

## Section 10: Stability and Reactivity

**Stability:** Stable under normal ambient and anticipated conditions of use.

**Conditions to Avoid:** Avoid high heat, open flames and all possible sources of ignition. Heat will increase pressure in the storage tank.

**Materials to Avoid (Incompatible Materials):** Avoid contact with acids, aluminum chloride, chlorine, chlorine dioxide, halogens and oxidizing agents.

**Hazardous Decomposition Products:** Not anticipated under normal conditions of use.

**Hazardous Polymerization:** Not known to occur

## Section 11: Toxicological Information

### Information on Toxicological Effects of Substance/Mixture

<u>Acute Toxicity</u>	<u>Hazard</u>	<u>Additional Information</u>	<u>LC50/LD50 Data</u>
Inhalation	Unlikely to be harmful	Asphyxiant. High concentrations in confined spaces may limit oxygen available for breathing. See Signs and Symptoms	>20,000 ppm (gas)
Skin Absorption	Skin absorption is not anticipated		Not applicable
Ingestion (Swallowing)	Ingestion is not anticipated		Not applicable

**Aspiration Hazard:** Not applicable

**Skin Corrosion/Irritation:** Skin exposure is not anticipated. Solid and liquid forms of this material and pressurized gas can cause frostbite, blisters and redness of skin.

**Serious Eye Damage/Irritation:** Not expected to be irritating. Contact with liquefied or pressurized gas may cause frostbite ("cold" burn).

**Signs and Symptoms:** Light hydrocarbon gases are simple asphyxiates and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible if exposure is stopped, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death.

**Skin Sensitization:** Skin contact is not anticipated.

**Respiratory Sensitization:** Not expected to be a respiratory sensitizer.

**Specific Target Organ Toxicity (Single Exposure):** Not expected to cause organ effects from single exposure.

**Specific Target Organ Toxicity (Repeated Exposure):** Not expected to cause organ effects from repeated exposure.

**Carcinogenicity:** Not expected to cause cancer. This substance is not listed as a carcinogen by IARC, NTP or OSHA.

**Germ Cell Mutagenicity:** Not expected to cause heritable genetic effects.

**Reproductive Toxicity:** Not expected to cause reproductive toxicity.

**Other Comments:** High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus.

## Section 12: Ecological Information

**Ecotoxicity:** Petroleum gases will readily evaporate from the surface and would not be expected to have significant adverse effects in the aquatic environment. Classification: No classified hazards

**Persistence and Degradability:** The hydrocarbons in this material are expected to be inherently biodegradable. In practice, hydrocarbon gases are not likely to remain in solution long enough for biodegradation to be a significant loss process.

**Bioaccumulative Potential:** Log Kow values measured for the hydrocarbon gases range from 2.3 for propane to 2.8 for butane and are not regarded as having the potential to bioaccumulate.

**Mobility in Soil:** Due to the extreme volatility of petroleum gases, air is the only environmental compartment in which these hydrocarbons will be found. In air, these hydrocarbons undergo photodegradation by reaction with hydroxyl radicals with half-lives ranging from 3.2 days for n-butane to 7 days for propane.

**Other Adverse Effects:** None anticipated

## Section 13: Disposal Considerations

This material is a gas and would not typically be managed as a waste.

## Section 14: Transport Information

### U.S. Department of Transportation (DOT)

<b>Proper Shipping Name:</b>	UN1972, Methane, refrigerated liquid, 2.1
<b>Non-Bulk Package Marking:</b>	None [ <i>Not authorized in non-bulk packages.</i> ]
<b>Non-Bulk Package Labeling:</b>	None [ <i>Not authorized in non-bulk packages.</i> ]
<b>Bulk Package/Placard Marking:</b>	Flammable gas/1972 Methane, refrigerated liquid

**Packaging - References:** None; None; §173.318  
*(Exceptions; Non-bulk; Bulk)*  
**Hazardous Substance:** See Section 15 for RQ's  
**Emergency Response Guide:** 115

**Note:** *Transport in bulk in according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable*

**International Maritime Dangerous Goods (IMDG)**

**Shipping Description:** UN1972, Methane, refrigerated liquid, 2.1  
**Non-Bulk Package Marking:** Methane, refrigerated liquid, UN1972  
**Labels:** Flammable gas  
**Placards/Marking (Bulk):** Flammable / UN1972  
**Packaging - Non-Bulk:** P203  
**EMS:** F-D, S-U

**International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)**

**UN/ID:** *Forbidden*

## **Section 15: Regulatory Information**

**CERCLA/SARA – Section 302 Extremely Hazardous Substances and TPQs (in pounds):**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 §CFR 372.

**CERCLA/SARA – Section 311/312 (Title III Hazard Categories)**

**Acute Health:** Yes  
**Chronic Health:** No  
**Fire Hazard:** Yes  
**Pressure Hazard:** Yes  
**Reactive Hazard:** No

**CERCLA/SARA – Section 313 and 40 CFR 372:**

This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 §CFR 372.

**EPA (CERCLA) Reportable Quantity (in pounds):**

EPA's Petroleum Exclusion applies to this material – (CERCLA 101(14)).

**California Proposition 65:**

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

**International Hazard Classification**

**Canada:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

**WHMIS Hazard Class:**

A - Compressed Gas  
B1 - Flammable Gases

**National Chemical Inventories**

All components either are listed on the US TSCA Inventory, or are not regulated under TSCA.  
All components either are on the DSL, or are exempt from DSL listing requirements.

**U.S. Export Control Classification Number:** EAR99

**Section 16: Other Information**

**Date of Issue:** 02/16/2026  
**Status:** FINAL  
**Previous Issue Date:** None

**Revised Sections or Basis for Revision:** This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR §1910.1200.

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists  
CASRN = Chemical Abstracts Service Registry Number  
CEILING = Ceiling Limit (15 minutes)  
CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act  
EPA = Environmental Protection Agency  
GHS = Globally Harmonized System  
IARC = International Agency for Research on Cancer  
INSHT = National Institute for Health and Safety at Work  
IOPC = International Oil Pollution Compensation  
LEL = Lower Explosive Limit  
NE = Not Established  
NFPA = National Fire Protection Association  
NTP = National Toxicology Program  
OSHA = Occupational Safety and Health Administration  
PEL = Permissible Exposure Limit (OSHA)  
SARA = Superfund Amendments and Reauthorization Act  
STEL = Short Term Exposure Limit (15 minutes)  
TLV = Threshold Limit Value (ACGIH)  
TWA = Time Weighted Average (8 hours)  
UEL = Upper Explosive Limit  
WHMIS = Worker Hazardous Materials Information System (Canada)

**Disclaimer of Expressed and implied Warranties:**

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