SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier used on the label:
Product Name: Liquefied Natural Gas
SDS Manufacturer Number: 169200

Other means of identification:
Synonyms: LNG; Liquid Methane

Recommended use of the chemical and restrictions on use:
Product Use/Restriction: Fuel

Chemical manufacturer address and telephone number:
Manufacturer Name: ConocoPhillips Alaska, Inc.
Address: A Subsidiary of ConocoPhillips
P.O. Box 100360 700 G. Street
Anchorage, Alaska 99510-0360
USA
Website: www.conocophillips.com
Customer Service Phone Number: 907-659-7812
Health Issues Information: 855-244-0762
Technical Product Information: 907-659-7812

Emergency phone number:
Emergency Phone Number: Chemtrec: 800-424-9300 (24 Hours)

SECTION 2: HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):
GHS Class:
Flammable gases, Category 1.
Refrigerated liquefied gases under pressure.
Simple Asphyxiant.

Hazard Statements:
H220 - Extremely flammable gas.
H281 - Contains refrigerated gas; may cause cryogenic burns or injury.

Precautionary Statements:
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.
P243 - Take precautionary measures against static discharge.
P336+P315 - Thaw frosted parts with lukewarm water. Do not rub affected area.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

Hazards not otherwise classified that have been identified during the classification process:

Natural gas, dried

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

Signs/Symptoms:
Light hydrocarbon gases are simple asphyxiants 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.
SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Mixtures:</th>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Ingredient Percent</th>
<th>EC Num.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Natural gas, dried</td>
<td>68410-63-9</td>
<td>Concentration(1): 100% by weight</td>
<td></td>
</tr>
</tbody>
</table>

Notes: ¹ All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4 : FIRST AID MEASURES

**Description of necessary measures:**

**Eye Contact:** For contact with the liquefied 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:** Liquefied 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 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.

**Indication of immediate medical attention and special treatment needed:**

**Note to Physicians:** 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.

**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.

SECTION 5 : FIRE FIGHTING MEASURES

**Suitable and unsuitable extinguishing media:**

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

**Specific hazards arising from the chemical:**

**Hazardous Combustion Byproducts:**

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

**Unusual Fire 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 cell phones, computers, calculators, and pagers which 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 runoff from fire fighting to enter drains or water courses - may cause explosion hazard in drains and may reignite.

**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 to protect personnel. Cool equipment exposed to fire with water if it can be done safely.

**NFPA Ratings:**

| NFPA Health: | 3 |
| NFPA Flammability: | 4 |
| NFPA Reactivity: | 0 |

Notes: NFPA 704 Hazard Class:
(0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits
SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

**EXPOSURE GUIDELINES:**

**Natural gas, dried:**

**Guideline Info:**
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.

**Guideline ACGIH:**
1000 ppm TWA as Aliphatic Hydrocarbons C1-4

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

**Individual protection measures:**

**Eye/Face Protection:**
The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

**Skin Protection Description:**
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 percent), 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.

**Notes:**
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

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Form: Refrigerated Gas
Color: Colorless; Water-white
Odor: No distinct odor
Odor Threshold: No Data
Boiling Point: -259 deg F/-162 deg C
Melting Point: No Data
Specific Gravity: (Water=1): 0.426 @ 60 deg F (15.6 deg C)
Solubility: negligible
Vapor Density: (Air=1): 0.5
Vapor Pressure: > 1000 mm Hg @ 77 deg F/25 deg C
Percent Volatile: 100%
Evaporation Rate: (nBuAc=1): > 1
pH: Not Applicable
Coefficient of Water/Oil Distribution: Partition Coefficient (n-octanol/water) (Kow): No data
Flash Point: < -306 deg F/< -188 deg C
Lower Flammable/Explosive Limit: (vol % in air): 4.5
Upper Flammable/Explosive Limit: (vol % in air): 14.0
Auto Ignition Temperature: 999 deg F/537 deg C

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

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:
Stable under normal ambient and anticipated conditions of use.
Possibility of hazardous reactions:
Hazardous Polymerization: Not known to occur.
Conditions To Avoid:
Avoid all possible sources of ignition. Heat will increase pressure in the storage tank.
Incompatible Materials:
Materials to Avoid: Avoid contact with acids, aluminum chloride, chlorine, chlorine dioxide, halogens and oxidizing agents.
Hazardous Decomposition Products:
Not anticipated under normal conditions of use.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Eye:
Not expected to be irritating. Contact with the liquefied or pressurized gas may cause momentary freezing followed by swelling and eye damage.

Skin:
Skin Absorption:
Hazard: Skin absorption is not anticipated
LD50 Data: Not Applicable
Not expected to be irritating. Contact with the liquefied or pressurized gas may cause frostbite (cold burn).

Inhalation:
Hazard: Unlikely to be harmful
Additional Information: Asphyxiant. High concentrations in confined spaces may limit oxygen available for breathing. See Signs and Symptoms.
LC50: > 20,000 ppm (gas)

Ingestion:
Ingestion (Swallowing):
Hazard: Ingestion is not anticipated
LD50 Data: Not Applicable

Sensitization:
Skin Sensitization: Skin contact is not anticipated.
Respiratory Sensitization: Not expected to be a respiratory sensitizer.

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

Mutagenicity:
Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.
Reproductive Toxicity: Not expected to cause reproductive toxicity.

Other Toxicological Information: Signs and Symptoms: Light hydrocarbon gases are simple asphyxiants 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.

Target Organ Single Exposures: Not expected to cause organ effects from single exposure.

Target Organ Repeated Exposures: Not expected to cause organ effects from repeated exposure.

Aspiration: Not applicable.

Notes: 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

Natural gas, dried:

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: 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: 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: 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.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

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

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: UN1972, Methane, refrigerated liquid, 2.1
Non-Bulk Package Marking: None [Not authorized in nonbulk packages.]
Non-Bulk Package Labeling: None [Not authorized in nonbulk packages.]
Bulk Package/Placard Marking: Flammable gas / 1972 Methane, refrigerated liquid
Packaging - References: None; None; 173.318 (Exceptions; Non-bulk; Bulk)

Emergency Response Guide: 115
Note: Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

IATA Shipping Name: UN/ID #: Forbidden

IMDG Shipping Name: UN/ID #: Flammable gas
Packaging - Non-Bulk: P203
EMs: F-D, S-U

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

TSCA Inventory Status: All components are either listed on the US TSCA Inventory, or are not regulated under TSCA

TSCA 12(b) Export Notification: U.S. Export Control Classification Number: EAR99

CERCLA Section 302: 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.

Section 311/312 Hazard Categories: CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
Acute Health: Yes
Chronic Health: No
Fire Hazard: Yes
Pressure Hazard: Yes
Reactive Hazard: No

Section 313: 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 PROP 65: This material does not contain any chemicals which are known to the State of California to cause cancer.

Canada DSL: All components are either on the DSL, or are exempt from DSL listing requirements.

Canada WHMIS: WHMIS Hazard Class:
A - Compressed Gas
B1 - Flammable Gases

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other Information: SDS Number: 169200

SDS Revision Date: October 08, 2015

MSDS Revision Notes: Supersedes: 02-Apr-2012
Format change

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: The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

Copyright© 1996-2015 Actio Corporation. All Rights Reserved.