



SAFETY DATA SHEET

NATURAL GAS

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Natural Gas
SYNONYMS: Methane, Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG)
PRODUCT DESCRIPTION: Complex mixture of petroleum hydrocarbons

MANUFACTURER: SCANA ENERGY & SUBSIDIARIES
DIVISION: SCE&G & PSNC
ADDRESS: 220 OPERATIONS WAY, CAYCE, SC 29033
PHONE: 1-800-815-0083
EMERGENCY PHONE: Chemtrec (800) 424-9300

CHEMICAL NAME: Methane
CHEMICAL FAMILY: Aliphatic Hydrocarbon
CHEMICAL FORMULA: CH₄

PRODUCT USE: Gas Sales, Process Stream
PREPARED BY: Mark A. Passerini

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION:
Flammable Gas, Category 1
Gas under pressure; Compressed gas, Liquefied gas

SIGNAL WORD: Danger, Warning (Compressed gas)

HAZARD STATEMENT(s):
Extremely flammable
Contains gas under pressure; may explode if heated

SYMBOLS:



PRECAUTIONARY STATEMENT(s):

Prevention	Response	Storage
Keep away from heat/sparks/open flames/hot surfaces. -No smoking.	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.	Store in well-ventilated place. Protect from sunlight.

Other hazards: May cause asphyxia, frostbite from liquefied natural gas or sudden release of compressed gas



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NFPA HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 4 REACTIVITY: 0

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 4 REACTIVITY: 0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

	<u>CAS NO.</u>	<u>% WT (1)</u>	<u>OSHA¹</u>	<u>ACGIH¹</u>	<u>UNITS</u>
Methane	74-82-8	60 – 95	N/A	1000 ²	PPM
Ethane	74-84-0	2 – 12	N/A	1000 ²	PPM
n-Pentane	109-66-0	5 – 25	1000	1000 ²	PPM
Nitrogen	7727-37-9	0 – 15	N/A	N/A	
n-Hexane	110-54-3	2 – 13	500	50 ³	PPM
n-Butane	106-97-8	2 – 5	N/A	1000 ²	PPM
I-Butane	75-28-5	0 - 2	N/A	N/A	
Neo Pentane	463-82-1	0 - 2	N/A	N/A	
Ethylene	9002-88-4	<0.1	N/A	N/A	
Carbon Dioxide	124-38-9	0 - 2	5000	5000	PPM
Nitrogen	7727-37-9	0 - 18	N/A	N/A	
Propane	74-98-6	0 - 10	1000	N/A	PPM
Ethyl Mercaptan	75-08-1	< 0.1	0.5	0.5	PPM

- (1) 8-HOUR Time Weighted Average (TWA) unless otherwise specified (See note below).
- (2) Exposure limit given as Aliphatic hydrocarbon gases.
- (3) ACGIH has established a Biological Exposure Index (BEI) for this substance.

NOTE: Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELS) from 29 CFR 1910.1000 Z-1 Table [58 FR 35340, June 30, 1993; 58 FR 40191, July 27, 1993, as amended at 61 FR 56831, Nov. 4, 1996; 62 FR 1600, Jan 10, 1997; 62 FR 42018, Aug. 4, 1997; 71 FR 10373, Feb. 28, 2006; 71 FR 16673, Apr. 3, 2006; 71 FR 36008, June 23, 2006.]. PELs are 8-hour time weighted averages (TWAs) unless otherwise indicated. OSHA enforces these limits under section 5(a)(2) of the OSH Act. In addition to the values listed in this table, the Z tables in 29 CFR 1910.1000 list skin absorption designations. The ACGIH limits is based on the 2015 data.

A complex mixture of light gases separated from raw natural gas consisting of aliphatic hydrocarbons. May be odorized with trace amounts of odorant (typically well below 0.1% t-butyl mercaptan).

- (1) Normal composition ranges are shown. Exceptions may occur depending upon the sources of the gas. Methane is the principle component.

SECTION 3 NOTES: This product has not been tested by SCANA Energy to determine its specific health hazards. Therefore, the information provided in this section includes health hazard information on the product components.

SECTION 4: FIRST AID MEASURES

EYES: If liquefied gas contacts the eyes, immediately flush the area with cool to warm water, and seek immediate medical attention.

SKIN: If liquefied gas contacts the skin, immediately flush the area with cool to warm water. If freeze burn, a clean sterile dressing may be applied to prevent infection. Seek immediate medical attention.

INGESTION: Risk of ingestion is extremely low. Seek immediate medical attention if ingested.

INHALATION: This product is considered non-toxic. Move victim to fresh air. Seek immediate medical attention if symptoms persist. If breathing has stopped, provide CPR.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Medical providers are urged to contact the Poison Control Center at (800)222-1222.



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SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, halon, foam or class B, extinguisher. Water should not be used as extinguishing media for liquefied gas, but should be used to move vapor cloud or keep surrounding area cool.

SPECIAL FIRE FIGHTING PROCEDURES: Gas Fires should not be extinguished unless flow of gas can be immediately stopped. Shut off source and allow gas to burn out. If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to protect personnel attempting to stop the leak.

Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fires, the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure.

Isolate the area, particularly around the edge of storage vessels. Let vessel, tank car, or container burn unless leak can be stopped. Withdraw immediately in the event of a rising sound from the venting of a safety device. Large fires typically require NIOSH/MSHA-approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Activate facility Spill Contingency Plan (e.g. SPCC, RCRA, OPA, or Emergency Plan). Evacuate non-essential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible to evaluate the direction of product travel. Vapor cloud may be white, but color will dissipate as cloud disperses – fire and explosion is still present.

Stop the source of the release, if safe to do so. Do not flush down sewer or drainage system. Do not touch spill liquid (Frostbite or freeze burn hazard). Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

Clean up in accordance with all applicable regulations.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Keep away from sources of ignition, flame, sparks, and excessive temperatures. Wear appropriate personal protective equipment (see Section 8).

CONDITIONS FOR SAFE STORAGE: Store only in approved and properly labeled containers. Bond and ground containers to safeguard against static discharges. Use only in well ventilated areas. Post storage areas “No Smoking or Open Flame”. See also applicable OSHA regulations for the handling of this product, including, but not limited to, 29 CFR 1910.110 Storage and Handling of Liquefied Petroleum Gases.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

	<u>OSHA</u> ¹	<u>ACGIH</u> ¹	<u>UNITS</u>
Methane	N/A	1000 ²	PPM
Ethane	N/A	1000 ²	PPM
n-Pentane	1000	1000 ²	PPM
Nitrogen	N/A	N/A	
n-Hexane	500	50 ³	PPM
n-Butane	N/A	1000 ²	PPM
I-Butane	N/A	N/A	
Neo Pentane	N/A	N/A	
Ethylene	N/A	N/A	
Carbon Dioxide	5000	5000	PPM
Nitrogen	N/A	N/A	
Propane	1000	N/A	PPM
Ethyl Mercaptan	0.5	0.5	PPM

(1) 8-HOUR Time Weighted Average (TWA) unless otherwise specified (See note below).

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ENGINEERING CONTROLS: Use adequate ventilation to keep vapor concentration of this product below occupational exposure and flammability limits, particularly in confined spaces. Use explosion proof equipment and lighting in classified/controlled areas.

RESPIRATORY PROTECTION: Use a NIOSH/MSHA approved positive-pressure, supplied air respirator with escape bottle or self-contained breathing apparatus (SCBA) for gas concentrations above occupational exposure limits, for potential uncontrolled release, if exposure levels are not known, or in an oxygen-deficient atmosphere.

EYE PROTECTION: Where there is a possibility of liquid contact, wear splash proof SAFETY goggles and face shield.

SKIN PROTECTION: When contact with liquid may occur, wear apron, face shield, and cold-impervious, insulating gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: A colorless gas. Cold vapor cloud may be white but the lack of visible gas cloud does not indicate absence of gas. A colorless liquid under pressure.

ODOR: Odorless when pure, but may have a "natural gas" type odor when treated with odorizing agent (usually t-butyl mercaptan).

ODOR THRESHOLD: Not available

pH AS SUPPLIED: Not available

MELTING/FREEZING POINT:

F: Not available
C: Not available

BOILING POINT:

F: -259
C: -162

FLASH POINT:

F: -306
C: -187.7

EVAPORATION RATE: Not available

FLAMMABLE LIMITS IN AIR, UPPER: 13 - 17
(% BY VOLUME) **LOWER:** 3.8 - 6.5

VAPOR PRESSURE (mmHg): 40 atm. @

F: -187
C: -86

VAPOR DENSITY (AIR = 1): 0.6

RELATIVE DENSITY: Not available

SOLUBILITY IN WATER: Slight

PARTITION COEFFICIENT: Not available

AUTO-IGNITION TEMPERATURE:

F: 900 -1170
C: 482 - 632

DECOMPOSITION TEMPERATURE: Not available

SPECIFIC GRAVITY (H₂O = 1): 0.4 @

F: -263
C: -164

VISCOSITY: Not available



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SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Non-reactive under normal conditions of use, storage and transport.

STABILITY: Stable under normal conditions of use.

CONDITIONS TO AVOID (STABILITY): Keep away from, high temperatures, open flames, sparks, welding, smoking, static electricity and other ignition sources.

INCOMPATIBILITY (MATERIAL TO AVOID): Keep way from strong oxidizers

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon monoxide, Carbon dioxide, sulfur oxides, and non-combustible hydrocarbons (smoke).

SECTION 11: TOXICOLOGICAL INFORMATION

PRIMARY ROUTE OF ENTRY

Eyes: No Skin: No Inhalation: No Ingestion: No

POTENTIAL HEALTH EFFECTS ON LIKELY ROUTES OF EXPOSURE

Acute Effects:

EYES: Natural gas is generally non-irritating to the eyes. Pressurized gas can cause mechanical injury to the eye. Contact with the liquefied gas may cause frostbite of the eye and surrounding tissue.

SKIN: Contact with liquefied gas may cause frostbite, with tissue damage in some cases.

INGESTION: Ingestion is unlikely. Contact of the mucous membranes with liquefied product may cause frostbite or freeze burns.

INHALATION: This product is considered to be non-toxic by inhalation. Inhalation of high concentrations may cause central nervous system depression such as dizziness, drowsiness, headache, and similar narcotic symptoms, but no long term effects. Numbness, a "chilly" feeling, and vomiting have been reported from accidental exposure to high concentrations. This product is a simple asphyxiate. In high concentrations it will displace oxygen from the breathing atmosphere, particularly confined spaces. Signs of asphyxiation will be noticed when oxygen is reduced to below 16% and may occur in several stages. Symptoms may include rapid breathing and pulse rate, headache, dizziness, visual disturbances, mental confusion, coordination, mood changes, muscular weakness, tremors, cyanosis, narcosis and numbness of the extremities. Unconsciousness leading to central nervous system injury and possibly death will occur with inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Warning: The burning of any hydrocarbon as a fuel in an area without ventilation may result in a hazardous level of combustible products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Chronic Effects: None expected

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Individuals with pre-existing conditions of the heart, lungs, and blood may have increased susceptibility to symptoms of asphyxia.

TOXICOLOGICAL INFORMATION:

CARCINOGENICITY

OSHA: NO ACGIH: NO NTP: NO IARC: NO



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SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: Not expected to be harmful to aquatic organisms.

PERSISTENCE AND DEGRADABILITY: The hydrocarbons in this material are expected to be inherently biodegradable.

BIOACCUMULATIVE POTENTIAL: This product is not expected to bioaccumulate.

MOBILITY IN SOIL: NA due the form of the product

OTHER EFFECTS: Liquid release is only expected to cause localized, non-persistent environmental damage, such as freezing. Biodegradation of this product may occur in soil and water. Volatilization is expected to exist entirely in the vapor phase in ambient air.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Consult federal, state, and local waste regulations to determine appropriate waste characterization of material and allowable disposal methods, including the disposal of any contaminate packaging.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

UN number: UN1971
UN PROPER SHIPPING NAME: Natural Gas, Compressed
TRANSPORT HAZARD CLASS: 2.1
PACKING GROUP: N/A
ENVIRONMENTAL HAZARDS: No
LABEL STATEMENT: Flammable Gas

U.S. DEPARTMENT OF TRANSPORTATION

UN number: UN1972
UN PROPER SHIPPING NAME: Natural Gas Refrigerated Liquid (Cryogenic liquid with high Methane content)
TRANSPORT HAZARD CLASS: 2.1
PACKING GROUP: N/A
ENVIRONMENTAL HAZARDS: No
LABEL STATEMENTS: Flammable Gas

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION): This product is a "hazardous chemical" as defined by the OSHA Hazard Communication Standard.

TSCA (TOXIC SUBSTANCE CONTROL ACT):

This product and its constituents listed herein are on the EPA TSCA inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal reporting requirements. Consult those regulations applicable to your facility/operation.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g. SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

Product Component:	CAS No.	Wt%	RQ, lb
NONE			

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Reportable under EPCRA Title III, Section 312, if the storage amount exceeds 10,000 lbs.

SARA 302 EXTREMELY HAZARDOUS SUBSTANCE: No
SDS 001, Issue date 3/15/2015 Rev. 0



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311/312 HAZARD CATEGORIES: Acute: No Chronic: No Fire: Yes Pressure: Yes Reactive: No

313 HAZARDOUS CHEMICALS: YES

STATE REGULATIONS:

Any spill or controlled release of this product may be subject to state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operations.

SECTION 16: OTHER INFORMATION

DATE OF PREPARATION: 3-15-2015, Rev 0

DISCLAIMER:

THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF THIS COMPANY'S KNOWLEDGE AND BELIEVED ACCURATE AND RELIABLE AS OF THE DATE INDICATED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO THE ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY THEMSELVES AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.