Safety Data Sheet

Section 1: Identification of the substance or mixture and of the supplier	Rev: 01/2016

Product Name:	Natural Gas
Synonyms/Other Means of Identification:	Residue Gas Processed Gas Natural Gas, Dry Compressed Natural Gas
Intended Use:	Fuel
Supplier:	Fountain Inn Natural Gas 100 S Weston St Fountain Inn, SC 29644
Emergency Health and Safety Number:	Chemtrec: 800-424-9300 (24 Hours)
SDS Information: Phone:	Safety Department [8:00 am-5:00 pm]: M-TH [8:00 am-12:00pm]: Fri After Hours: 864-862-4461
Email:	fing.custserv@fountaininn.org
URL:	http://www.fountaininngas.org
CASRN:	68410-63-9

Section 2: Hazard(s) Identification	Rev: 01/2016

GHS Classification

Flammable gases -- Category 1
Gases under pressure -- Compressed gas
Specific Target Organ Systemic Toxicity (STOT) – Single Exposure Category 2

GHS Label Elements

Signal Word

DANGER

Hazard Statements

Extremely flammable gas
Contains gas under pressure. May explode if heated
Gas may reduce oxygen in confined spaces.

Precautionary Statement(s):

Prevention:

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.
Protect from sunlight. If containerized, store in a well ventilated place.
Do not eat, drink or smoke when using this product.

Response:

Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage:

Protect from containerized natural gas from sunlight. Store well in a well-ventilated place.
Store locked-up

Section 3: Composition / Information on Ingredients	Rev: 01/2016

Component	CAS No.	Concentration (mole%)
Natural gas, dried	68410-63-9	100
Methane	78-82-8	87.0-96%
Ethane	78-98-6	1.8-5.1%
Propane	74-98-6	0.1-1.5%
Nitrogen	7727-37-9	1.3-5.6%
Carbon Dioxide	124-38-9	0.1-1.0%

Composition can vary greatly. Generally a complex mixture of light gases separated from raw natural gas consisting of aliphatic hydrocarbons having carbon numbers in the range of C1 through C4, predominantly (C1), ethane (C2), and propane (C3). May contain carbon dioxide (CO_2). Odorized with trace amounts of odorant (see Section 9).

Section 4: First Aid Measures	Rev: 01/2016

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: First aid is not normally required. However, it is good practice to wash any chemical from the skin.

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	Rev: 01/2016

General Fire Hazards:

Dangerous fire and explosion hazard when exposed to heat, sparks, or flame. Natural gas is lighter than air and may travel long distances to a point of ignition and flash back. Container may explode in heat or fire.

NFPA 704 Hazard Class

Health: 1 **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 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. Contents under pressure.

Extinguishing Media: Class B fire extinguishers are preferred but a dry chemical or carbon dioxide extinguisher could be used. If using a carbon dioxide extinguisher in a confined space, use caution because a carbon dioxide can displace oxygen.

Fire Fighting Instructions: Fire should NOT be extinguished unless flow of gas can be immediately stopped. Gas fires should not be extinguished unless flow of gas can be immediately stopped. Shut off gas 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 leak. Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Isolate area, particularly around ends 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 a venting safety device. Large fires typically require specially trained personnel and equipment to isolate and extinguish the fire.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

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

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

Section 6: Accidental Release Measures	Rev: 01/2016

Recovery and Neutralization

Stop the source of the release, if safe to do so.

Materials and Methods for Clean-Up

Do not flush down sewer or drainage systems. Do not touch spilled liquid (frostbite/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.

Emergency Measures

Evacuate nonessential personnel and secure all ignition sources. No road flares, smoking or flames in hazard area. Consider wind direction, stay upwind and uphill, if possible. Evaluate the direction of product travel. Vapor cloud may be white, but color will dissipate as cloud disperses - fire and explosion hazard is still present!

Personal Precautions and Protective Equipment

Extremely flammable. During releases / holes in pipe, pipe may become cold and cause (frostbite/freeze burn hazard!).

Environmental Precautions

Do not flush down sewer or drainage systems. 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 including reporting quantities to Emergency Response Centers as necessary. Recommended measures are based on the most likely release 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	Rev: 01/2016

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).

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 area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. 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. Avoid exposing any part of a compressed-gas cylinder to temperatures above 125^{O}F(51.6^{O}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	Rev: 01/2016

Component	ACGIH	OSHA PEL (ppm)	Other
Natural gas, dried	1000 ppm TWA as Aliphatic Hydrocarbons C1-4	---	---
Natural Gas is comprised of the following gases and associated compounds			
Methane	1000 ppm TWA as Aliphatic Hydrocarbons C1-C4	---	---
Ethane	1000 ppm TWA as Aliphatic Hydrocarbons C1-C4	---	---
Propane	1000 ppm TWA as Aliphatic Hydrocarbons C1-C4	2500	---
Nitrogen	1000 ppm TWA	---	---
Carbon Dioxide	5000 ppm TWA	5000	---

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 that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

Skin/Hand Protection

The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals.

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.

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	Rev: 01/2016

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.

Appearance:	Colorless
Physical Form:	Compressed Gas
Odor:	Slight hydrocarbon[1]
Odor Threshold:	No data
pH:	Not applicable
Vapor Density (air=1):	0.5
Initial Boiling Point/Range:	No data
Melting/Freezing Point:	No data
Solubility in Water:	Slight
Partition Coefficient (n-octanol/water) (Kow):	No data
Percent Volatile:	100%
Flammability (solid, gas):	Gas, Extremely Flammable
Evaporation Rate (nBuAc=1):	No data
Flash Point:	-299 °F / -184 °C
Test Method:	(estimate)
Lower Explosive Limits (vol % in air):	2.0
Upper Explosive Limits (vol % in air):	10.0
Auto-ignition Temperature:	999 °F / 537 °C

[1] Mercaptan (an odorant) is added to natural gas. Mercaptan is typically in the range of 0.5% to 1%

Section 10: Stability and Reactivity	Rev: 01/2016

Chemical Stability

Stable under normal ambient and anticipated conditions of use.

Conditions to Avoid

Avoid all possible sources of ignition. Heat will increase pressure in a storage tank or pipe.

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	Rev: 01/2016

Information on Toxicological Effects of Substance/Mixture

Acute Toxicity	Hazard	LC50/LD50 Data	Additional information
Methane (74-82-8) Ethane (74-84-0)	Inhalation Inhalation	LC50 Mouse 326 g/m^3 2h LC50 Rate 658 mg / L 4h	
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.

Serious Eye Damage/Irritation

Not expected to be irritating.

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.

Skin Sensitization

Skin contact is not anticipated.

Respiratory Sensitization

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 exposures to high concentrations. This product is a simple asphyxiant. In high concentrations it will displace oxygen from the breathing atmosphere, particularly in 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, incoordination, mood changes, muscular weakness, tremors, cyanosis, narcosis and numbness of the extremities. Unconsciousness leading to central nervous system injury and possibly death will occur when the atmospheric oxygen concentration is reduced to about 6% to 8% or less.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death. 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	Rev: 01/2016

Toxicity

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. Hydrogen sulfide, if present in refinery gas streams, will be rapidly oxidized in water and insoluble sulfides precipitated from water when metallic radicals are present.

Bioaccumulative Potential

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 they 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	Rev: 01/2016

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

Section 14: Transport Information	Rev: 01/2016

U.S. Department of Transportation (DOT)

Shipping Description: UN1971, Natural gas, compressed, 2.1

Non-Bulk Package Marking: Natural gas, compressed, UN1971
Non-Bulk Package Labeling: Flammable gas
Bulk Package/Placard Marking: Flammable gas / 1971
Packaging - References: 49 CFR 173.306; 173.302; 173.302 (Exceptions; Non-bulk; Bulk)
Hazardous Substance: None
Emergency Response Guide: 115

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

International Maritime Dangerous Goods (IMDG)

Shipping Description:	UN1971, Natural gas, compressed, 2.1
Non-Bulk Package Marking:	Natural gas, compressed, UN1971
Labels:	Flammable gas
Placards/Marking (Bulk):	Flammable gas / 1971
Packaging - Non-Bulk:	P200
EMS:	F-D, S-U

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

UN/ID #:	UN1971
Proper Shipping Name:	Natural gas, compressed
Hazard Class/Division:	2.1
Subsidiary risk:	None
Packing Group:	None
Non-Bulk Package Marking:	Natural gas, compressed, UN1971
Labels:	Flammable gas, Cargo Aircraft Only
ERG Code:	10L

	Limited Quantity	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	Forbidden	Forbidden	200
Maximum Net Quantity Per Package	Forbidden	Forbidden	150 kg

Section 15: Regulatory Information	Rev: 01/2016

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)).

Section 16: Other Information	Rev: 01/2016

Date of Issue: January 25, 2016
Status: FINAL
Previous Issue Date: April 2, 2012
Revised Sections or Basis for Revision: Identified Hazards (Section 2) Precautionary Statement(s) (Section 2) First Aid (Section 4) Shipping information (Section 14) Regulatory information (Section 15)

Guide to Abbreviations:
ACGIH = American Conference of Governmental Industrial Hygienists;
CASRN = Chemical Abstracts Service Registry Number;
CEILING = Ceiling Limit (15 minutes);
CERCLA = 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;

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