Safety Data Sheet

Section 1
Identification of the Substance and of the Supplier

1.1 Product identifier

Product name/identification:	Natural Gas
Synonyms:	Methane, Pipeline Gas, Pipeline Natural Gas, Compressed Natural Gas (CNG), Natural Gas (odorized)
Product code:	Not applicable
Formula:	CH_4

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:	Heating, lighting, cooking, equipment designed to use natural gas as a fuel.
Uses advised against:	Uses other than for heating, cooking, or use in equipment designed to burn natural gas as a fuel.

1.3 Details of the supplier of the SDS

Manufacturer/Supplier:	We Energies
Street address:	333 W. Everett St.
City, State and Zip Code:	Milwaukee, WI 53201
Customer telephone:	800-242-9137
Email address:	WE5878@we-energies.com

1.4 Emergency telephone number

Emergency phone number:	800-261-5325
Hours available:	Anytime

Section 2
Hazards Identification

2.1 Classification of the substance

GHS Classification(s) according to OSHA Hazard Communication Standard (29 CFR 1910.1200):

Flammable Gases – Category 1
Gases Under Pressure – Compressed Gas
Simple Asphyxiant

2.2 Label elements

Labelling according to 29 CFR 1910.1200 Appendices A, B and C*	
Hazard pictogram(s):	
Signal word:	*Danger*
Hazard statement(s):	*Extremely flammable gas.* *Contains gas under pressure, may explode if heated.* *May displace oxygen and cause rapid suffocation.*
Precautionary statement(s):	***Prevention*** *Keep away from heat/sparks/open flames/hot surfaces. No smoking.* *Do not breathe fume/gas/mist/vapours/spray.* *Wash thoroughly after handling.* *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.* *If exposed or concerned: Call a POISON CENTER or doctor/physician.* ***Storage*** *Protect from sunlight. Store ina well-ventilated place.* *Store locked up.* ***Disposal*** *Dispose of contents/container in accordance with local/regional/national/international regulations.*

2.3 Other hazards

Listed carcinogens: None

IARC: [No] **NTP:** [No] **OSHA:** [No] **Other:** [No]

Section 3
Composition/Information on Ingredients

***Substance*[1]**	***CAS No.***	***Percentage*[2] *(%)* *Range (Typical)***
Natural gas, dried	*68410-63-9*	*100*
Methane	*74-82-8*	*50 - 95 (90.2)*
Ethane	*74-84-0*	*1 – 20 (7.02)*
Propane	*74-98-6*	*0.1 – 12 (1)*

[1]Natural gas is a mixture of light gases separated from raw natural gas consisting of aliphatic hydrocarbons having carbon numbers in the range of C1 through C4, predominantly methane (C1) and ethane (C2). May contain carbon dioxide. This SDS is for natural gas that has been processed to remove hydrogen sulfide and other contaminants. May contain trace amounts of butane, isobutene, pentane, and hexane isomers, and other hydrocarbons. Less than 50 ppm of odorant containing tert-butyl mercaptan (CAS 75-66-1) and /or ethyl methyl sulfide (CAS 624-89-5) are added to the natural gas.
[2]By volume.

Section 4
First Aid Measures

4.1 Description of first aid measures

Inhalation:	If respiratory symptoms develop, remove person to fresh air and seek medical attention. If person is not breathing, provide artificial respiration. Provide additional oxygen once breathing is restored if trained.
Skin contact:	If injury is due to pressure, treat abrasions/contusions symptomatically. Remove contaminated clothing. In case of blistering, frostbite or freeze burns seek immediate medical attention.
Eye contact:	If injury is due to pressure, treat abrasions/contusions symptomatically. If eyes were exposed, flush with large amounts of water for at least 15 minutes and seek medical attention. In case of freeze burn, cover eyes to protect from light and then seek medical attention.
Ingestion:	This material is a gas under normal atmospheric conditions and ingestion is unlikely. Risk of ingestion is extremely low. However, if oral exposure occurs seek medical attention.

4.2 Most important health effects, both acute and delayed

Acute effects: Natural gas is a simple asphyxiant that can displace oxygen from the air, primarily in enclosed spaces, resulting in an oxygen deficient atmosphere and hypoxia. Dermal exposure can cause frostbite.

Chronic effects: None known.

Section 5
Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media:	Any extinguisher suitable for Class B fires can be used including dry chemical, CO_2 and other gaseous agents. However, fire should not be extinguished unless flow of gas can be immediately stopped.
Unsuitable extinguishing media:	None known.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products:	Carbon monoxide, carbon dioxide, oxides of nitrogen and sulfur, and non-combusted hydrocarbons (smoke).

5.3 Advice for firefighters

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. Contents under pressure.
Special protective equipment and precautions for firefighters:	If a leak has not ignited, stop release if it can be done safely. Use water spray to contain the vapors and to protect personnel attempting to stop the leak. Move undamaged containers from immediate hazard area if it can be done safely. For fires in enclosed/confined areas, a self-contained breathing apparatus (SCBA) must be worn. Unless creating a greater hazard, gas fires should not be extinguished. Re-accumulation of gas can result in an explosion. Fire impingement on surfaces (especially if the fire has been ongoing for a long period of time) could create sufficient heat to reignite product. Use water spary to cool equipment, surfaces and containers exposed to fire and excessive heat.

Section 6
Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions/protective equipment:	Extremely flammable. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Product is lighter than air. Stay upwind and away from release. Wear appropriate protective equipment including respiratory protection (see Section 8).
Emergency procedures:	Evacuate nonessential personnel and secure all ignition sources. Releases indoors should be controlled remotely from a safe area. Passive ventilation may be used to dilute gas concentrations to prevent an explosive atmosphere. Water spray may be useful in minimizing or dispersing vapors.

6.2 Environmental precautions

Environmental precautions:	Stop spill/release if it can be done safely. If spill occurs on water notify appropriate authorities and advise of any hazard.

6.3 Methods and material for containment and clean up

Methods and materials for containment and cleaning up:	Notify relevant authorities in accordance with all applicable regulations.

See Sections 8 and Section 13 for additional information on exposure controls and disposal.

Section 7
Handling and Storage

7.1 Precautions for safe handling

Handle as a flammable, compressed gas. Keep away from ignition sources such as heat/sparks/open flame. No smoking. Electrical equipment shold be approved for classified areas. Take precautionary measures against static discharge. Bond and ground containers during product transfer pursuant to NFPA 52, NFPA 70, and API RP 2003 to reduce the possibility of static-initiated fire or explosion. Wear appropriate personal protective equipment (see Section 8). Use only in well ventilated areas. Product can displace oxygen at high concentrations. Do not enter confined spaces where product may be present. Test all confined spaces where product may accumulate for the presence of oxygen and combustible vapors.

7.2 Conditions for safe storage, including any incompatibilities

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 and protect against physical damage. Post “No Smoking or Open Flame” in area. Keep away from

incompatible material (see Section 10).

"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.

Section 8
Exposure Controls/Personal Protection

8.1 Control parameters

OCCUPATIONAL EXPOSURE LIMITS				
SUBSTANCE	**OSHA PEL TWA (ppm)**	**NIOSH REL TWA (ppm)**	**ACGIH TLV TWA (ppm)**	**CA - OSHA PEL (ppm)**
Natural gas	NA	NA	1000[1]	NA
Methane	NA	NA	1000[1]	NA
Ethane	NA	NA	1000[1]	NA
Propane	1000	1000	1000[1]	1000

[1]Listed under Aliphatic hydrocarbon gases: Alkane C1-4.

8.2 Exposure controls

8.2.1 Engineering controls

Use adequate ventilation to keep gas concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use explosion-proof equipment and lighting in classified/controlled areas.

8.2.2 Personal Protective Equipment (PPE)

Respiratory protection:	Wear a NIOSH approved positive-pressure, supplied air respirator with escape bottle or SCBA for gas concentrations above occupational exposure limits, if there is a potential for an uncontrolled release, if exposure levels are not known, or in an oxygen-deficient atmosphere. CAUTION: Flammability limits (i.e., explosion hazard) should be considered when assessing the need to expose personnel to concentrations requiring respiratory protection.
Eye and face protection:	Where there is a possibility of pressurized gas contact, wear splash-proof safety goggles and faceshield.

Hand and skin protection:	Where contact with pressurized gas may occur, wear apron and faceshield.

Section 9
Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Property: Value	Property: Value
Appearance (physical state, color, etc.): Colorless	**Vapor pressure:** 40 atm @ -187°F (-86°C)
Odor: Distinctive natural gas, slight sulfur odor, "rotten egg"	**Vapor density:** 0.55 (air=1)
Odor threshold: 5-10 ppb	**Percent volatiles:** 100%
pH (25 °C): Not applicable	**Specific gravity or relative density:** 0.4 @ -263°F (water=1)
Melting point/freezing point: -296.7°F (-182.6°C)	**Water solubility: S**light
Initial boiling point/range: -258.52°F (-161.4°C)	**Partition coefficient: n-octane/water:** Not determined
Flash point: -306°F (-188°C)	**Auto ignition temperature:** 999°F (537°C)
Evaporation rate: Not applicable	**Decomposition temperature:** Not determined
Flammability (solid, gas): Compressed gas	**Viscosity:** Not applicable
Upper/lower flammability or explosive limits: 2% - 15% by volume	

Section 10
Stability and Reactivity

10.1 Reactivity:	Avoid all possible sources of ignition. Heat will increase pressure in the container.
10.2 Chemical stability:	Stable under normal ambient and anticipated conditions of use.
10.3 Possibility of hazardous reactions:	None known.

10.4 Conditions to avoid:	Keep away from strong oxidizers, ignition sources and heat.
10.5 Incompatible materials:	Strong oxidizers.
10. 6 Hazardous decomposition products:	Not anticipated during normal use. Byproducts of combustion include carbon dioxide, carbon monoxide, oxides of nitrogen and sulfur and non-combusted hydrocarbons (smoke).

Section 11
Toxicological Information

11.1 Information on toxicological effects

Methane and ethane, the main components of natural gas, are considered practically inert in terms of physiological effects. At high concentrations these materials act as simple asphyxiants and may cause death due to lack of oxygen.

Endpoint	Data
Acute oral toxicity	This product is a gas and is extremely unlikely to be ingested.
Acute dermal toxicity	This product is not toxic and is not anticipated to be absorbed through the skin.
Acute inhalation toxicity	Product: LC50>20,000 ppm (gas) (human) Methane: LC50=326 g/m^3, 2 hr (mouse) Ethane: LC50=658 mg/L, 4 hr (rat) This product is considered non-toxic by inhalation. 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 corrosion/irritation	Vapors are not irritating. Direct contact to skin with pressurized vapor may cause freeze burns and frostbite. Signs of frostbite include a change in the color of the skin to gray or white, possibly followed by blistering. Skin may become inflamed and painful.
Eye damage/irritation	Vapors are not irritating. However, contact with liquid or cold vapor may cause frostbite, freeze burns and permanent eye damage.

Endpoint	Data
Respiratory/skin sensitization	Not expected to be a respiratory or skin sensitizer.
Germ cell mutagenicity	Not expected to cause heritable genetic effects.
Carcinogenicity	Not expected to cause cancer. The substance is not listed as a carcinogen by IARC, NTP or OSHA.
Reproductive toxicity	Not expected to cause reproductive toxicity.
STOT-SE	Not expected to cause organ effects from single, short-term exposure. Prolonged exposure can lead to hypoxia, bluish coloration to the skin, numbness, damage to the nervous system, heart sensitization, reduced consciousness and death. Target organs: skin, eyes, repiratory system, central nervous system.
STOT-RE	Not expected to cause organ effects from repeated short-term exposure. Prolonged exposure can lead to hypoxia, bluish coloration to the skin, numbness, damage to the nervous system, heart sensitization, reduced consciousness and death. Target organs: skin, eyes, repiratory system, central nervous system.

Section 12
Ecological Information

12.1 Toxicity

Natural gas will readily evaporate and is not expected to have significant long-term adverse effects on the aquatic environment, however short-term impacts on aquatic biota are possible due to asphyxiation. No classified hazards.

12.2 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.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

None expected.

Section 13
Disposal Considerations

See Section 7 and Section 8 above for safe handling and use, including appropriate hygienic practices.

This material is a gas and would not typically be managed as a waste. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. If disposal is required, dispose of contents/container in accordance with local/regional/national regulations.

Section 14
Transport Information

Regulatory entity: U.S. DOT	Shipping name:	Natural gas, compressed
	Hazard class:	2.1
	UN ID Number:	1971
	Packing group:	Not applicable
	Label:	Flammable gas

Section 15
Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the mixture

- TSCA Inventory Status

  All components are listed on the TSCA Inventory.

- California Proposition 65

  This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

- EPA SARA 302/304 Emergency Planning and Notification: This product does not contain chemicals subject to emergency planning and release reporting under the Superfund Amendments and Reauthorization Act of 1986 (SARA).

- EPA SARA 311/312 (Title III Hazard Categories)
  - Acute health: Yes
  - Chronic health: No
  - Fire hazard: Yes
  - Pressue hazard: Yes
  - Reactive hazard: No

- EPA SARA Section 313 – This product does not contain substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Section 16
Other Information, Including Date of Preparation or Last Revision

16.1 Indication of changes

Date of preparation or last revision: 6/1/15

16.2 Abbreviations and Acronyms

- ACGIH: American Conference of Industrial Hygienists
- CA: California
- CAS: Chemical Abstract Services
- CCP: Coal Combustion Product
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- EPA: Environmental Protection Agency
- EPRCA: Emergency Planning and Community Right-to-Know Act
- GHS: Globally Harmonized System of Classification and Labelling
- HMIS: Hazardous Materials Identification System
- IARC: International Agency for Research on Cancer
- LC50: Concentration resulting in the mortality of 50% of an animal population
- LD50: Dose resulting in the mortality of 50% of an animal population
- LEL: Lower explosive limit
- NIOSH: National Institute of Occupational Safety and Health
- NTP: US National Toxicology Program
- OEL: Occupational Exposure Limit
- OSHA: Occupational Safety and Health Administration
- PBT: Persistent, Toxic and Bioaccumulative
- PEL: Permissible exposure limit
- PPE: Personal Protective Equipment
- REL: Recommended exposure limit
- SARA: Superfund Amendments and Reauthorization Act
- SCBA: Self-contained breathing apparatus
- SDS: Safety Data Sheet
- STEL: Short-term exposure limit
- STOT-RE: Specific target organ toxicity-repeated exposure
- STOT-SE: Specific target organ toxicity-single exposure
- TLV: Threshold limit value
- TSCA: Toxic Substances Control Act

- TWA: Time-weighted average
- UEL: Upper explosive limit
- UVCB: Unknown or Variable Composition/Biological
- U.S.: United States
- U.S. DOT: United States of Department of Transportation
- vPvB: Very Persistent and Very Bioaccumulative

16.3 Other hazards

Hazardous Materials Identification System (HMIS) Degree of hazard (0= low, 4 = extreme)							
Health:	2	**Flammability:**	**4**	**Reactivity:**	**0**	**Personal protection:**	

Hazardous Materials Identification System (NFPA) Degree of hazard (0= low, 4 = extreme)							
Health:	2	**Flammability:**	**4**	**Reactivity:**	**0**	**Personal protection:**	

DISCLAIMER:

This SDS has been prepared in accordance with the Hazard Communication Rule 29 CFR 1910.1200. This information is based on current scientific literature. Information may be developed from time to time which may render this document incorrect; therefore, neither the WEC Energy Group nor it's subsidiaries makes any warranties to it's agents, employees or contractors as to the applicability of this data to the user's intented purpose.