CONSOL ENERGY

Safety Data Sheet (SDS)

Section 1 – Identification

1(a) Product Identifier used on Label: Natural Gas

1(b) Other Means of Identification: : Wellhead Natural Gas

1(c) Recommended Use of the Chemical and Restrictions on Use: Fuel for combustion applications, raw material for chemical reactions

1(d) Name, Address, and Telephone Number:

CONSOL Energy Inc.
1000 CONSOL Energy Drive
Canonsburg, PA 15317

General information: (724) 485-4000

1(e) Emergency Phone Number: 3E Company (800) 451-8346 with U.S and Canada; (760) 602-8703 outside of U.S. and Canada

Section 2 – Hazard(s) Identification

2(a) Classification of the Chemical: Natural Gas is considered a hazardous material according to the criteria specified in REACH [REGULATION (EC) No 1907/2006] and CLP [REGULATION (EC) No 1272/2008] and OSHA 29 CFR 1910.1200 Hazard Communication Standard. The categories of Health Hazards as defined in "GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3" United Nations, New York and Geneva, 2009 have been evaluated. Refer to Section 3, 8 and 11 for additional information.

2(b) Signal Word, Hazard Statement(s), Symbol(s) and Precautionary Statement(s):

Hazard Symbol	Hazard Classification	Signal Word	Hazard Statement(s)
	Flammable Liquid -1	**Danger**	Extremely flammable gas May cause CNS depression or tremors through prolonged or repeated exposure May displace oxygen and cause rapid suffocation
	Single Target Organ Toxicity (STOT) Single Exposure -2 STOT Repeated Exposure-2 Simple Asphyxiant - Single Category		

Precautionary Statement(s)

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. Do not breathe /gas/mist/vapor/spray. Wash thoroughly after handling.	Do not eat, drink or smoke when using this product. If exposed or concerned: Call a poison center or doctor. Get medical attention if you feel unwell. Store locked up. Dispose of contents in accordance with federal, state and local regulations.

2(c) Hazards not Otherwise Classified: None Known or Found

2(d) Unknown Acute Toxicity Statement (mixture): None Known or Found

Section 3 – Composition/Information on Ingredients

3(a-c) Chemical Name, Common Name (synonyms), CAS Number and Other Identifiers, and Concentration:

Chemical Name	CAS Number	EC Number	% weight
Methane	74-82-8	200-812-7	91-97
Ethane	74-84-0	200-814-8	1-5
Propane	74-98-6	200-827-9	1-2

EC - European Community
CAS - Chemical Abstract Service

Section 4 – First-aid Measures

4(a) Description of Necessary Measures: If exposed or concerned: Call a poison center or doctor. Get medical attention if you feel unwell.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention, if needed.

- **Eye Contact:** In case of contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing if eye irritation persists: Get medical advice/attention, if needed.
- **Skin Contact:** This material is a gas under normal atmospheric conditions. If exposed or concerned get medical advice/attention, if needed.
- **Ingestion:** This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Section 4 - First Aid Measures (continued)

4(b) Most Important Symptoms/Effects, Acute and Delayed (chronic):

Acute Effects:

- **Inhalation:** Natural Gas, when exposed at high concentrations will act as a simple asphyxiant. Simple asphyxiants displace the oxygen in the air and can cause symptoms of oxygen deprivation.
- **Eye:** None Expected
- **Skin:** None Expected
- **Ingestion:** This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Delayed (chronic) Effects:

- None Expected

4(c) Immediate Medical Attention and Special Treatment: No Data Found

Additional Information:

Primary Entry Routes: Inhalation

Target Organs: Eye, Skin and Respiratory System.

Carcinogenicity: IARC, NTP, and OSHA does not list methane as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: None Expected

Section 5 – Fire-fighting Measures

5(a) Suitable (and unsuitable) Extinguishing Media: Leaking gas fire: Do not extinguish, unless leak can be stopped safely or fire is immediately impacting human life. Eliminate all ignition sources if safe to do so. Extinguish with foam, carbon dioxide, dry powder or water fog, once leak is stopped. Do not use a solid stream of water as it may scatter and spread the fire.

5(b) Specific Hazards Arising from the Chemical: Not applicable for gas.

5(c) Special Protective Equipment and Precautions for Fire-fighters Self-contained NIOSH approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present. Heat and flames cause emittance of acrid smoke and fumes. Do not release runoff from fire control methods to sewers or waterways. Firefighters should wear full face-piece self-contained breathing apparatus and chemical protective clothing with thermal protection. Direct water stream will scatter and spread flames and, therefore, should not be used. Evacuate area. Remove pressurized gas cylinders from the immediate vicinity. Cool containers exposed to flames with water until well after the fire is out. Close the valve if no risk is involved. Do not extinguish a leaking gas fire unless leak can be stopped. If leak cannot be stopped and no danger to surrounding area allow the fire to burn out. Fight fire from a protected location. Prevent buildup of vapors or gases to explosive concentrations.

Section 6 - Accidental Release Measures

6(a) Personal Precautions, Protective Equipment and Emergency Procedures: If leakage cannot be stopped, evacuate area. Check oxygen content before entering the area.

6(b) Methods and Materials for Containment and Clean Up: Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements.

Section 7 - Handling and Storage

7(a) Precautions for Safe Handling Keep away from heat/sparks/open flames/hot surfaces. No smoking. Eliminate all ignition sources if safe to do so. Practice good housekeeping.

7(b) Conditions for Safe Storage, Including Any Incompatibilities: Store in well-ventilated place. If feasible, store locked up.

Section 8 - Exposure Controls / Personal Protection

8(a) Occupational Exposure Limits (OELs): The following exposure limits are offered as reference, for an experience industrial hygienist to review.

Ingredients	OSHA PEL [1]	ACGIH TLV [2]	NIOSH REL [3]	IDLH [4]
Methane	NE	1000 ppm (as Aliphatic hydrocarbon gasses, Alkanes [C_1 - C_4])	NE	NE
Ethane	NE	1000 ppm (as Aliphatic hydrocarbon gasses, Alkanes [C_1 - C_4])	NE	NE
Propane	1000 ppm	1000 ppm (as Aliphatic hydrocarbon gasses, Alkanes [C_1 - C_4])	1000 ppm	2100 ppm

NE - None Established

1. OSHA PELs are 8-hour TWA concentrations unless otherwise noted.
2. TLVs established by the ACGIH are 8-hour TWA concentrations unless otherwise noted. ACGIH TLVs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.

Section 8 - Exposure Controls / Personal Protection (continued)

8(a) Occupational Exposure Limits (OELs) (continued):

3. The NIOSH-REL- Compendium of Policy and Statements. NIOSH, Cincinnati, OH (1992). NIOSH is the federal agency designated to conduct research relative to occupational safety and health. As is the case with ACGIH TLVs, NIOSH RELs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.
4. The IDLHs are used by NIOSH as part of the respirator selection criteria and were first developed in the mid 1970's by NIOSH. The Documentation for IDLHs is a compilation of the rationale and sources of information used by NIOSH during the original determination of 387 IDLHs and their subsequent review and revision in 1994.

8(b) Appropriate Engineering Controls: Local exhaust ventilation should be used to control the emission of air contaminants. General dilution ventilation may assist with the reduction of air contaminant concentrations.

8(c) Individual Protection Measures:

- **Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, use only a NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. Concentration in air of the various contaminants determines the extent of respiratory protection needed. Use a positive-pressure-demand, full-face, supplied air respirator or SCBA for concentrations above 50 times the exposure limit. If exposure is above the IDLH for any of the constituents, or there is a possibility of an uncontrolled release or exposure levels are unknown, then use a positive-demand, full-face, supplied air respirator with escape bottle or SCBA.

  Warning! Air-purifying respirators both negative-pressure, and powered-air do not protect workers in oxygen-deficient atmospheres.
- **Eyes**: Wear appropriate eye protection to prevent eye contact.
- **Skin**: Wear appropriate personal protective clothing to prevent skin contact. This may include fire retardant clothing.

Section 9 - Physical and Chemical Properties

9(a) Appearance (physical state, color, etc.): Gas Colorless

9(b) Odor: Petroleum smell

9(c) Odor Threshold: NA

9(d) pH: NA

9(e) Melting Point/Freezing Point: NA

9(f) Initial Boiling Point and Boiling Range: -250 -160 °F (-156.7 - 106.7 °C)

9(g) Flash Point: NA

9(h) Evaporation Rate: NA

9(i) Flammability (solid, gas): Extremely Flammable

9(j) Upper/lower Flammability or Explosive Limits: 15% / 5%

9(k) Vapor Pressure: NA

9(l) Vapor Density (Air = 1): NA

9(m) Relative Density: NA

9(n) Solubility(ies): Slightly Soluble

9(o) Partition Coefficient n-octanol/water: ND

9(p) Auto-ignition Temperature: NA

9(q) Decomposition Temperature: ND

9(r) Viscosity: NA

NA - Not Applicable

ND - Not Determined for product as a whole

Section 10 - Stability and Reactivity

10(a) Reactivity: Can readily form explosive mixtures with air, which are easily ignited by a static charge.

10(b) Chemical Stability: Stable under normal storage and handling conditions.

10(c) Possibility of Hazardous Reaction: No Data Found

10(d) Conditions to Avoid: Static discharge, sparks, open flames and other ignition sources.

10(e) Incompatible Materials: Oxidizing agents.

10(f) Hazardous Decomposition Products: Can produce carbon dioxide and carbon monoxide.

Section 11 - Toxicological Information

11(a-e) Information on Toxicological Effects: The following toxicity data have been determined using the information available for its components applied to the guidance on the preparation of an SDS under the GHS requirements of OSHA and the EU CPL:

Hazard Classification	Hazard Category		Hazard Symbols	Signal Word	Hazard Statement
	EU	OSHA			
Acute Toxicity Hazard (covers Categories 1-5)	NA*	NA*	NA*	NA*	NA*
Eye Damage/ Irritation (covers Categories 1, 2A and 2B)	NA*	NA*	NA*	NA*	NA*
Skin/Dermal Sensitization (covers Category 1)	NA*	NA*	NA*	NA*	NA*
Carcinogenicity (covers Categories 1A, 1B and 2)	NA*	NA*	NA*	NA*	NA*
Toxic Reproduction (covers Categories 1A, 1B and 2)	NA*	NA*	NA*	NA*	NA*

Section 11 - Toxicological Information (continued)

11(a-e) Information on Toxicological Effects (continued):

Hazard Classification	Hazard Category		Hazard Symbols	Signal Word	Hazard Statement
	EU	OSHA			
Specific Target Organ Toxicity (STOT) Following Single Exposure (covers Categories 1-3)	NA*	2 [a]		**Warning**	May cause frostbite due to rapid evaporation
STOT following Repeated Exposure (covers Categories 1 and 2)	NA*	2 [b]		**Warning**	May cause CNS Depression, tremors through prolonged or repeated exposure
Simple Asphyxiant (Single Category)	NA*	Single Category	No Pictogtram	**Warning**	May displace oxygen and cause rapid suffocation

* Not Applicable - Many categories have conclusive but not sufficient for classification information.

a. No Specific Target Organ Toxicity (STOT) following Single Exposure data available for **Natural Gas** as a mixture. The following STOT following Single Exposure information was found for the components:

- **Propane** - Risk of suffocation in confined areas due to evaporation. Frostbite may occur due to rapid evaporation.

b. No Specific Target Organ Toxicity (STOT) following Repeated Exposure data available for **Natural Gas** as a mixture: The following STOT following Repeated Exposure information was found for the components:

- **Propane** - CNS depression with tremors may occur.

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2009, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCLID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS).

Section 12 - Ecological Information

12(a) Ecotoxicity (aquatic & terrestrial): No Data Found

12(b) Persistence & Degradability: No Data Found

12(c) Bioaccumulative Potential: No Data Found

12(d) Mobility (in soil): No Data Found

12(e) Other Adverse Effects: No Data Found

Additional Information:

Hazard Category: Not Reported

Signal Word: No Signal Word

Hazard Symbol: No Symbol

Hazard Statement: No Statement

Section 13 - Disposal Considerations

Disposal: Waste code D001: Waste Flammable material with a flash point <140°F. This material and its container must be disposed of as hazardous waste. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Container Cleaning and Disposal: Dispose of contents in accordance with federal, state and local regulations. Observe safe handling precautions. EWC: 16-05-05 (gasses in pressure containers other than those mentioned in 16-05-04).

Please note this information is for Natural Gas in its original form. Any alterations can void this information.

Section 14 - Transportation Information

14(a-g) Transportation Information:

US DOT under 49 CFR 172.101 regulates **Natural Gas** as a hazardous material. All federal, state, and local laws and regulations that apply to the transport of this type of material must be adhered to.

Shipping Name: UN1971, Methane, compressed or Natural gas, compressed with high methane content. **Shipping Symbols:** Flammable Gas **Hazard Class:** 2.1 **UN No.:** UN1971 **Packing Group:** NA **DOT/ IMO Label:** 2.1 **Special Provisions (172.102):** NA	**Packaging Authorizations** **a) Exceptions:** 306 **b) Non-Bulk:** 302 **c) Bulk:** 302	**Quantity Limitations** **a) Passenger, Aircraft, or Railcar:** Forbidden **b) Cargo Aircraft Only:** 150 kg **Vessel Stowage Requirements** **a) Vessel Stowage:** E **b) Other:** 40 **DOT Reportable Quantities**: NA

IMDG and RID classification, packaging and shipping requirements follow the US DOT Hazardous Materials Regulation.

Section 14 - Transportation Information (continued)

14(a-g) Transportation Information (continued):

ADR regulates **Natural Gas** as a hazardous material.

Shipping Name: : UN1971, Methane, compressed or Natural gas, compressed with high methane content. **Classification Code:** 2.1 **UN No.:** 1971 **Packing Group:** NA **ADR Label:** Flammable gas **Special Provisions:** NA **Limited Quantities:** 0 **Excepted Quantities (EQ):** EO	**Packaging** **a) Packing Instructions:** P200 **b) Special Packing Provisions:** NA **c) Mixed Packing Provisions:** NA	**Portable Tanks & Bulk Containers** **a) Instructions:** NA **b) Special Provisions:** NA

IATA regulates **Natural Gas** as a hazardous material.

Shipping Name: : UN1971, Methane, compressed or Natural gas, compressed with high methane content**.** **Class/Division:** 2.1 **Hazard Label (s):** Flammable gas **UN No.:** 1971 **Packing Group:** NA **Excepted Quantities (EQ):** EO	**Passenger & Cargo Aircraft Limited Quantity (EQ)**		**Cargo Aircraft Only** **Pkg Inst:** 200 **Max Net Qty/Pkg:** 150 kg	**Special Provisions:** NA **ERG Code:** 10L
	Pkg Inst: Forbidden **Max Net Qty/Pkg:** Forbidden	**Pkg Inst:** Forbidden **Max Net Qty/Pkg:** Forbidden		

Pkg Inst – Packing Instructions Max Net Qty/Pkg – Maximum Net Quantity per Package ERG – Emergency Response Drill Code

TDG Classification: Natural Gas does have a TDG classification.

Section 15 - Regulatory Information

Regulatory Information: *The following listing of regulations relating to a CONSOL Energy Inc. product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.*

This product and/or its constituents are subject to the following regulations:

OSHA Regulations: Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-2, Z-3): The product, **Natural Gas** as a whole is not listed. However, individual components of the product are listed: Refer to Section 8, Exposure Controls and Personal Protection

EPA Regulations: Natural Gas is not listed as a whole. However, individual components of the product are listed:

Components	Regulations
Methane	CAA
Ethane	CAA
Propane	CAA

SARA Potential Hazard Categories: Fire Hazard

Regulations Key:

CAA	Clean Air Act (42 USC Sec. 7412; 40 CFR Part 61 [As of: 8/18/06])
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (42 USC Secs. 9601(14), 9603(a); 40 CFR Sec. 302.4, Table 302.4, Table 302.4 and App. A)
CWA	Clean Water Act (33 USC Secs. 1311; 1314(b), (c), (e), (g); 136(b), (c); 137(b), (c) [as of 8/2/06])
RCRA	Resource Conservation Recovery Act (42 USC Sec. 6921; 40 CFR Part 261 App VIII)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III Section 302 Extremely Hazardous Substances (42 USC Secs. 11023, 13106; 40 CFR Sec. 372.65) and Section 313 Toxic Chemicals (42 USC Secs. 11023, 13106; 40 CFR Sec. 372.65 [as of 6/30/05])
TSCA	Toxic Substance Control Act (15 U.S.C. s/s 2601 et seq. [1976])
SDWA	Safe Drinking Water Act (42 U.S.C. s/s 300f et seq. [1974])

Section 313 Supplier Notification: This product does not contain any toxic chemicals 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.

State Regulations: The product, **Natural Gas** as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations:

Pennsylvania Right to Know: Contains regulated material in the following categories: Hazardous Substances: Methane, ethane and propane

California Prop. 65: Does not contain elements known to the State of California to cause cancer or reproductive toxicity.

New Jersey: Contains regulated material in the following categories: Hazardous Substance: Methane, ethane and propane

Minnesota: Methane, ethane and propane

Massachusetts: Methane, ethane and propane

Section 15 - Regulatory Information (continued)

Other Regulations:

WHMIS Classification (Canadian): Natural Gas is not listed as a whole. However individual components are listed.

Ingredients	WHMIS Classification
Methane	A, B1
Propane	A, B1

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

Section 16 - Other Information

Prepared By: CONSOL Energy Inc.

Issue Date: 6/16/2013

Additional Information:

HMIS Classification

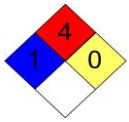
Health Hazard	1
Fire Hazard	4
Physical Hazard	0

HEALTH = **1**, * Denotes possible chronic hazard if airborne dusts or fumes are generated Irritation or minor reversible injury possible.

FIRE = **4**, Flammable gases, or very volatile flammable liquids with flash points below 73 °F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA).

PHYSICAL HAZARD = **0**, Materials that are normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives.

NFPA



HEALTH = **1**, Exposure could cause irritation but only minor residual injury even if no treatment is given.

FIRE = **4,** Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.

INSTABILITY = **0**, Normally stable, even under fire exposure conditions, and are not reactive with water.

ABBREVIATIONS/ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	Regulations Concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CPL	Classification, Labeling and Packaging
DOT	Department of Transportation
EC	European Community
EU	European Union
EWC	European Waste Catalogue
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IDLH	Immediately Dangerous to Life or Health
IMDG	International Maritime Dangerous Goods
LEL	Lower Explosive Limit
MSHA	Mine Safety and Health Administration

NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
REACH	**R**egistration, **E**valuation, **A**uthorization and Restriction of **Ch**emical substances.
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail
REL	Recommended Exposure Limits
SDS	Safety Data Sheet
SARA	Superfund Amendment and Reauthorization Act
SCBA	Self-contained Breathing Apparatus
TDG	Transport Dangerous Goods
TLV	Threshold Limit Value
TWA	Time-weighted Average
UEL	Upper Explosive Limit
WHMIS	Workplace Hazardous Materials Information System

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