



# Safety Data Sheet

**MSDS ID NO: 008**
**Revision date:** April 2014

## Section 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product name:** Natural gas
**Synonyms:** Gas, gasses, marsh gas, methane, natural sweet, sweet natural gas
**Chemical family:** Natural gas — aliphatic hydrocarbon mixture
**Formula:** Mixture
**Producer:** EnLink Midstream, L.P.
2501 Cedar Springs Road
Suite 100
Dallas, TX 75201
www.EnLink.com

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|---|---|---|
| **Emergency Line** | **866-394-9839** | **Available 24 hours** |
| **CHEMTREC** | **800-424-9300** | |
| **EnLink** | **214-953-9500** | **Available during normal business hours** ****Ask for Compliance Dept**** |

## Section 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Natural gas does not have any color and has a slight hydrocarbon odor. Some natural gas products have an odorant added to signal their presence in an atmosphere. Natural gas is typically stored under pressure. It is extremely flammable and explosive. In higher concentrations, natural gas acts as a simple asphyxiant, displacing oxygen.

**OSHA-GHS Hazard Statements:**
**DANGER — Extremely Flammable Gas**
**WARNING — Contains gas under pressure; may explode if heated**

**Inhalation:** This product is considered to have low toxicity by inhalation and is a simple asphyxiant. Signs of asphyxiation will be noticed when oxygen is reduced to below 16%, and may occur in several stages. At this concentration, the product can produce symptoms of rapid breathing and pulse rate, dizziness, headaches, confusion and incoordination. At extreme concentrations, asphyxiation and death can occur due to lack of oxygen.

**Ingestion:** Ingestion is not likely.

**Skin contact:** Generally, no major irritation occurs unless unusual conditions exist.

**Eye contact:** Some slight irritation can occur on mucous membranes. However, a greater hazard may be due to pressure issues of material storage.

**Carcinogenic evaluation:** Natural gas components that are present at concentrations greater than 0.1% are not considered carcinogenic according to OSHA, the IARC and the NTP.

## Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Natural gas is a product of natural occurrences. It is a gaseous combination of hydrocarbons having carbon numbers primarily in the range of $C_1$ through $C_4$. These carbons are separated from the naturally produced product by removing natural gas condensate and liquids.

**Material information:**

| Name | CAS No. | Weight % |
|---|---|---|
| **Methane*** | 74-82-8 | 35-99 |
| **Ethane*** | 74-84-0 | 1-20 |
| **Nitrogen** | 7727-37-9 | 0.1-20 |
| **Propane*** | 74-98-6 | 0.1-15 |
| **Normal butane*** | 106-97-8 | 1-5 |
| **Carbon dioxide** | 124-38-9 | 0.25-5 |
| **Iso-butane*** | 75-28-5 | 0.1-3 |

*** Aliphatic hydrocarbon gas (alkane $C_1$-$C_4$)**

***NOTE:*** *The above weight percentages are represented in ranges as estimates. The components of natural gas may be different due to the variations produced by a natural product.*

## Section 4. FIRST AID MEASURES

**Inhalation:** Move affected person(s) to fresh air. If not breathing, breathing is difficult or no heartbeat, give artificial respiration and cardiopulmonary resuscitation (CPR) and/or administer oxygen as needed by trained personnel. Immediately call a physician.

**Skin contact:** Consult with a physician if any unusual symptoms are noted.

**Ingestion:** N/A

**Eye contact:** Consult with a physician if any unusual symptoms are noted.

## Section 5. FIREFIGHTING MEASURES

**Suitable extinguishing media:** Small fires — Class B fire-extinguishing media including $CO_2$ or dry chemical can be used. Larger fires — water spray, fog. Use of extinguishers should be undertaken only by adequately trained personnel.

**Specific hazards:** Refer to NFPA 30 or North American Emergency Response Guide 115. If possible, immediately stop product flow and allow it to burn out. Product can produce both internal/external explosions in any vessel if Bleve's point is reached. Extinguishing flame may lead to formation of other dangerous mixtures.

**Special protective equipment for firefighters:** Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment. Firefighting may result in potential exposure to high heat, smoke or toxic byproducts of combustion. A self-contained breathing apparatus (SCBA) with full-face piece and full protective firefighting clothing should be worn.

**NFPA rating:**

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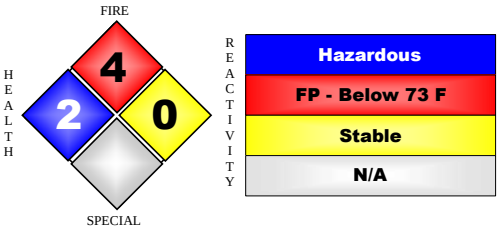
| **Health:** | **2** |
| **Flammability:** | **4** |
| **Instability:** | **0** |
| **Other:** | **N/A** |




## Section 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Evacuate any potentially affected area and isolate personnel from entry. Shut off source if possible and if safe.

## Section 7. HANDLING AND STORAGE

**Handling:** Ensure proper grounding methods are used in the handling of this product. Comply with all applicable regulatory agencies related to environmental, health and safety.

## Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Occupational Exposure Limits:**

| Name | CAS No. | Weight % | Federal OSHA PEL (ppm) | ACGIH® TLV® (ppm) | OSHA PEL — 1989 [B] and NIOSH REL (ppm) |
|---|---|---|---|---|---|
| **Methane** | 74-82-8 | 35-99 | Not established | 1,000 | Not established |
| **Ethane** | 74-84-0 | 1-20 | Not established | 1,000 | Not established |
| **Nitrogen** | 7727-37-9 | 0.1-20 | Not established | | Not established |
| **Propane** | 74-98-6 | 0.1-15 | 1,000 | 1,000 | 1,000<br>1,800 mg/m$^3$ |
| **Normal Butane** | 106-97-8 | 1-5 | Not established | 1,000 | 800<br>1,900 mg/m$^3$ |
| **Carbon Dioxide** | 124-38-9 | 0.25-5 | 5,000 ppm | 5,000 ppm<br>30,000 ppm STEL | 10,000 [B]<br>30,000 STEL [B]<br>5000<br>30000 STEL |
| **Iso-butane** | 75-28-5 | 0.1-3 | Not established | Not established | Not established [B]<br>800 ppm |

All exposure limits listed are 8-hour time weighted average (TWA) — except where noted otherwise.
[A] Aliphatic hydrocarbon gas (alkane $C_1$-$C_4$)
[B] Federal OSHA 1989 PELs were vacated but are in use and enforced by many state OSHA plans.

TWA — Time Weighted Average is an average value of exposure over the course of an 8-hour work shift.
PEL — Permissible Exposure Limit is the maximum amount or concentration of a chemical that a worker may be exposed to under OSHA regulations.
STEL — Short Term Exposure Limit — typically a 15-minute exposure period of time

**Engineering measures:** Ensure proper ventilation and methods of exhaust are operating to reduce potential hazards. Use mechanical ventilation equipment that is intrinsically safe or explosion-proof.

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory protection:** Use a NIOSH/MSH- approved positive pressure supplied air respirator with escape bottle or self-contained breathing apparatus (SCBA) for gas concentrations above occupational exposure

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| | limits, if exposure levels are not known, or in an oxygen-deficient atmosphere. |
| **Skin and body protection:** | Cover exposed skin areas with appropriate personal protection coverings. |
| **Eye protection:** | Ensure proper use of goggles and/or face shields in the handling of any pressurized gases or materials. |
| **Hygiene measures:** | Ensure proper exhaust methods are explosion-proof. |

## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|---|
| **Appearance:** | Colorless gas |
| **Physical state (solid/liquid/gas):** | Gas |
| **Substance type (pure/mixture):** | Mixture |
| **Color:** | Colorless |
| **Odor:** | Hydrocarbon |
| **Molecular weight:** | 16-30 |
| **pH:** | Neutral |
| **Boiling point/range (5-95%):** | -259° to -43°F |
| **Melting point/range:** | N/A |
| **Decomposition temperature:** | N/A |
| **Critical temperature:** | -82.7°C |
| **Specific gravity:** | ($H_2O$ = 1) 0.555 |
| **Vapor density:** | (AIR = 1) 0.6 |
| **Vapor pressure:** | Gas |
| **Evaporation rate:** | Gas |
| **Flash point:** | -292°F |
| **Auto-ignition temperature:** | 900°-1238° F |
| **Flammable limits in air — lower (%):** | 3.8-6.5 % |
| **Flammable limits in air — upper (%):** | 13-17 % |

## Section 10. STABILITY AND REACTIVITY

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| **Stability:** | This product is stable at 70°F at 182 PSI. |
| **Polymerization:** | Will not occur. |
| **Hazardous decomposition products:** | Carbon monoxide/carbon dioxide |
| **Materials to avoid:** | Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine |
| **Conditions to avoid:** | Heat/ignition |

## Section 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:**

**Product information:**

| Name | CAS No. | Inhalation: | Dermal: | Oral: |
|---|---|---|---|---|
| **Natural gas** | 8006-14-2 | N/A | N/A | N/A |

**Summary of health effect information on the product:** ***refer to Hazard Section 2***

## Section 12. ECOLOGICAL INFORMATION

**Ecotoxicity effects:** Product will dissipate quickly in atmosphere of unconfined area.

## Section 13. DISPOSAL CONSIDERATIONS

**Cleanup considerations:** Disposal of this material must be done in accordance with federal, state and/or local regulations. The material destined for disposal must be characterized properly and may differ from the product described in this MSDS if mixed with other wastes.

## Section 14. TRANSPORT INFORMATION

**Please refer to 40 CFR 172.101:**
**DOT:**

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| **Transport information:** | This material is regulated under DOT when transported via U.S. commerce routes. |
| **Proper shipping name:** | Natural gas, compressed |
| **UN/identification no.:** | UN 1971 |
| **Hazard class:** | 2.1 |
| **Packing group:** | N/A |
| **DOT reportable quantity (lbs):** | N/A |

## Section 15. REGULATORY INFORMATION

**U.S. federal regulatory information:**

**State and community right-to-know regulations:**
***The following component(s) of this material are identified on the regulatory lists below:***

**CERCLA Sections 102a/103 (40 FR 302.4): Not regulated**
**SARA Title III Section 302 (40 CFR 355.30): Not regulated**
**SARA Title III Section 304 (40 CFR 355.40): Not regulated**
**SARA Title III Section 313 (40 CFR 372.65): Not regulated**
**OSHA Process Safety (29 CFR 1910.119): Not regulated**
**SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21)**

| | |
|---|---|
| **ACUTE:** | **HEALTH HAZARD** |
| **CHRONIC:** | **NO** |
| **FIRE:** | **FIRE HAZARD** |
| **REACTIVE:** | **NO** |
| **SUDDEN RELEASE:** | **SUDDEN RELEASE OF PRESSURE** |

***NOTE:*** *User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.*

## Section 16. OTHER INFORMATION

**The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, EnLink Midstream, L.P., and its related operations or divisions (EnLink) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. EnLink assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.**