

# Natural Gas Dry

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Date of Issue: 08/16/2024

Version: 1.0

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Natural Gas Dry

**Synonyms:** Methane, Petroleum Gas, Methyl Hydride, Treated Gas, Process Gas

#### 1.2. Intended Use of the Product

Fuel

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Company

Williams Inc.

One Williams Center

Tulsa, OK 74172

855-945-5762

[www.williams.com](http://www.williams.com)

[ehs@williams.com](mailto:ehs@williams.com)

#### 1.4. Emergency Telephone Number

CHEMTREC:

1-800-424-9300 (US/Canada)

+01 703-527-3887 (International)

[Security.OperationsCenter@williams.com](mailto:Security.OperationsCenter@williams.com)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

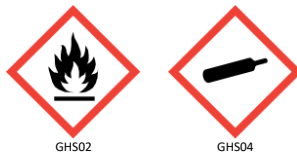
##### GHS-US/CA Classification

Flammable gases Category 1	H220
Gases under pressure Compressed gas	H280
Simple Asphyxiant	
Hazardous to the aquatic environment - Acute Hazard Category 3	H402
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412

#### 2.2. Label Elements

##### GHS-US/CA Labeling

**Hazard Pictograms (GHS-US/CA)** :



**Signal Word (GHS-US/CA)** :

Danger

**Hazard Statements (GHS-US/CA)** :

H220 - Extremely flammable gas.  
 H280 - Contains gas under pressure; may explode if heated.  
 H402 - Harmful to aquatic life.  
 H412 - Harmful to aquatic life with long lasting effects.  
 May displace oxygen and cause rapid suffocation.

**Precautionary Statements (GHS-US/CA)** :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P273 - Avoid release to the environment.  
 P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
 P381 - In case of leakage, eliminate all ignition sources.  
 P403 - Store in a well-ventilated place.  
 P410+P403 - Protect from sunlight. Store in a well-ventilated place.  
 P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

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### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Contact with gas escaping the container can cause frostbite.

### 2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Natural gas, dried	Natural gas, dried (A complex combination of hydrocarbons separated from natural gas. It consists of saturated aliphatic hydrocarbons having carbon numbers in the range of C1-4, predominantly methane and ethane.) / Dry gas	(CAS-No.) 68410-63-9	100	Simple Asphy Flam. Gas 1, H220 Press. Gas (Comp.), H280
Ethanethiol	Ethyl mercaptan / Ethyl hydrosulfide / Ethyl sulfhydrate / Ethyl thioalcohol / Thioethanol / Thioethyl alcohol / ethanethiol	(CAS-No.) 75-08-1	< 0.1	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:vapor), H332 Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First-aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists. For brief contact with a small amount: Rewarm with body heat. Get immediate medical advice/attention. For extensive contact or a large amount: Immediately call a poison center/doctor and follow their advice. Specific treatment is urgent, incorrect first-aid practices will aggravate the injury. Protect affected area with a loose cover until proper medical treatment is received.

**Eye Contact:** Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** Contact with gas escaping the container can cause frostbite. Asphyxia by lack of oxygen: risk of death.

**Inhalation:** In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate.

Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death.

**Skin Contact:** Contact with gas escaping the container can cause frostbite and freeze burns.

**Eye Contact:** Contact with gas escaping the container can cause frostbite, freeze burns, and permanent eye damage.

**Ingestion:** Not considered a potential route of exposure, but contact with gas escaping the container can cause freeze burns and frostbite.

**Chronic Symptoms:** None known.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

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### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Do not extinguish burning gas if flow cannot be shut off immediately. Extinguish secondary FIRES with appropriate materials.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

#### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Extremely flammable gas.

**Explosion Hazard:** May form flammable/explosive vapor-air mixture. Container may explode in heat of fire. Gas is heavier than air and may pool in low-lying areas and may drift towards ignition sources.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

#### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Fight fire remotely due to the risk of explosion.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Hydrocarbons. Sulfur compounds.

**Other Information:** Use water spray to disperse vapors. Do not allow run-off from fire fighting to enter drains or water courses.

#### 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Eliminate every possible source of ignition. Do not get in eyes, on skin, or on clothing. Do not breathe gas.

##### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

##### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Eliminate ignition sources. Evacuate unnecessary personnel, isolate, and ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

#### 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

#### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Remove ignition sources. Stop leak, if possible without risk. As an immediate precautionary measure, isolate spill or leak area in all directions.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

#### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

### SECTION 7: HANDLING AND STORAGE

#### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Handle empty containers with care because residual vapors are flammable. Ruptured cylinders may rocket. Do not pressurize, cut, or weld containers. Asphyxiating gas at high concentrations.

**Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Do not breathe gas.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

#### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Keep in fireproof place. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling.

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**Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

### 7.3. Specific End Use(s)

Fuel

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Ethanethiol (75-08-1)		
USA ACGIH	ACGIH OEL TWA [ppm]	0.5 ppm
USA OSHA	OSHA PEL (Ceiling)	25 mg/m <sup>3</sup>
USA OSHA	OSHA PEL C [ppm]	10 ppm
USA NIOSH	NIOSH REL (Ceiling)	1.3 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL C [ppm]	0.5 ppm
USA IDLH	IDLH [ppm]	500 ppm
Alberta	OEL TWA	1.3 mg/m <sup>3</sup>
Alberta	OEL TWA [ppm]	0.5 ppm
British Columbia	OEL TWA [ppm]	0.5 ppm
Manitoba	OEL TWA [ppm]	0.5 ppm
New Brunswick	OEL TWA	1.3 mg/m <sup>3</sup>
New Brunswick	OEL TWA [ppm]	0.5 ppm
Newfoundland & Labrador	OEL TWA [ppm]	0.5 ppm
Nova Scotia	OEL TWA [ppm]	0.5 ppm
Nunavut	OEL STEL [ppm]	1.5 ppm
Nunavut	OEL TWA [ppm]	0.5 ppm
Northwest Territories	OEL STEL [ppm]	1.5 ppm
Northwest Territories	OEL TWA [ppm]	0.5 ppm
Ontario	OEL TWA [ppm]	0.5 ppm
Prince Edward Island	OEL TWA [ppm]	0.5 ppm
Québec	VEMP (OEL TWA)	1.3 mg/m <sup>3</sup>
Québec	VEMP (OEL TWA) [ppm]	0.5 ppm
Saskatchewan	OEL STEL [ppm]	1.5 ppm
Saskatchewan	OEL TWA [ppm]	0.5 ppm
Yukon	OEL C	7.6 mg/m <sup>3</sup>
Yukon	OEL Ceiling [ppm]	3 ppm

### 8.2. Exposure Controls

**Appropriate Engineering Controls:** Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released. Oxygen detectors should be used when asphyxiating gases may be released.

**Personal Protective Equipment:** Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection. Respiratory protection of the dependent type.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

**Hand Protection:** Wear protective gloves. If material is cold, wear thermally resistant protective gloves.

**Eye and Face Protection:** Chemical safety goggles.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** Use a NIOSH-approved self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

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**Thermal Hazard Protection:** Wear thermally resistant protective clothing.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Gas
Appearance	: Colorless
Odor	: Normally odorless, Pungent odor observed if mercaptans are present.
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: -184 °C (-299.2 °F)
Auto-ignition Temperature	: 537 °C (998.6 °F)
Decomposition Temperature	: No data available
Flammability (solid, gas)	: Extremely flammable gas
Lower Flammable Limit	: 2 %
Upper Flammable Limit	: 10 %
Vapor Pressure	: 40 mm Hg (0.77 psi)
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Specific Gravity	: No data available
Solubility	: Water: Not miscible or difficult to mix
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available
Explosive Properties	: Contains gas under pressure; may explode if heated

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity:

Hazardous reactions will not occur under normal conditions.

### 10.2. Chemical Stability:

Contains gas under pressure; may explode if heated.

### 10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

### 10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

### 10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers.

### 10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Hydrocarbons. Sulfur compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

#### LD50 and LC50 Data:

No additional information available

**Skin Corrosion/Irritation:** Not classified

**Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

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**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death.

**Symptoms/Injuries After Skin Contact:** Contact with gas escaping the container can cause frostbite and freeze burns.

**Symptoms/Injuries After Eye Contact:** Contact with gas escaping the container can cause frostbite, freeze burns, and permanent eye damage.

**Symptoms/Injuries After Ingestion:** Not considered a potential route of exposure, but contact with gas escaping the container can cause freeze burns and frostbite.

**Chronic Symptoms:** None known.

**Potential Adverse human health effects and symptoms:** Based on available data, the classification criteria are not met.

### 11.2. Information on Toxicological Effects - Ingredient(s)

**LD50 and LC50 Data:**

Ethanethiol (75-08-1)	
LD50 Oral Rat	682 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	11.23 mg/L/4h
LC50 Inhalation Rat	4420 ppm/4h

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General:** Harmful to aquatic life with long lasting effects.

Ethanethiol (75-08-1)	
LC50 Fish 1	2.2 mg/L
EC50 - Crustacea [1]	90 – 280 mg/L (Exposure time: 48 h - Species: Daphnia magna)
EC50 - Crustacea [2]	0.09 – 0.28 mg/L (Exposure time: 48 h - Species: Daphnia magna [Static])
NOEC Chronic Crustacea	0.009 mg/L

### 12.2. Persistence and Degradability

Natural Gas Dry	
Persistence and Degradability	May cause long-term adverse effects in the environment.

### 12.3. Bioaccumulative Potential

Natural Gas Dry	
Bioaccumulative Potential	Not established.

Natural gas, dried (68410-63-9)	
Partition coefficient n-octanol/water (Log Pow)	≤ 2.8

Ethanethiol (75-08-1)	
Partition coefficient n-octanol/water (Log Pow)	1.5 (at 20 °C (at pH 7))

### 12.4. Mobility in Soil

No additional information available

### 12.5. Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Additional Information:** Handle empty containers with care because residual vapors are flammable. Empty gas cylinders should be returned to the vendor for recycling or refilling. Do not puncture or incinerate container.

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**Ecology - Waste Materials:** Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

### SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

#### 14.1. In Accordance with DOT

**Proper Shipping Name** : COMPRESSED GAS, FLAMMABLE (natural gas-high methane content)  
**Hazard Class** : 2.1  
**Identification Number** : UN1954  
**Label Codes** : 2.1  
**ERG Number** : 115



#### 14.2. In Accordance with IMDG

**Proper Shipping Name** : COMPRESSED GAS, FLAMMABLE (natural gas-high methane content)  
**Hazard Class** : 2.1  
**Identification Number** : UN1954  
**Label Codes** : 2.1  
**EmS-No. (Fire)** :F-D  
**EmS-No. (Spillage)** : S-U



#### 14.3. In Accordance with IATA

**Proper Shipping Name** : COMPRESSED GAS, FLAMMABLE (natural gas-high methane content)  
**Hazard Class** : 2.1  
**Identification Number** : UN1954  
**Label Codes** : 2.1  
**ERG Code (IATA)** : 10L



#### 14.4. In Accordance with TDG

**Proper Shipping Name** : COMPRESSED GAS, FLAMMABLE (natural gas-high methane content)  
**Hazard Class** : 2.1  
**Identification Number** : UN1954  
**Label Codes** : 2.1



### SECTION 15: REGULATORY INFORMATION

#### 15.1. US Federal Regulations

<b>Natural Gas Dry</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Physical hazard - Gas under pressure Health hazard - Simple asphyxiant
<b>Natural gas, dried (68410-63-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
<b>Ethanethiol (75-08-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	

#### 15.2. US State Regulations

<b>Ethanethiol (75-08-1)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Massachusetts - Right To Know List

#### 15.3. Canadian Regulations

<b>Natural gas, dried (68410-63-9)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Ethanethiol (75-08-1)</b>
Listed on the Canadian DSL (Domestic Substances List)

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### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest** : 02/22/2023

**Revision**

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

#### GHS Full Text Phrases:

H220	Extremely flammable gas
H224	Extremely flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

NA GHS SDS 2015 (Can, US)