



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Natural Gas  
**Other means of identification** Not available.  
**Synonyms** Methane, Natural Gas Sweet, Fuel Gas, Petroleum Gas, Methyl Hydride  
**Recommended use** Fuel.  
**Recommended restrictions** None known.

### Manufacturer / Importer / Supplier / Distributor information

**Company name** Williams, Inc.  
**Address** One Williams Center  
Tulsa, OK 74172  
US  
**Telephone** 800-688-7507  
**E-mail** enterpriseehs@williams.com  
**Emergency phone number** 888-677-2370

## 2. Hazard(s) identification

**Physical hazards** Flammable gases Category 1  
Gases under pressure Compressed gas  
**Health hazards** Not classified.  
**OSHA hazard(s)** Simple asphyxiant

### Label elements

#### Hazard symbol



#### Signal word

Danger

#### Hazard statement

Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

#### Precautionary statement

##### Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

##### 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 sunlight. Store in a well-ventilated place.

##### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Hazard(s) not otherwise classified (HNOC)

Not classified.

## 3. Composition/information on ingredients

### Substance

#### Hazardous components

Chemical name	Common name and synonyms	CAS number	%
Natural gas		8006-14-2	100

#### Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First-aid measures

#### Inhalation

Move injured person into fresh air and keep person calm under observation. If breathing is difficult, give oxygen. Get medical attention if any discomfort continues.

#### Skin contact

Frostbite: Do not remove clothes, but flush with copious amounts of lukewarm water. Call an ambulance and continue to flush during transportation to hospital.

#### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

<b>Ingestion</b>	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
<b>Most important symptoms/effects, acute and delayed</b>	Narcosis. Behavioral changes. Decrease in motor functions.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Extinguish with foam, carbon dioxide, dry powder or water fog.
<b>Unsuitable extinguishing media</b>	None.
<b>Specific hazards arising from the chemical</b>	Extremely flammable gas. Closed containers can burst violently when heated, due to excess pressure build-up. Gas may travel considerable distance to a source of ignition and flash back. Gases may form explosive mixtures with air. Fire or high temperatures create: Carbon monoxide. Carbon oxides. Sulfur oxides.
<b>Special protective equipment and precautions for firefighters</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode. Use approved gas detectors in confined spaces.
<b>Fire-fighting equipment/instructions</b>	Evacuate area. Move container from fire area if it can be done without risk. Stay away from ends of tanks. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect men attempting to stop a leak. Cool equipment exposed to flames with water, if it can be done without risk. 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.
<b>6. Accidental release measures</b>	
<b>Personal precautions, protective equipment and emergency procedures</b>	Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. 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. Beware of accumulation in low areas or contained areas, where explosive concentrations may occur. Prevent from entering drains or any places where accumulation may occur. Ventilate well and allow to evaporate. Stay upwind. Avoid inhalation and contact with skin and eyes. For large spillages notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate personal protective equipment (See Section 8).
<b>Methods and materials for containment and cleaning up</b>	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
<b>Environmental precautions</b>	Stop leak if possible without any risk. Water may be useful in minimizing or dispersing vapors. If spill occurs on water notify appropriate authorities in accordance with all applicable regulations.
<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Observe good industrial hygiene practices. 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. Use non-sparking hand tools and explosion-proof electrical equipment. The product can accumulate electrostatic charges, which may cause an electrical spark (ignition source). Ground container and transfer equipment to eliminate static electric sparks. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H <sub>2</sub> S) and flammability. Cold burns may occur during filling operations. Containers and delivery lines may become cold enough to present cold burn hazard.  The use 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, 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. Post areas "No Smoking or Open Flame." Store away from incompatible materials. Protect against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

Empty containers may contain flammable product residues. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

Components	Type	Value
Natural gas (CAS 8006-14-2)	TWA	1000 ppm

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**

No exposure standards allocated.

**Appropriate engineering controls**

Provide shower facilities near the work place. In confined spaces, make sure the area is well-ventilated and sufficient oxygen (19.5%) exists before entry. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof equipment.

**Individual protection measures, such as personal protective equipment**

**Eyeface protection**

Wear approved safety glasses as a good hygiene practice.

**Skin protection**

**Hand protection**

Wear suitable gloves as a good hygiene practice.

**Other**

Wear suitable protective clothing.

**Respiratory protection**

A NIOSH approved, self-containing 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 OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever work place conditions warrant a respirator's use.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

**Appearance**

Colorless gas.

**Physical state**

Gas Compressed.

**Form**

Gas.

**Color**

Colorless.

**Odor**

Odorless to slight, sweet.

**Odor threshold**

Not available.

**pH**

Not applicable.

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

-259.6 °F (-162 °C)

**Flash point**

-304.6 °F (-187 °C)

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Extremely flammable gas.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)**

5 %

**Flammability limit - upper (%)**

15 %

**Explosive limit - lower (%)**

Not available.

**Explosive limit - upper (%)**

Not available.

<b>Vapor pressure</b>	40 mm Hg (77°F/25°C)
<b>Vapor density</b>	0.55 Approximate.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Slightly soluble in water.
<b>Partition coefficient (n-octanol/water)</b>	1.81
<b>Auto-ignition temperature</b>	> 550.4 °F (> 288 °C)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Percent volatile</b>	100

## 10. Stability and reactivity

<b>Reactivity</b>	The product is non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable under normal temperature conditions and recommended use.
<b>Possibility of hazardous reactions</b>	Polymerization will not occur.
<b>Conditions to avoid</b>	Heat, sparks, flames, elevated temperatures. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
<b>Incompatible materials</b>	Oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon oxides. Sulfur oxides.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
<b>Inhalation</b>	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. In high concentrations, vapors are narcotic and may cause headache, fatigue, dizziness and nausea.
<b>Skin contact</b>	Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling.
<b>Eye contact</b>	Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Contact with evaporating liquid may cause frostbite or freezing of skin. Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, cyanosis (bluish discoloration of skin), numbness of the extremities, unconsciousness and death.

### Information on toxicological effects

<b>Acute toxicity</b>	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn").
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Product	Species	Test Results
Natural gas (CAS 8006-14-2)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 5 g/kg
<b>Skin corrosion/irritation</b>	Not classified.	
<b>Serious eye damage/eye irritation</b>	Not classified.	
<b>Respiratory sensitization</b>	Not classified.	
<b>Skin sensitization</b>	Not a skin sensitizer.	
<b>Germ cell mutagenicity</b>	Not classified.	
<b>Carcinogenicity</b>	Not classified.	
<b>Reproductive toxicity</b>	Not classified.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	

**Aspiration hazard** Not applicable.  
**Chronic effects** Prolonged exposure may cause chronic effects.

## 12. Ecological information

**Ecotoxicity** Not expected to be harmful to aquatic organisms.  
**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 oxidized in water and insoluble sulfides precipitated from water when metallic radicals are present.  
**Bioaccumulative potential** The product is not expected to bioaccumulate.  
**Partition coefficient n-octanol / water (log Kow)**  
Natural gas 1.81  
**Mobility in soil** Not relevant, due to the form of the product.  
**Mobility in general** The product is a volatile substance, which may spread in the atmosphere.  
**Other adverse effects** The product is a volatile organic compound which has a photochemical ozone creation potential.

## 13. Disposal considerations

**Disposal instructions** This material is a gas and would not typically be managed as a waste.  
**Local disposal regulations** Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.  
**Hazardous waste code** D001  
**Waste from residues / unused products** Dispose of in accordance with local regulations.  
**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

**UN number** UN1971  
**UN proper shipping name** Natural gas, compressed  
**Transport hazard class(es)** 2.1  
**Subsidiary class(es)** Not available.  
**Packing group** Not available.  
**Special precautions for user** Not available.  
**Labels required** 2.1  
**Packaging exceptions** 306  
**Packaging non bulk** 302  
**Packaging bulk** 302

### IATA

**UN number** UN1971  
**UN proper shipping name** Natural gas, compressed  
**Transport hazard class(es)** 2.1  
**Subsidiary class(es)** -  
**Packaging group** Not available.  
**Environmental hazards** No  
**Labels required** 2.1  
**ERG Code** 10L  
**Special precautions for user** Not available.

### IMDG

**UN number** UN1971  
**UN proper shipping name** NATURAL GAS, COMPRESSED  
**Transport hazard class(es)** 2.1  
**Subsidiary class(es)** -  
**Packaging group** Not available.  
**Environmental hazards**  
**Marine pollutant** No  
**Labels required** 2,1  
**EmS** F-D, S-U  
**Special precautions for user** Not available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No information available.

## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not on regulatory list.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Natural gas (CAS 8006-14-2)

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### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Hazard categories

Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - Yes  
Pressure Hazard - Yes  
Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

No

#### SARA 311/312 Hazardous chemical

Yes

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

#### Safe Drinking Water Act (SDWA)

Not regulated.

#### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

#### Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

#### DEA Exempt Chemical Mixtures Code Number

Not regulated.

#### Food and Drug Administration (FDA)

Not regulated.

### US state regulations

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

#### US. Massachusetts RTK - Substance List

Natural gas (CAS 8006-14-2)

#### US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

#### US. Pennsylvania RTK - Hazardous Substances

Natural gas (CAS 8006-14-2)

#### US. Rhode Island RTK

Not regulated.

#### US. California Proposition 65

##### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

## 16. Other information, including date of preparation or last version

<b>Issue date</b>	11-08-2012
<b>Revision date</b>	-
<b>Version #</b>	01
<b>Further information</b>	Not available.
<b>References</b>	Registry of Toxic Effects of Chemical Substances (RTECS)
<b>Disclaimer</b>	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.