



# Safety Data Sheet

## Methane

### Section 1: Product and Company Identification

**Purity Cylinder Gases, Inc.**

2580 28th St SW  
Wyoming, MI 49519  
P: (616)532-2375  
www.puritygas.com

Product Code: Methane

### Section 2: Hazards Identification



**Danger**

**Hazard Classification:**

Flammable (Category 1)  
Gases Under Pressure

**Hazard Statements:**

Contains gas under pressure; may explode if heated  
Extremely flammable gas

**Precautionary Statements**

**Prevention:**

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

**Response:**

Eliminate all ignition sources if safe to do so.  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

**Storage:**

Protect from sunlight.  
Store in well-ventilated place.

### Section 3: Composition/Information on Ingredients

|              |
|--------------|
| <b>CAS #</b> |
| 74-82-8      |

| Chemical Substance      | Chemical Family                    | Trade Names   |
|-------------------------|------------------------------------|---|
| METHANE, COMPRESSED GAS | Hydrocarbons, Aliphatic, Saturated | FIRE DAMP; MARSH GAS; METHYL HYDRIDE; NATURAL GAS; METHANE; UN 1971; R50; CH4 |

## Section 4: First Aid Measures

| Skin Contact                           | Eye Contact                      | Ingestion  | Inhalation   | Note to Physicians               |
|--|----------------------------------|--|--|----------------------------------|
| Wash exposed skin with soap and water. | Flush eyes with plenty of water. | If a large amount is swallowed, get medical attention. | If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention. | For inhalation, consider oxygen. |

## Section 5: Fire Fighting Measures

| Suitable Extinguishing Media   | Products of Combustion                 | Protection of Firefighters   |
|--|--|--|
| Carbon dioxide, regular dry chemical Large fires: Use regular foam or flood with fine water spray. | Carbon monoxide, carbon dioxide, water | <ul style="list-style-type: none"> <li>Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.</li> <li>Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.</li> </ul> |

## Section 6: Accidental Release Measures

| Personal Precautions   | Environmental Precautions                                 | Methods for Containment  |
|--|---|--|
| Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. | Avoid heat, flames, sparks and other sources of ignition. | Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition. |

| Methods for Cleanup | Other Information |
|---------------------|-------------------|
| Not available       | Not available     |

## Section 7: Handling and Storage

| Handling  | Storage                                      |
|---|--|
| Store and handle in accordance with all current regulations and standards. Grounding and bonding required. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. | Keep separated from incompatible substances. |

## Section 8: Exposure Controls/Personal Protection

| Exposure Guidelines  |
|--|
| METHANE, COMPRESSED GAS: ALIPHATIC HYDROCARBON GASES ALKANE (C1-C4): 1000 ppm ACGIH TWA METHANE: No occupational exposure limits established. ALIPHATIC HYDROCARBON GASES ALKANE (C1-C4): 1000 ppm ACGIH TWA |

### Engineering Controls

Handle only in fully enclosed systems.

| Eye Protection                                | Skin Protection                      | Respiratory Protection   |
|---|--------------------------------------|--|
| Eye protection not required, but recommended. | Protective clothing is not required. | Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece. |

### General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

## Section 9: Physical and Chemical Properties

| Physical State | Appearance | Color     | Change in Appearance | Physical Form | Odor     | Taste     |
|----------------|------------|-----------|----------------------|---------------|----------|-----------|
| Gas            | Colorless  | Colorless | N/A                  | Gas           | Odorless | Tasteless |

| Flash Point     | Flammability  | Partition Coefficient                                 | Autoignition Temperature | Upper Explosive Limits | Lower Explosive Limits |
|-----------------|---------------|---|--------------------------|------------------------|------------------------|
| -369 F (-223 C) | Not available | 724.44 (log = 2.87) (estimated from water solubility) | 999 F (537 C)            | 15%                    | 5%                     |

| Boiling Point   | Freezing Point  | Vapor Pressure    | Vapor Density | Specific Gravity | Water Solubility | pH             | Odor Threshold | Evaporation Rate | Viscosity         |
|-----------------|-----------------|-------------------|---------------|------------------|------------------|----------------|----------------|------------------|-------------------|
| -260 F (-162 C) | -297 F (-183 C) | 760 mmHg @ -161 C | 0.555 (Air=1) | Not applicable   | 3.5% @ 17 C      | Not applicable | Not available  | Not applicable   | 0.01118 cP @ 27 C |

| Molecular Weight | Molecular Formula | Density         | Weight per Gallon | Volatility by Volume | Volatility     | Solvent Solubility                                 |
|------------------|-------------------|-----------------|-------------------|----------------------|----------------|--|
| 16.04            | C-H4              | 0.717 g/L @ 0 C | Not available     | Not applicable       | Not applicable | Soluble: Alcohol, ether, benzene, organic solvents |

## Section 10: Stability and Reactivity

| Stability                                   | Conditions to Avoid                         | Incompatible Materials                               |
|---|---|--|
| Stable at normal temperatures and pressure. | Stable at normal temperatures and pressure. | Halogens, oxidizing materials, combustible materials |

| Hazardous Decomposition Products | Possibility of Hazardous Reactions |
|----------------------------------|------------------------------------|
| Oxides of carbon                 | Will not polymerize.               |

## Section 11: Toxicology Information

### Acute Effects

| Oral LD50     | Dermal LD50   | Inhalation  |
|---------------|---------------|---|
| Not available | Not available | Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, drowsiness, fatigue, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma |

| Eye Irritation                                | Skin Irritation                               | Sensitization        |
|---|---|----------------------|
| No information on significant adverse effects | No information on significant adverse effects | Difficulty breathing |

### Chronic Effects

| Carcinogenicity | Mutagenicity  | Reproductive Effects | Developmental Effects |
|-----------------|---------------|----------------------|-----------------------|
| Not available   | Not available | Not available        | No data               |

## Section 12: Ecological Information

### Fate and Transport

| Eco toxicity  | Persistence / Degradability  | Bioaccumulation / Accumulation                             | Mobility in Environment                                 |
|---|--|--|---|
| Fish toxicity: Not available<br>Invertebrate toxicity: Not available<br>Algal toxicity: Not available<br>Phyto toxicity: Not available<br>Other toxicity: Not available | Relatively non-persistent in the environment.<br>Moderately volatile from water. | Accumulates very little in the bodies of living organisms. | Not expected to leach through the soil or the sediment. |

## Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

## Section 14: Transportation Information

### U.S. DOT 49 CFR 172.101

| Proper Shipping Name | ID Number | Hazard Class or Division | Packing Group  | Labeling Requirements | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Description |
|----------------------|-----------|--------------------------|----------------|-----------------------|--|--|---------------------------------|
| Methane, compressed  | UN1971    | 2.1                      | Not applicable | 2.1                   | Forbidden  | 150 kg                                   | N/A                             |

### Canadian Transportation of Dangerous Goods

| Shipping Name       | UN Number | Class | Packing Group / Risk Group |
|---------------------|-----------|-------|----------------------------|
| Methane, compressed | UN1971    | 2.1   | Not applicable             |

## Section 15: Regulatory Information

### U.S. Regulations

| CERCLA Sections | SARA 355.30    | SARA 355.40    |
|-----------------|----------------|----------------|
| Not regulated.  | Not regulated. | Not regulated. |

### SARA 370.21

| Acute | Chronic | Fire | Reactive | Sudden Release |
|-------|---------|------|----------|----------------|
| Yes   | No      | Yes  | No       | Yes            |

### SARA 372.65

Not regulated.

### OSHA Process Safety

Not regulated.

### State Regulations

#### CA Proposition 65

Not regulated.

### Canadian Regulations

#### WHMIS Classification

A, B1

### National Inventory Status

| US Inventory (TSCA)  | TSCA 12b Export Notification | Canada Inventory (DSL/NDSL) |
|----------------------|------------------------------|-----------------------------|
| Listed on inventory. | Not listed.                  | Listed on inventory.        |

## Section 16: Other Information

### NFPA Rating

HEALTH=0 FIRE=4 REACTIVITY=0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard