Section 1. IDENTIFICATION

1.1. Product identifier

Product form : Pure
Product name : Methane, Compressed

1.2. Relevant identified uses of the substance or mixture and uses advised against

Product use : Calibration gas/Bumptest gas/Function test gas

1.3. Details of the supplier of the safety data sheet

Intermountain Specialty Gases
520 N. Kings Road
Nampa, ID 83687
Telephone 1-208-466-9425 or Toll free 1-800-552-5003
Fax 1-208-466-9144
www.isgases.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300

Section 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification
FLAMMABLE GASES - Category 1
GASES UNDER PRESSURE - Compressed gas
SIMPLE ASPHYXIANTS - YES

2.2. Label elements

Hazard pictograms

Signal word : DANGER

Hazard statements : H220 - EXTREMELY FLAMMABLE GAS
: H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
: OSHA-H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.
: CGA-HG04 - MAY FORM EXPLOSIVE MIXTURES WITH AIR
Precautionary statements

[General]: Read and follow all Safety Data Sheets (SDS's) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have a product container or label at hand. Use equipment rated for cylinder pressure.

[Prevention]: P202 - Do not handle until all safety precautions have been read and understood
: P210 - Keep away from heat/sparks/open flames/hot surfaces - No smoking.
: P271+P403 - Use only outdoors or in a well-ventilated area
: CGA-PG05 - Use a back flow preventive device in the piping.
: CGA-PG10 - Use only with equipment rated for cylinder pressure.
: CGA-PG12 - Do not open valve until connected to equipment prepared for use.
: CGA-PG06 - Close valve after each use and when empty.
: CGA-PG27 - Read and follow the Safety Data Sheet (SDS) before use.

[Response]: P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
: P381 - Eliminate all ignition sources if safe to do so.
: P304+P340+P313 - If inhaled: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.

[Storage]: CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)

[Disposal]: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity
No data available

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane</td>
<td>(CAS No) 74-82-8</td>
<td>100</td>
</tr>
</tbody>
</table>

Section 4. FIRST AID MEASURES

4.1. Description of first aid measures

General : IF exposed or concerned: Get medical advice/attention.
Inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. If
Skin contact: Immediately flush with copious amount of water for at least 15 minutes.

Eye contact: Immediately flush with copious amount of water for at least 15 minutes.

Inhalation: May displace oxygen and cause rapid suffocation.

Skin contact: Contact with rapidly expanding gas may cause burns or frostbite.

Eye contact: Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion: Ingestion is not considered a potential route of exposure, refer to the inhalation section.

Frostbite: Thaw frosted parts with lukewarm water. Do not rub affected areas. Get immediate medical advice/attention.

4.3. Indication of any immediate medical attention and special treatment needed

If victim feels unwell, seek medical advice. If breathing is difficult, give artificial respiration or oxygen by trained personnel.

Section 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Dry chemical or CO2. Water spray (fog). DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard: This product is flammable.

Explosion hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Reactivity: None known.

5.3. Advice for fire-fighters

In case of fire: Evacuate all personnel from the danger area. Stop the leak and flow of gas before extinguishing fire, if safe to do so. If this is not possible, withdraw from the danger area.
Protection during firefighting: Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus, SCBA) for fire fighters. Do not enter fire area without proper protective equipment, including respiratory protection.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Ensure adequate ventilation.

6.1.1. For non-emergency personnel

Protective equipment: Wear protective equipment consistent with the site emergency plan.

Emergency procedures: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Escape the danger area by the closest safe route. Close doors and windows of adjacent premises. Keep containers closed. Mark the danger area. Seal off low-lying areas. Keep upwind.

6.1.12. For emergency responders

Protective equipment: Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus) for fire fighters. Equip cleanup crew with proper protection.

Emergency procedures: Evacuate and limit access. Ventilate area. See information above "For non-emergency personnel".

6.2. Methods and material for containment and cleaning up

For containment: Immediately contact emergency personnel. Try to stop gas leak if safe to do so.

Methods for cleaning up: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safety handling: Pressurized container: Do not pierce or burn, even after use. Use equipment rated for cylinder pressure. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Protect cylinders from physical damage; do not drag, roll, slide, or drop.

Hygiene measures: Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: None known.

Storage conditions: Do not expose to temperatures exceeding 52°C (125°F). Store locked up. Keep containers closed when not in use. Protect cylinder from physical damage. Store and use away from heat, sparks, open flame or any other ignition source. Store in well ventilated area.

Incompatible products: None known.

Incompatible materials: Oxidizing agents.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
### Methane, Compressed

<table>
<thead>
<tr>
<th>OSHA PEL</th>
<th>Cal/OSHA PEL</th>
<th>NIOSH REL</th>
<th>ACGIH 2015 TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>ppm</td>
<td>mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(as of 4/26/13)</td>
<td>(as of 4/26/13)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,000 ppm</td>
<td></td>
</tr>
</tbody>
</table>

#### 8.2. Appropriate engineering controls

Engineering measures/controls: Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly check for leakages. Ensure exposure is below occupational exposure limits. Oxygen detectors should be used when asphyxiating gases may be released. Consider work permit system e.g. for maintenance activities.

#### 8.3. Individual protection measures

- **Skin and body protection**: Wear suitable protective clothing, e.g.-Lab coats, coveralls or flame resistant clothing.
- **Respiratory protection**: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
- **Thermal hazard protection**: None necessary during normal and routine operations.
- **Environmental exposure controls**: Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.
- **Other information**: Wear safety shoes while handling containers. 29 CFR 1910.136: Foot Protection

### Section 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Exposure controls

- **Appearance**: Clear, colorless gas.
- **Physical state**: Gas
- **Color**: Colorless
- **Odor**: No data available
- **Odor threshold**: No data available
- **pH**: No data available
- **Melting point**: -182.5 °C / -296.5 °F
- **Freezing point**: No data available
- **Flash point**: No data available
- **Evaporation rate**: No data available
- **Flammability (solid, gas)**: Extremely flammable
- **Upper flammability**: 15%
- **Lower flammability**: 5%
- **Relative density**: No data available
Methane, Compressed

Solubility: No data available
Partition coefficient: No data available
Auto-ignition temperature: 600 °C / 1112 °F
Decomposition temperature: No data available
Viscosity: Not applicable

<table>
<thead>
<tr>
<th>Property</th>
<th>Methane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular weight (grams)</td>
<td>16.04</td>
</tr>
<tr>
<td>Boiling point</td>
<td>-161.49 °C</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Above critical temperature</td>
</tr>
<tr>
<td>Vapor density at 20°C</td>
<td>0.56</td>
</tr>
<tr>
<td>Relative gas density</td>
<td>0.6784 kg/m³ @ 20 °C</td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>-82.1 °C</td>
</tr>
</tbody>
</table>

Section 10. STABILITY AND REACTIVITY

10.1. Reactivity
No reactivity hazard other than the effects described below.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
May form explosive mixtures with air. May react violently with oxidizers.

10.4. Conditions to avoid
Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose container to heat or sources of ignition. Storage in poorly ventilated areas.

10.5. Incompatible materials
Extremely reactive or incompatible with the following: oxidizing agents.

10.6. Hazardous decomposition products
Carbon monoxide (CO). Carbon dioxide (CO₂)

Section 11. TOXICOLOGICAL INFORMATION

Acute toxicity

11.1. Information on routes of exposure
- Inhalation: This product is a simple asphyxiant.
- Skin contact: Adverse effects not expected from this product
- Eye contact: Adverse effects not expected from this product
- Ingestion: Ingestion is not considered a potential route of exposure

11.2. Symptoms related to physical, chemical and toxicological characteristics
Symptoms
Simple asphyxiant. May cause suffocation by displacing the oxygen in the air. Exposure to oxygen-deficient atmosphere (<=18%) may cause dizziness, drowsiness, nausea, vomiting, excess salivation, diminished mental alertness, loss of consciousness and death. Exposure to atmospheres containing 8-10% or less oxygen will bring about unconsciousness without warning and so quickly that the individuals cannot help or protect themselves. Lack of sufficient oxygen may cause serious injury or death.

11.3. Delayed and immediate effects

<table>
<thead>
<tr>
<th>Skin corrosion/irritation</th>
<th>Contact with rapidly expanding gas may cause burns or frostbite.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/irritation</td>
<td>Contact with rapidly expanding gas may cause burns or frostbite.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>This product does not contain any carcinogens or potential carcinogens listed by OSHA, IARC or NTP</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Not applicable for gases and gas-mixtures

11.4. Carcinogenic effects
The components of this material are not found on the following lists: FEDERAL OSHA Z LIST, NTP AND IARC; therefore, they are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

Section 12. ECOLOGICAL INFORMATION

12.1. Aquatic Toxicity
Ecology - general : No ecological damage caused by this product

12.2. Persistence and degradability
No information available for the product

12.3. Bioaccumulative potential
No information available for the product

12.4. Mobility in soil
No information available for the product

12.5. Other
No information available for the product

Section 13. DISPOSAL CONSIDERATIONS
13.1. Disposal methods
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14. TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>US DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN #</td>
<td>UN 1971</td>
<td>UN 1971</td>
<td>UN 1971</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Methane, compressed</td>
<td>Methane, compressed</td>
<td>Methane, compressed</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Section 15. REGULATORY INFORMATION

15.1. US Federal regulations

SARA 311/312 hazard categories
Acute Health : No
Chronic Health : No
Fire : Yes
Pressure : Yes
Reactive : No

SARA Title III Notifications and Information: Hydrogen is Listed under the accident prevention provisions of section 112 ® of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds.
This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372
SARA 311/312 | Sudden Release of Pressure Hazard

15.2. US State regulations

Methane (74-82-8)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right To Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right To Know) List

Section 16. OTHER INFORMATION

Date of issue/Date of revision : New SDS 3/1/2015
Revision Note : Initial release

Hazardous Material Information System (USA)
Hazard Scale : 0 = Minimal/ 1 = Slight/ 2 = Moderate/ 3 = Serious/ 4 = Severe
Health : 0
Methane, Compressed

<table>
<thead>
<tr>
<th>Physical hazards</th>
<th>3</th>
</tr>
</thead>
</table>

**Key/Legend**

- SARA: Superfund Amendments and Reauthorization Act
- OSHA: Occupational Safety and Health Administration
- DOT: Department of Transportation
- TSCA: Toxic Substance Control Act
- NTP: National Toxicology Program
- ACGIH: American Conference of Governmental Industrial Hygienists
- PEL: Permissible Exposure Limit
- STEL: Short Term Exposure Limit
- TLV: Threshold Limit Value
- TDG: Transportation of Dangerous Goods
- CAS: Chemical Abstracts Service
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
- IATA: International Air Transport Association
- IMDG: International Maritime Dangerous Goods
- TWA: Time Weighted Average
- Prop: Proposition
- ATE: Acute Toxicity Estimate

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