**PTG-4006**

Safety Data Sheet

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products

Date of issue: 06/09/2015 Version: 0.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

- **Product form**: Mixture
- **Formula**: Non-flammable, Non-oxidizing gas mixture containing one or more of the following components: Methane, Butane, Isobutane, Oxygen, Nitrogen, Ethane, Propylene, Pentane, Propane, Carbon Dioxide.

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

- **Use of the substance/mixture**: Calibration / Reference
- **Use of the substance/mixture**: Industrial use. Use as directed.

#### 1.3. Details of the supplier of the safety data sheet

**Manufactured for:**
- Industrial Scientific Corporation
  - 1 Life Way
  - Pittsburgh, PA 15205-7500 - USA
  - USA Phone: 412-788-4353
  - 1-800-DETECTS (338-3287)
  - Fax: 412-788-8353
  - www.indsci.com

**By:** PortaGas (Praxair, Inc)
- 1202 E Sam Houston Pkwy S
- Pasadena, TX 77503

#### 1.4. Emergency telephone number

- **Emergency number**: Onsite Emergencies: 1-800-645-4633
  - CHEMTREC: USA 1-800-424-9300, International 001-703-527-3887 (Collect calls accepted, contract 17729)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

- **Classification (GHS-CA)**: Compressed gas H280
- **Full text of H-phrases**: see section 16

- **WHMIS Classification**:
  - Class A - Compressed Gas

#### 2.2. Label elements

**GHS-CA labeling**

- **Hazard pictograms (GHS-CA)**:
  - ![GHS04](image)

- **Signal word (GHS-CA)**: WARNING

- **Hazard statements (GHS-CA)**: P410 + P403 - Protect from sunlight when ambient temperature exceeds 52°C (125°F). Use and store only outdoors or in a well-ventilated place. CGA-PG27 - Read and follow the Safety Data Sheet (SDS) before use. CGA-PG21 - Open valve slowly. CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F). CGA-PG05 - Use a back flow preventive device in the piping. CGA-PG06 - Close valve after each use and when empty. CGA-PG10 - Use only with equipment rated for cylinder pressure. CGA-PG11 - Never put cylinders into unventilated areas of passenger vehicles. CGA-PG12 - Do not open valve until connected to equipment prepared for use.

- **Precautionary statements (GHS-CA)**:
  - CGA-PG27 - Read and follow the Safety Data Sheet (SDS) before use.

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-CA)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable
3.2. Mixture

<table>
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<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-CA)</th>
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<td>Nitrogen</td>
<td>(CAS No) 7727-37-9</td>
<td>0 - 99.99</td>
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<td>0 - 20.9</td>
<td>Ox. Gas 1, H270 Compressed gas, H280</td>
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<td>Methane</td>
<td>(CAS No) 74-82-8</td>
<td>0 - 3.75</td>
<td>Compressed gas, H280</td>
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<tr>
<td>Carbon dioxide</td>
<td>(CAS No) 124-38-9</td>
<td>0 - 2.5</td>
<td>Compressed gas, H280</td>
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<tr>
<td>Ethane</td>
<td>(CAS No) 74-84-0</td>
<td>0 - 2.25</td>
<td>Flam. Gas 1, H220 Compressed gas, H280</td>
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<tr>
<td>Propane</td>
<td>(CAS No) 74-98-6</td>
<td>0 - 1.575</td>
<td>Flam. Gas 1, H220 Liquefied gas, H280</td>
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<tr>
<td>Butane</td>
<td>(CAS No) 106-97-8</td>
<td>0 - 1.35</td>
<td>Liquefied gas, H280 Acute Tox. 4 (Inhalation:gas), H332</td>
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<tr>
<td>Isobutane</td>
<td>(CAS No) 75-28-5</td>
<td>0 - 1.35</td>
<td>Liquefied gas, H280</td>
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<tr>
<td>Propylene</td>
<td>(CAS No) 115-07-1</td>
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<tr>
<td>n-Pentane</td>
<td>(CAS No) 109-66-0</td>
<td>0 - 1.05</td>
<td>Flam. Liq. 2, H225</td>
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**Methane (74-82-8)**

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**Butane (106-97-8)**

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**Isobutane (75-28-5)**

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**Oxygen (7782-44-7)**

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<td>Class C - Oxidizing Material</td>
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**Nitrogen (7727-37-9)**

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**Ethane (74-84-0)**

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**Propylene (115-07-1)**

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**n-Pentane (109-66-0)**

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**Propane (74-98-6)**

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<td>Class B Division 1 - Flammable Gas</td>
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</tbody>
</table>

**Carbon dioxide (124-38-9)**

<table>
<thead>
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<th>WHMIS Classification</th>
<th>Class A - Compressed Gas</th>
</tr>
</thead>
</table>

**SECTION 4: First aid measures**

4.1. Description of first aid measures

- First-aid measures after inhalation: Adverse effects not expected from this product. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- First-aid measures after skin contact: Adverse effects not expected from this product.
- First-aid measures after eye contact: Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
- First-aid measures after ingestion: Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries: Effects are due to lack of oxygen. Moderate concentrations may cause headache, drowsiness, dizziness, excitement, excess salivation, vomiting, and unconsciousness. Prolonged exposure to low concentrations of carbon monoxide can kill.

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

None.
SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Water spray or fog. Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media: Do not use water jet.

5.2. Special hazards arising from the substance or mixture
Reactivity: No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for firefighters
Firefighting instructions: Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.
Protection during firefighting: Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Evacuate area. Ensure adequate air ventilation. Wear self-contained breathing apparatus when entering area unless atmosphere is proven to be safe. Stop leak if safe to do so.

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions
None.

6.3. Methods and material for containment and cleaning up
No additional information available

6.4. Reference to other sections
See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.
7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store only where temperature will not exceed 125°F (52°C). Post "No Smoking or Open Flames" signs in storage and use areas. There must be no sources of ignition. Separate packages and protect against potential fire and/or explosion damage following appropriate codes and requirements (e.g., NFPA 30, NFPA 55, NFPA 70, and/or NFPA 221 in the U.S.) or according to requirements determined by the Authority Having Jurisdiction (AHJ). Always secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand when the container is not in use. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. For other precautions in using this product, see section 16.

OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE:
- When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit. Store in a cool, well-ventilated place. Store and use with adequate ventilation. Store only where temperature will not exceed 125°F (52°C). Firmly secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Methane (74-82-8)</th>
<th>British Columbia OEL TWA (ppm)</th>
<th>1000 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montana           OEL TWA (ppm)</td>
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<td></td>
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<tr>
<td>New Foundland &amp; Labrador OEL TWA (ppm)</td>
<td>1000 ppm</td>
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<tr>
<td>Nova Scotia       OEL TWA (ppm)</td>
<td>1000 ppm</td>
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<tr>
<td>Ontario           OEL TWA (ppm)</td>
<td>1000 ppm</td>
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<tr>
<td>Prince Edward Island OEL TWA (ppm)</td>
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</tr>
<tr>
<td>Saskatchewan      OEL STEL (ppm)</td>
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<tr>
<td>Saskatchewan      OEL TWA (ppm)</td>
<td>1000 ppm</td>
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<thead>
<tr>
<th>Butane (106-97-8)</th>
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<tr>
<td>ACGIH</td>
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<tr>
<td>NIOSH</td>
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<tr>
<td>NIOSH</td>
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<tr>
<td>Alberta            OEL TWA (ppm)</td>
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<tr>
<td>British Columbia   OEL STEL (ppm)</td>
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<tr>
<td>British Columbia   OEL TWA (ppm)</td>
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<tr>
<td>Manitoba           OEL STEL (ppm)</td>
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<tr>
<td>New Brunswick      OEL TWA (mg/m³)</td>
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<td>New Brunswick      OEL TWA (ppm)</td>
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<tr>
<td>New Foundland &amp; Labrador OEL STEL (ppm)</td>
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<td>Nova Scotia        OEL STEL (ppm)</td>
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<tr>
<td>Nunavut            OEL STEL (mg/m³)</td>
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<tr>
<td>Nunavut            OEL STEL (ppm)</td>
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<tr>
<td>Nunavut            OEL TWA (mg/m³)</td>
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<tr>
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<tr>
<td>Northwest Territories OEL STEL (mg/m³)</td>
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<tr>
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<td>Northwest Territories OEL TWA (ppm)</td>
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<tr>
<td>Butane (106-97-8)</td>
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<td>------------------</td>
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<tr>
<td><strong>Ontario</strong></td>
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<tr>
<td><strong>Prince Edward Island</strong></td>
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<table>
<thead>
<tr>
<th>Isobutane (75-28-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACGIH</strong></td>
<td>ACGIH TLV-TWA (ppm)</td>
</tr>
<tr>
<td><strong>ACGIH</strong></td>
<td>ACGIH TL-STELE (ppm)</td>
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<td>NIOSH REL (TWA) (ppm)</td>
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<td>OEL STEL (ppm)</td>
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<td><strong>Nova Scotia</strong></td>
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<tr>
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<td>OEL TWA (ppm)</td>
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<tr>
<td><strong>Saskatchewan</strong></td>
<td>OEL STEL (ppm)</td>
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<tr>
<td><strong>Saskatchewan</strong></td>
<td>OEL TWA (ppm)</td>
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</tbody>
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<table>
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<th>Nitrogen (7727-37-9)</th>
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</thead>
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<td>OEL TWA (ppm)</td>
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<th>Propylene (115-07-1)</th>
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<tbody>
<tr>
<td><strong>ACGIH</strong></td>
<td>ACGIH TLV-TWA (ppm)</td>
</tr>
<tr>
<td><strong>Alberta</strong></td>
<td>OEL TWA (mg/m³)</td>
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### n-Pentane (109-66-0)

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<tr>
<td>Ontario</td>
<td>OEL TWA</td>
<td>600 ppm</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Québec</td>
<td>VEMP</td>
<td>350 mg/m³</td>
</tr>
<tr>
<td>Québec</td>
<td>VEMP</td>
<td>120 ppm</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>OEL STEL</td>
<td>750 ppm</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>OEL TWA</td>
<td>600 ppm</td>
</tr>
<tr>
<td>Yukon</td>
<td>OEL STEL</td>
<td>2250 mg/m³</td>
</tr>
<tr>
<td>Yukon</td>
<td>OEL STEL</td>
<td>750 ppm</td>
</tr>
<tr>
<td>Yukon</td>
<td>OEL TWA</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td>Yukon</td>
<td>OEL TWA</td>
<td>600 ppm</td>
</tr>
</tbody>
</table>

### Propane (74-98-6)

<table>
<thead>
<tr>
<th>Agency</th>
<th>REL/PEL (mg/m³)</th>
<th>REL/PEL (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA)</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA)</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>IDLH</td>
<td>US IDLH (ppm)</td>
<td>2100 ppm (10% LEL)</td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA)</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA)</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Alberta</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>British Columbia</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Manitoba</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>New Foundland &amp; Labrador</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Ontario</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Québec</td>
<td>VEMP</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td>Québec</td>
<td>VEMP</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>OEL STEL</td>
<td>1250 ppm</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>OEL TWA</td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products.

<table>
<thead>
<tr>
<th>Carbon dioxide (124-38-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>ACGIH TLV-TWA (ppm)</td>
</tr>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>ACGIH TLV-STE (ppm)</td>
</tr>
<tr>
<td>OSHA</td>
</tr>
<tr>
<td>OSHA PEL (TWA) (mg/m³)</td>
</tr>
<tr>
<td>OSHA</td>
</tr>
<tr>
<td>OSHA PEL (TWA) (ppm)</td>
</tr>
<tr>
<td>IDLH</td>
</tr>
<tr>
<td>US IDLH (ppm)</td>
</tr>
<tr>
<td>NIOSH</td>
</tr>
<tr>
<td>NIOSH REL (TWA) (mg/m³)</td>
</tr>
<tr>
<td>NIOSH</td>
</tr>
<tr>
<td>NIOSH REL (TWA) (ppm)</td>
</tr>
<tr>
<td>NIOSH</td>
</tr>
<tr>
<td>NIOSH REL (STEL) (mg/m³)</td>
</tr>
<tr>
<td>NIOSH</td>
</tr>
<tr>
<td>NIOSH REL (STEL) (ppm)</td>
</tr>
<tr>
<td>Alberta</td>
</tr>
<tr>
<td>OEL STEL (mg/m³)</td>
</tr>
<tr>
<td>Alberta</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Alberta</td>
</tr>
<tr>
<td>OEL TWA (mg/m³)</td>
</tr>
<tr>
<td>Alberta</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
<tr>
<td>British Columbia</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>British Columbia</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
<tr>
<td>Manitoba</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Nova Scotia</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Nova Scotia</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
<tr>
<td>Nunavut</td>
</tr>
<tr>
<td>OEL STEL (mg/m³)</td>
</tr>
<tr>
<td>Nunavut</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Nunavut</td>
</tr>
<tr>
<td>OEL TWA (mg/m³)</td>
</tr>
<tr>
<td>Nunavut</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
<tr>
<td>Northwest Territories</td>
</tr>
<tr>
<td>OEL STEL (mg/m³)</td>
</tr>
<tr>
<td>Northwest Territories</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Northwest Territories</td>
</tr>
<tr>
<td>OEL TWA (mg/m³)</td>
</tr>
<tr>
<td>Northwest Territories</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
<tr>
<td>Ontario</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Ontario</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
<tr>
<td>Prince Edward Island</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Prince Edward Island</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
<tr>
<td>Québec</td>
</tr>
<tr>
<td>VECD (mg/m³)</td>
</tr>
<tr>
<td>Quebec</td>
</tr>
<tr>
<td>VECD (ppm)</td>
</tr>
<tr>
<td>Québec</td>
</tr>
<tr>
<td>VEMP (mg/m³)</td>
</tr>
<tr>
<td>Québec</td>
</tr>
<tr>
<td>VEMP (ppm)</td>
</tr>
<tr>
<td>Saskatchewan</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Saskatchewan</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
<tr>
<td>Yukon</td>
</tr>
<tr>
<td>OEL STEL (mg/m³)</td>
</tr>
<tr>
<td>Yukon</td>
</tr>
<tr>
<td>OEL STEL (ppm)</td>
</tr>
<tr>
<td>Yukon</td>
</tr>
<tr>
<td>OEL TWA (mg/m³)</td>
</tr>
<tr>
<td>Yukon</td>
</tr>
<tr>
<td>OEL TWA (ppm)</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Appropriate engineering controls: Oxygen detectors should be used when asphyxiating gases may be released. Systems under pressure should be regularly checked for leakages. Provide adequate general and local exhaust ventilation. Consider work permit system e.g. for maintenance activities.

Personal protective equipment: Gloves. Safety glasses.

Hand protection: Wear working gloves when handling gas containers.

Eye protection: Wear safety glasses with side shields.

Skin and body protection: Wear metatarsal shoes for container handling.

Respiratory protection: Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.

Thermal hazard protection: None necessary.

Environmental exposure controls: None necessary.

Other information: Wear safety shoes while handling containers.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Gas</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless.</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Relative evaporation rate (ether=1)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available.</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Log Kow</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>None.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

9.2 Other information

No additional information available

SECTION 10: Stability and reactivity

10.1 Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None.
### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 inhalation rat (mg/l)</th>
<th>LC50 inhalation rat (ppm)</th>
<th>ATE US (gases)</th>
<th>ATE US (vapors)</th>
<th>ATE US (dust, mist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane (106-97-8)</td>
<td>658 g/m³ (Exposure time: 4 h)</td>
<td>5555 ppm/1h</td>
<td>2777.500 ppmV/4h</td>
<td>658.000 mg/l/4h</td>
<td>658.000 mg/l/4h</td>
</tr>
<tr>
<td>Isobutane (75-28-5)</td>
<td>658 mg/l/4h</td>
<td>285000 ppm/1h</td>
<td>142500.000 ppmV/4h</td>
<td>658.000 mg/l/4h</td>
<td>658.000 mg/l/4h</td>
</tr>
<tr>
<td>Ethane (74-84-0)</td>
<td>658 mg/l/4h</td>
<td></td>
<td></td>
<td>658.000 mg/l/4h</td>
<td>658.000 mg/l/4h</td>
</tr>
<tr>
<td>Propylene (115-07-1)</td>
<td>658 mg/l/4h</td>
<td></td>
<td></td>
<td>658.000 mg/l/4h</td>
<td>658.000 mg/l/4h</td>
</tr>
<tr>
<td>n-Pentane (109-66-0)</td>
<td>3000 mg/kg</td>
<td>364 g/m³ (Exposure time: 4 h)</td>
<td>246702 ppm/1h</td>
<td>3000.000 mg/kg body weight</td>
<td>123351.000 ppmV/4h</td>
</tr>
<tr>
<td>Propane (74-98-6)</td>
<td>658 mg/l/4h</td>
<td></td>
<td></td>
<td>658.000 mg/l/4h</td>
<td>658.000 mg/l/4h</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**

- Not classified
- pH: Not applicable.

**Serious eye damage/irritation**

- Not classified
- pH: Not applicable.

**Respiratory or skin sensitization**

- Not classified

**Germ cell mutagenicity**

- Not classified

**Carcinogenicity**

- Not classified

**Propylene (115-07-1)**

- IARC group: 3

**Reproductive toxicity**

- Not classified

**Specific target organ toxicity (single exposure)**

- Not classified

**Specific target organ toxicity (repeated exposure)**

- Not classified: No known effects from this product.
## SECTION 12: Ecological information

### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 fish 1</th>
<th>EC50 Daphnia 1</th>
<th>LC50 fish 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Pentane (109-66-0)</td>
<td>9.87 mg/l</td>
<td>9.74 mg/l</td>
<td>11.59 mg/l</td>
</tr>
<tr>
<td>(Exposure time: 96 h - Species: Oncorhynchus mykiss)</td>
<td></td>
<td>(Exposure time: 48 h - Species: Daphnia magna)</td>
<td>(Exposure time: 96 h - Species: Pimephales promelas)</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTG-4006</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Methane (74-82-8)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Butane (106-97-8)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Isobutane (75-28-5)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Oxygen (7782-44-7)</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Nitrogen (7727-37-9)</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Ethane (74-84-0)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Propane (74-98-6)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Carbon dioxide (124-38-9)</td>
<td>No ecological damage caused by this product.</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Log Pow</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTG-4006</td>
<td>Not applicable.</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Methane (74-82-8)</td>
<td>1.09</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Butane (106-97-8)</td>
<td>2.89</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Isobutane (75-28-5)</td>
<td>1.57 - 1.97</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Oxygen (7782-44-7)</td>
<td>Not applicable.</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Nitrogen (7727-37-9)</td>
<td>Not applicable.</td>
<td>No ecological damage caused by this product.</td>
</tr>
</tbody>
</table>

## SECTION 12.3: Toxicity

**Aspiration hazard:** Not classified

**Ecological information**

**Toxicity**

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

**Persistence and degradability**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Pentane (109-66-0)</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Methane (74-82-8)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Butane (106-97-8)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Isobutane (75-28-5)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Oxygen (7782-44-7)</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Nitrogen (7727-37-9)</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Ethane (74-84-0)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Propane (74-98-6)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
<tr>
<td>Carbon dioxide (124-38-9)</td>
<td>No ecological damage caused by this product.</td>
</tr>
</tbody>
</table>

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Log Pow</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Pentane (109-66-0)</td>
<td>Not applicable.</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Methane (74-82-8)</td>
<td>1.09</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Butane (106-97-8)</td>
<td>2.89</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Isobutane (75-28-5)</td>
<td>1.57 - 1.97</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Oxygen (7782-44-7)</td>
<td>Not applicable.</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Nitrogen (7727-37-9)</td>
<td>Not applicable.</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Ethane (74-84-0)</td>
<td>1.81</td>
<td></td>
</tr>
</tbody>
</table>
PTG-4006
Safety Data Sheet
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

<table>
<thead>
<tr>
<th>Material</th>
<th>Log Kow</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane (74-84-0)</td>
<td></td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td></td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Propylene (115-07-1)</td>
<td>1.77</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>n-Pentane (109-66-0)</td>
<td>3.39</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Propylene (115-07-1)</td>
<td>1.77</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>n-Pentane (109-66-0)</td>
<td>3.39</td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Ethane (74-84-0)</td>
<td></td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td></td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
<tr>
<td>Carbon dioxide (124-38-9)</td>
<td></td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>BCF fish 1</td>
<td>(no bioaccumulation)</td>
<td></td>
</tr>
<tr>
<td>Log Pow</td>
<td>0.83</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Log Kow</td>
<td></td>
<td>Not expected to bioaccumulate due to the low log Kow (log Kow &lt; 4). Refer to section 9.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

PTG-4006

<table>
<thead>
<tr>
<th>Mobility in soil</th>
<th>No data available.</th>
</tr>
</thead>
</table>

Methane (74-82-8)

Ecology - soil: Because of its high volatility, the product is unlikely to cause ground or water pollution.

Butane (106-97-8)

Ecology - soil: Because of its high volatility, the product is unlikely to cause ground or water pollution.

Isobutane (75-28-5)

Ecology - soil: Because of its high volatility, the product is unlikely to cause ground or water pollution.

Oxygen (7782-44-7)

Mobility in soil: No data available.

Ecology - soil: No ecological damage caused by this product.

Nitrogen (7727-37-9)

Mobility in soil: No data available.

Ecology - soil: No ecological damage caused by this product.

Ethane (74-84-0)

Mobility in soil: No data available.

Ecology - soil: Because of its high volatility, the product is unlikely to cause ground or water pollution.

Propylene (115-07-1)

Ecology - soil: Because of its high volatility, the product is unlikely to cause ground or water pollution.

Propane (115-07-1)

Ecology - soil: Because of its high volatility, the product is unlikely to cause ground or water pollution.

Carbon dioxide (124-38-9)

Mobility in soil: No data available.

Ecology - soil: No ecological damage caused by this product.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods: May be vented to atmosphere in a well ventilated place. May be vented to atmosphere. Consult supplier for specific recommendations. Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required.

Waste disposal recommendations: Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

2015/06/09 EN (English US) 11/16
### SECTION 14: Transport information

**TDG**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport document description</td>
<td>UN1956 Compressed Gas, n.o.s., 2.2</td>
</tr>
<tr>
<td>UN-No. (TDG)</td>
<td>UN1956</td>
</tr>
<tr>
<td>TDG Proper Shipping Name</td>
<td>Compressed Gas, n.o.s.</td>
</tr>
<tr>
<td>TDG Primary Hazard Classes</td>
<td>2.2 - Class 2.2 - Non-Flammable, Non-Toxic Gas</td>
</tr>
<tr>
<td>Hazard labels (TDG)</td>
<td>2.2 - Non-flammable compressed gas</td>
</tr>
</tbody>
</table>

**DOT**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport document description</td>
<td>UN1956 Compressed gas, n.o.s., 2.2</td>
</tr>
<tr>
<td>UN-No.(DOT)</td>
<td>1956</td>
</tr>
<tr>
<td>UN-No.(DOT)</td>
<td>UN1956</td>
</tr>
<tr>
<td>Proper Shipping Name (DOT)</td>
<td>Compressed gas, n.o.s.</td>
</tr>
<tr>
<td>Transport hazard class(es) (DOT)</td>
<td>2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115</td>
</tr>
<tr>
<td>Hazard labels (DOT)</td>
<td>2.2 - Non-flammable gas</td>
</tr>
</tbody>
</table>

**DOT Symbols**

- G - Identifies proper shipping name (PSN) requiring the addition of technical name(s) in parentheses following the PSN.

**DOT Packaging Exceptions (49 CFR 173.xxx)**

- 306;307

**DOT Packaging Non Bulk (49 CFR 173.xxx)**

- 302;305

**DOT Packaging Bulk (49 CFR 173.xxx)**

- 314;315

**DOT Quantity Limitations Passenger aircraft/rail (49 CFR 172.101 HMT, Column 9a)**

- 75 kg

**DOT Quantity Limitations Cargo aircraft only (49 CFR 172.101 HMT, Column 9b)**

- 150 kg

**Emergency Response Guide (ERG) Number**

- 126

**DOT Vessel Stowage Location**

- A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.

**Other information**

- No supplementary information available.

**Special transport precautions**

- Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers:
  - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

**ADR**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport document description (ADR)</td>
<td>UN 1956 COMPRESSED GAS, N.O.S. (Nitrogen, Butane), 2.2, (E)</td>
</tr>
<tr>
<td>UN-No. (ADR)</td>
<td>1956</td>
</tr>
<tr>
<td>Proper Shipping Name (ADR)</td>
<td>COMPRESSED GAS, N.O.S.</td>
</tr>
<tr>
<td>Class (ADR)</td>
<td>2 - Gases</td>
</tr>
<tr>
<td>Hazard identification number (Kemler No.)</td>
<td>20</td>
</tr>
<tr>
<td>Classification code (ADR)</td>
<td>1A</td>
</tr>
<tr>
<td>Tunnel restriction code (ADR)</td>
<td>E</td>
</tr>
<tr>
<td>LQ</td>
<td>LQ1</td>
</tr>
<tr>
<td>Excepted quantities (ADR)</td>
<td>E1</td>
</tr>
</tbody>
</table>

**Transport by sea**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No. (IMDG)</td>
<td>1956</td>
</tr>
<tr>
<td>Proper Shipping Name (IMDG)</td>
<td>COMPRESSED GAS, N.O.S.</td>
</tr>
<tr>
<td>Class (IMDG)</td>
<td>2.2 - Non-flammable, non-toxic gases</td>
</tr>
</tbody>
</table>
**PTG-4006**  
**Safety Data Sheet**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products

<table>
<thead>
<tr>
<th>Limited quantities (IMDG)</th>
<th>: 120ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>EmS-No. (1)</td>
<td>: F-C</td>
</tr>
<tr>
<td>MFAG-No</td>
<td>: 620</td>
</tr>
<tr>
<td>EmS-No. (2)</td>
<td>: S-V</td>
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</table>

**Air transport**

<table>
<thead>
<tr>
<th>UN-No.(IATA)</th>
<th>: 1956</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (IATA)</td>
<td>: COMPRESSED GAS, N.O.S.</td>
</tr>
<tr>
<td>Class (IATA)</td>
<td>: 2</td>
</tr>
<tr>
<td>Instruction &quot;cargo&quot; (ICAO)</td>
<td>: 200</td>
</tr>
<tr>
<td>Instruction &quot;passenger&quot; (ICAO)</td>
<td>: 200</td>
</tr>
<tr>
<td>Instruction &quot;passenger&quot; - Limited quantities (ICAO)</td>
<td>: FORBIDDEN</td>
</tr>
</tbody>
</table>

**SECTION 15: Regulatory information**

**CANADA**

**PTG-4006**

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Class A - Compressed Gas</th>
</tr>
</thead>
</table>

**Methane (74-82-8)**

| WHMIS Classification | Class A - Compressed Gas  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class B Division 1 - Flammable Gas</td>
</tr>
</tbody>
</table>

**Butane (106-97-8)**

| WHMIS Classification | Class A - Compressed Gas  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class B Division 1 - Flammable Gas</td>
</tr>
</tbody>
</table>

**Isobutane (75-28-5)**

| WHMIS Classification | Class A - Compressed Gas  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class B Division 1 - Flammable Gas</td>
</tr>
</tbody>
</table>

**Oxygen (7782-44-7)**

| WHMIS Classification | Class A - Compressed Gas  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class C - Oxidizing Material</td>
</tr>
</tbody>
</table>

**Nitrogen (7727-37-9)**

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Class A - Compressed Gas</th>
</tr>
</thead>
</table>

**Ethane (74-84-0)**

| WHMIS Classification | Class A - Compressed Gas  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class B Division 1 - Flammable Gas</td>
</tr>
</tbody>
</table>

**Propylene (115-07-1)**

| WHMIS Classification | Class A - Compressed Gas  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class B Division 1 - Flammable Gas</td>
</tr>
</tbody>
</table>

**n-Pentane (109-86-0)**

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Class B Division 2 - Flammable Liquid</th>
</tr>
</thead>
</table>

**Propane (74-98-6)**

| WHMIS Classification | Class A - Compressed Gas  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class B Division 1 - Flammable Gas</td>
</tr>
</tbody>
</table>
PTG-4006
Safety Data Sheet
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products

<table>
<thead>
<tr>
<th>Carbon dioxide (124-38-9)</th>
<th>Listed on the Canadian DSL (Domestic Substances List)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHMIS Classification</td>
<td>Class A - Compressed Gas</td>
</tr>
</tbody>
</table>

15.2. International regulations

<table>
<thead>
<tr>
<th>Methane (74-82-8)</th>
<th>Listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane (106-97-8)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Isobutane (75-28-5)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Oxygen (7782-44-7)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Nitrogen (7727-37-9)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Ethane (74-84-0)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Propylene (115-07-1)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>n-Pentane (109-66-0)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Propane (74-98-6)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Carbon dioxide (124-38-9)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

EU-Regulations

<table>
<thead>
<tr>
<th>Methane (74-82-8)</th>
<th>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane (106-97-8)</td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td>Isobutane (75-28-5)</td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
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<tr>
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<tr>
<td>Propylene (115-07-1)</td>
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<tr>
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<tr>
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</tr>
<tr>
<td>Carbon dioxide (124-38-9)</td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
</tbody>
</table>

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Compressed gas  H280
Full text of H-phrases: see section 16
### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

#### 15.2.2. National regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>Listed on the AICS (Australian Inventory of Chemical Substances)</th>
<th>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)</th>
<th>Listed on the Japanese ENCS (Existing &amp; New Chemical Substances) inventory</th>
<th>Listed on the Korean ECL (Existing Chemicals List)</th>
<th>Listed on NZIoC (New Zealand Inventory of Chemicals)</th>
<th>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane</td>
<td>(74-82-8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>(106-97-8)</td>
<td></td>
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<td>Oxygen</td>
<td>(7782-44-7)</td>
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</tr>
<tr>
<td>n-Pentane</td>
<td>(109-66-0)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>(74-98-6)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Safety Data Sheet

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<table>
<thead>
<tr>
<th>Carbon dioxide (124-38-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the AICS (Australian Inventory of Chemical Substances)</td>
</tr>
<tr>
<td>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)</td>
</tr>
<tr>
<td>Listed on the Japanese ENCS (Existing &amp; New Chemical Substances) inventory</td>
</tr>
<tr>
<td>Listed on the Korean ECL (Existing Chemicals List)</td>
</tr>
<tr>
<td>Listed on NZIoC (New Zealand Inventory of Chemicals)</td>
</tr>
<tr>
<td>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)</td>
</tr>
<tr>
<td>Listed on the Canadian IDL (Ingredient Disclosure List)</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

Other information

When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product. Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information. The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product. Praxair SDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from www.praxair.com. If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (Phone: 1-800-PRAXAIR/1-800-772-9247; Address: Praxair Call Center, Praxair, Inc., P.O. Box 44, Tonawanda, NY 14151-0044). PRAXAIR and the Flowing Airstream design are trademarks or registered trademarks of Praxair Technology, Inc. in the United States and/or other countries.

Full text of H-phrases:

| Acute Tox. 4 (Inhalation:gas) | Acute toxicity (inhalation:gas) Category 4 |
| Compressed gas | Gases under pressure Compressed gas |
| Flam. Gas 1 | Flammable gases Category 1 |
| Flam. Liqu. 2 | Flammable liquids Category 2 |
| Liquefied gas | Gases under pressure Liquefied gas |
| Ox. Gas 1 | Oxidizing gases Category 1 |
| H220 | EXTREMELY FLAMMABLE GAS |
| H225 | HIGHLY FLAMMABLE LIQUID AND VAPOR |
| H270 | MAY CAUSE OR INTENSIFY FIRE; OXIDIZER |
| H280 | CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED |
| H332 | HARMFUL IF INHALED |


HMIS III Rating

SDS Canada (GHS)

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.