SECTION: 1. Product and company identification

1.1. Product identifier

Product form: Mixture

Formula: Non-flammable, Non-oxidizing gas mixture containing one or more of the following components: Propylene Oxide, Ethylene Oxide, Butadiene, Oxygen, Nitrogen.

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-US)
Compressed gas H280
Muta. 1B H340
Carc. 1A H350

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US): :

Signal word (GHS-US): DANGER

Hazard statements (GHS-US):
H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
H340 - MAY CAUSE GENETIC DEFECTS (Inhalation)
H350 - MAY CAUSE CANCER (Inhalation)
OSHA-H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

Precautionary statements (GHS-US):
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear eye protection, protective gloves
P308+P313 - If exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.
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.
## PTG-4010 Safety Data Sheet PTG-4010


Date of issue: 05/25/2015  
Version: 1.0

### 2.3. Other hazards

No additional information available

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

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>Nitrogen</td>
<td>(CAS No) 7727-37-9</td>
<td>79.1 - 100</td>
</tr>
<tr>
<td>Oxygen</td>
<td>(CAS No) 7782-44-7</td>
<td>0.0001 - 20.9</td>
</tr>
<tr>
<td>Ethylene oxide</td>
<td>(CAS No) 75-21-8</td>
<td>0.1 - 1.5</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>(CAS No) 75-56-9</td>
<td>0.1 - 1.05</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>(CAS No) 106-99-0</td>
<td>0.0005 - 1</td>
</tr>
</tbody>
</table>

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation: Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may give oxygen. Call a physician.

First-aid measures after skin contact: Adverse effects not expected from this product.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.

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

No additional information available

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

None.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

#### 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.

Special protective equipment for fire fighters: Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures: Ensure adequate air ventilation. Evacuate area. Monitor concentration of released product.
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 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.

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.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th>ACGIH TLV-TWA (ppm)</th>
<th>USA OSHA</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>USA OSHA</th>
<th>OSHA PEL (TWA) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene oxide (75-56-9)</td>
<td>ACGIH</td>
<td>2 ppm</td>
<td>USA OSHA</td>
<td>240 mg/m³</td>
<td>USA OSHA</td>
<td>100 ppm</td>
</tr>
<tr>
<td>Ethylene oxide (75-21-8)</td>
<td>ACGIH</td>
<td>1 ppm</td>
<td>USA OSHA</td>
<td>1 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**PTG-4010**

**Safety Data Sheet PTG-4010**


Date of issue: 05/25/2015  Version: 1.0

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### Ethylene oxide (75-21-8)

<table>
<thead>
<tr>
<th></th>
<th>USA OSHA</th>
<th>OSHA PEL (STEL) (ppm)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5 ppm (see 29 CFR 1910.1047)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 1,3-Butadiene (106-99-0)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th>ACGIH TLV-TWA (ppm)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>USA OSHA</th>
<th>OSHA PEL (TWA) (ppm)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>USA OSHA</th>
<th>OSHA PEL (STEL) (ppm)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5 ppm (see 29 CFR 1910.1051)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Oxygen (7782-44-7)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not established</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>USA OSHA</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not established</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Nitrogen (7727-37-9)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not established</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>USA OSHA</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not established</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

#### 8.2. Exposure controls

**Appropriate engineering controls**: Alarm detectors should be used when toxic gases may be released. Product to be handled in a closed system and under strictly controlled conditions. Ensure exposure is below occupational exposure limits (where available). Preferably use only permanent leak-tight installations (e.g., welded pipes). Provide adequate general and local exhaust ventilation.

**Personal protective equipment**: Gloves. Safety glasses.

**Eye protection**: Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133.

**Skin and body protection**: Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible. Select per OSHA 29 CFR 1910.132, 1910.136, and 1910.138.

**Respiratory protection**: When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure (e.g., an organic vapor cartridge). For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA). Keep self contained breathing apparatus readily available for emergency use. Select per OSHA 29 CFR 1910.134, 1910.136, and 1910.138.

**Thermal hazard protection**: Wear cold insulating gloves when transferring or breaking transfer connections.

---

#### SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></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>
</tbody>
</table>

---

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Boiling point: No data available
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: Not applicable.
Relative vapor density at 20 °C: No data available
Relative density: No data available
Solubility: Water: No data available
Log Pow: Not applicable.
Log Kow: Not applicable.
Viscosity, kinematic: Not applicable.
Viscosity, dynamic: Not applicable.
Explosive properties: Not applicable.
Oxidizing properties: None.
Explosion limits: No data available

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.

10.4. Conditions to avoid
None.

10.5. Incompatible materials
None.

10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

**Propylene oxide (75-56-9)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>520 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>1244 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>0.948 mg/l/4h</td>
</tr>
<tr>
<td>LC50 inhalation rat (ppm)</td>
<td>7200 ppm/1h</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>520.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1244.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>3600.000 ppmV/4h</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>0.948 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>0.948 mg/l/4h</td>
</tr>
</tbody>
</table>

**Ethylene oxide (75-21-8)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>72 mg/kg</td>
</tr>
</tbody>
</table>
# Ethylene oxide (75-21-8)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 inhalation rat (ppm)</td>
<td>1450 ppm/4h</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>72,000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>1450.000 ppmV/4h</td>
</tr>
</tbody>
</table>

## 1,3-Butadiene (106-99-0)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>5480 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>285 g/m³ (Exposure time: 4 h)</td>
</tr>
<tr>
<td>LC50 inhalation rat (ppm)</td>
<td>220000 ppm/1h</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>5480.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>110000.000 ppmV/4h</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>285.000 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>285.000 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: MAY CAUSE GENETIC DEFECTS (Inhalation).

Carcinogenicity: MAY CAUSE CANCER (Inhalation).

## Propylene oxide (75-56-9)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>215 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>350 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
</tbody>
</table>

## Ethylene oxide (75-21-8)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>2B - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td>National Toxicology Program (NTP) Status</td>
<td>1 - Evidence of Carcinogenicity, 3 - Reasonably anticipated to be Human Carcinogen</td>
</tr>
</tbody>
</table>

## 1,3-Butadiene (106-99-0)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>1 - Carcinogenic to humans</td>
</tr>
<tr>
<td>National Toxicology Program (NTP) Status</td>
<td>1 - Evidence of Carcinogenicity, 2 - Known Human Carcinogens</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>

## SECTION 12: Ecological information

### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene oxide (75-56-9)</td>
<td>215 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
<tr>
<td>Ethylene oxide (75-21-8)</td>
<td>350 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
</tbody>
</table>

## 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTG-4010</td>
<td>No ecological damage caused by this product.</td>
</tr>
<tr>
<td>Ethylene oxide (75-21-8)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
</tbody>
</table>

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1,3-Butadiene (106-99-0)
Persistence and degradability: Not readily biodegradable.

Oxygen (7782-44-7)
Persistence and degradability: No ecological damage caused by this product.

Nitrogen (7727-37-9)
Persistence and degradability: No ecological damage caused by this product.

### 12.3. Bioaccumulative potential

#### PTG-4010

**Log Pow**
Not applicable.

**Log Kow**
Not applicable.

**Bioaccumulative potential**
No ecological damage caused by this product.

#### Propylene oxide (75-56-9)

**Log Pow**
0.08

#### Ethylene oxide (75-21-8)

**Log Pow**
-0.3

**Bioaccumulative potential**
Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

1,3-Butadiene (106-99-0)

**BCF fish 1**
13 - 19.1

**Log Pow**
1.99

**Bioaccumulative potential**
Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

#### Oxygen (7782-44-7)

**Log Pow**
Not applicable.

**Log Kow**
Not applicable.

**Bioaccumulative potential**
No ecological damage caused by this product.

#### Nitrogen (7727-37-9)

**Log Pow**
Not applicable.

**Log Kow**
Not applicable.

**Bioaccumulative potential**
No ecological damage caused by this product.

### 12.4. Mobility in soil

#### PTG-4010

**Mobility in soil**
No data available.

#### Ethylene oxide (75-21-8)

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

1,3-Butadiene (106-99-0)

**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.

### 12.5. Other adverse effects

**Effect on ozone layer:** None.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**Waste treatment methods**
Avoid discharge to atmosphere. Ensure that the emission levels from local regulations or operating permits are not exceeded.

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PTG-4010
Safety Data Sheet PTG-4010
Date of issue: 05/25/2015  Version: 1.0

Waste disposal recommendations: Do not attempt to dispose of residual or unused quantities. Return container to supplier.

SECTION 14: Transport information

In accordance with DOT
Transport document description: UN1956 Compressed gas, n.o.s., 2.2
UN-No.(DOT): UN1956
Proper Shipping Name (DOT): Compressed gas, n.o.s.
Transport hazard class(es) (DOT): 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
Hazard labels (DOT): 2.2 - Non-flammable gas

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

Additional information

Emergency Response Guide (ERG) Number: 126
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.

Transport by sea
UN-No. (IMDG): 1956
Proper Shipping Name (IMDG): COMPRESSED GAS, N.O.S.
Class (IMDG): 2.2 - Non-flammable, non-toxic gases
Limited quantities (IMDG): 120ml
EmS-No. (1): F-C
MFAG-No: 620
EmS-No. (2): S-V

Air transport
UN-No.(IATA): 1956
Proper Shipping Name (IATA): COMPRESSED GAS, N.O.S.
Class (IATA): 2
Instruction "cargo" (ICAO): 200
Instruction "passenger" (ICAO): 200
Instruction "passenger" - Limited quantities (ICAO): FORBIDDEN

SECTION 15: Regulatory information

15.1. US Federal regulations

Methyloxirane (Propylene oxide) (75-56-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the United States SARA Section 302
Listed on United States SARA Section 313

EPA TSCA Regulatory Flag: T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

SARA Section 302 Threshold Planning Quantity (TPQ): 10000

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### Methyloxirane (Propylene oxide) (75-56-9)
<table>
<thead>
<tr>
<th>Section</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 313 - Emission Reporting</td>
<td>0.1 %</td>
</tr>
</tbody>
</table>

### Ethylene oxide (75-21-8)
- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Listed on the United States SARA Section 302
- Listed on United States SARA Section 313

<table>
<thead>
<tr>
<th>Section</th>
<th>Threshold Planning Quantity (TPQ)</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 302</td>
<td>1000</td>
<td>0.1 %</td>
</tr>
<tr>
<td>SARA Section 313 - Emission Reporting</td>
<td></td>
<td>0.1 %</td>
</tr>
</tbody>
</table>

### 1,3-Butadiene (106-99-0)
- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Listed on United States SARA Section 313

<table>
<thead>
<tr>
<th>Section</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 313 - Emission Reporting</td>
<td>0.1 %</td>
</tr>
</tbody>
</table>

## 15.2. International regulations

### CANADA

#### Methyloxirane (Propylene oxide) (75-56-9)
- Listed on the Canadian DSL (Domestic Substances List)

#### Ethylene oxide (75-21-8)
- Listed on the Canadian DSL (Domestic Substances List)

#### 1,3-Butadiene (106-99-0)
- Listed on the Canadian DSL (Domestic Substances List)

- Oxygen (7782-44-7)
  - Listed on the Canadian DSL (Domestic Substances List)

- Nitrogen (7727-37-9)
  - Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

#### Methyloxirane (Propylene oxide) (75-56-9)
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Ethylene oxide (75-21-8)
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### 1,3-Butadiene (106-99-0)
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

## 15.2.2. National regulations

#### Methyloxirane (Propylene oxide) (75-56-9)
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on Japanese Pollutant Release and Transfer Register Law (PRTR Law)
- Listed on the Canadian IDL (Ingredient Disclosure List)
### Ethylene oxide (75-21-8)

- Listed on IARC (International Agency for Research on Cancer)
- Listed on AICS (Australian Inventory of Chemical Substances)
- Listed on IECS (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Japanese ISHL (Industrial Safety and Health Law)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on PTG (Proposition 65) (California)
- Listed on the Canadian IDL (Ingredient Disclosure List)
- Listed as carcinogen on NTP (National Toxicology Program)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on the Japanese ISHL (Industrial Safety and Health Law)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

### 1,3-Butadiene (106-99-0)

- Listed on IARC (International Agency for Research on Cancer)
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECS (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
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- Listed on PTG (Proposition 65) (California)
- Listed as carcinogen on NTP (National Toxicology Program)
- Listed on the Canadian IDL (Ingredient Disclosure List)

### Methyloxiran (Propylene oxide) (75-56-9)

<table>
<thead>
<tr>
<th>Unix Code</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significance risk level (NSRL)</th>
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</thead>
<tbody>
<tr>
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<td>No</td>
<td>No</td>
<td>No</td>
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### Ethylene oxide (75-21-8)

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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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### 1,3-Butadiene (106-99-0)

<table>
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<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
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<td>Yes</td>
<td>No</td>
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### Oxygen (7782-44-7)

<table>
<thead>
<tr>
<th>Unix Code</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significance risk level (NSRL)</th>
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<td>Yes</td>
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<td>No</td>
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</tbody>
</table>
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<table>
<thead>
<tr>
<th></th>
<th>Female</th>
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</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
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</table>

## Nitrogen (7727-37-9)

<table>
<thead>
<tr>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Prop 65 - Developmental Toxicity</th>
<th>U.S. - California - Prop 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Prop 65 - Reproductive Toxicity - Male</th>
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<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
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</table>

## Methylxirane (Propylene oxide) (75-56-9)

<table>
<thead>
<tr>
<th>U.S. - Massachusetts - Right To Know List</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances</td>
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</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.

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ISC Part Numbers: 1810-5700, 1810-5767

SDS US (GHS HazCom 2012) - Praxair

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