Oxygen (19.5 - 23.5%), n-Pentane (0.1 - 0.75%) in balance Nitrogen

Safety Data Sheet 50011
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 09/19/2014 Revision date: 09/19/2014 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : Oxygen (19.5 - 23.5%), n-Pentane (0.1 - 0.75%) in balance Nitrogen
Replaces ISC MSDS No. : 1810-1162, 1810-4216K

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

Use of the substance/mixture : Test gas/Calibration gas.

1.3. Details of the supplier of the safety data sheet

U.S. Supplier: Industrial Scientific Corporation
1 Life Way
Pittsburgh, PA 15205-7500
Phone (412) 788-4353
TOLL-FREE 800-DETECTS
Fax (412) 788-8353

MANUFACTURER: CALGAZ
821 Chesapeake Drive
Cambridge, MD 21613

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300
Internationally: 1-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

2.2. Label elements

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

GHS04

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated
Precautionary statements (GHS-US) : P202 - Do not handle until all safety precautions have been read and understood
P271 - Use only outdoors or in a well-ventilated area
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P313 - Get medical advice/attention
P403 - Store in a well-ventilated place
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-PG14 - Approach suspected leak area with caution
CGA-PG21 - Open valve slowly

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable
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>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>(CAS No) 7727-37-9</td>
<td>75.75 - 80.4</td>
<td>Compressed gas, H280</td>
</tr>
<tr>
<td>Oxygen</td>
<td>(CAS No) 7782-44-7</td>
<td>19.5 - 23.5</td>
<td>Ox. Gas 1, H270</td>
</tr>
<tr>
<td>n-Pentane</td>
<td>(CAS No) 109-66-0</td>
<td>0.1 - 0.75</td>
<td>Flam. Liq. 2, H225,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H336, Asp.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tox. 1, H304, Aquatic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chronic 2, H411</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact : Adverse effects not expected from this product.
First-aid measures after eye contact : Adverse effects not expected from this product.
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 : Adverse effects not expected from this product.
Symptoms/injuries after inhalation : Adverse effects not expected from this product.
Symptoms/injuries after skin contact : Adverse effects not expected from this product.
Symptoms/injuries after eye contact : Adverse effects not expected from this product.
Symptoms/injuries after ingestion : Ingestion is not considered a potential route of exposure.
Symptoms/injuries upon intravenous administration : Not known.
Chronic symptoms : Adverse effects not expected from this product.

4.3. Indication of any immediate medical attention and special treatment needed
If you feel unwell, seek medical advice.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media : 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

Fire hazard : The product is not flammable.
Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Product is not explosive.
Reactivity : None known.

5.3. Advice for firefighters
Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.
Protection during firefighting : Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus) 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.
Oxygen (19.5 - 23.5%,) n-Pentane (0.1 - 0.75%) in balance Nitrogen

Safety Data Sheet

Emergency procedures

6.1.2. 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.

6.2. Environmental precautions

Try to stop release if safe to do so.

6.3. Methods and material for containment and cleaning up

For containment : Try to stop release if safe to do so.

Methods for cleaning up : Dispose of this material and its container in accordance with local regulations.

6.4. Reference to other sections

See also Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Pressurized container: Do not pierce or burn, even after use. Use equipment rated for cylinder pressure.

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area.

Safe use of the product : Only experienced and properly instructed persons should handle gases under pressure.

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

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Do not expose to temperatures exceeding 52°C (125°F). Keep container closed when not in use. Protect cylinder from physical damage. Store in well ventilated area.

Incompatible products : None known.

Incompatible materials : Flammable materials.

7.3. Specific end use(s)

Test gas/Calibration gas.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen (19.5 - 23.5%,)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>n-Pentane (0.1 - 0.75%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen (7782-44-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen (109-66-0)</td>
<td>ACGIH TWA (ppm)</td>
<td>600 ppm</td>
</tr>
<tr>
<td>ACGIH</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>2950 mg/m³</td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

Nitrogen (7727-37-9)

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls : Ensure exposure is below occupational exposure limits. Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly checked for leakages. Consider work permit system e.g. for maintenance activities.
Oxygen (19.5 - 23.5%,) n-Pentane (0.1 - 0.75%) in balance Nitrogen

Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Skin and body protection: Wear suitable protective clothing, e.g. - lab coats, coveralls or flame resistant clothing.
Respiratory protection: None necessary during normal and routine operations. See Sections 5 & 6.
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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Gas
Appearance: Clear, colorless gas.
Color: Colorless
Odor: Odorless gasoline-like
Odor threshold: No data available
pH: Not applicable for gas-mixtures.
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Relative evaporation rate (butyl acetate=1): No data available
Relative evaporation rate (ether=1): Not applicable for gas-mixtures.
Flammability (solid, gas): Not applicable - not flammable
Explosion limits: Not applicable - not flammable
Explosive properties: Not applicable - not flammable.
Oxidizing properties: Supports combustion. Not combustible but enhances combustion of other substances.
Vapor pressure: Not applicable.
Relative density: No data available
Relative vapor density at 20 °C: No data available
Molecular mass: Not applicable for gas-mixtures.
Relative gas density: Lighter or similar to air.
Solubility: Water: Solubility in water of component(s) of the mixture:
  • : 39 mg/l
  • : < 1 mg/l
  • : 20 mg/l
Log Pow: Not applicable for gas-mixtures.
Log Kow: Not applicable for gas-mixtures.
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Viscosity, kinematic: Not applicable.
Viscosity, dynamic: Not applicable.

9.2. Other information
Additional information: None.

SECTION 10: Stability and reactivity

10.1. Reactivity
None known.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Can form explosive mixtures with flammable materials.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).
### Incompatible materials
None known.

### Hazardous decomposition products
Under normal conditions of storage and use hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 inhalation rat (ppm)</th>
<th>LD50 dermal rabbit</th>
<th>LC50 inhalation rat (mg/l)</th>
<th>ATE US (dermal)</th>
<th>ATE US (gases)</th>
<th>ATE US (vapors)</th>
<th>ATE US (dust, mist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen (7782-44-7)</td>
<td>800000 ppm/4h</td>
<td>3000 mg/kg</td>
<td>364 g/m³ (Exposure time: 4 h)</td>
<td>3000.000 mg/kg body weight</td>
<td>123317.170 ppmV/4h</td>
<td>364.000 mg/l/4h</td>
<td>364.000 mg/l/4h</td>
</tr>
<tr>
<td>n-Pentane (109-66-0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen (7727-37-9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Skin corrosion/irritation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

#### Serious eye damage/irritation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

#### Respiratory or skin sensitization

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

#### Germ cell mutagenicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

#### Carcinogenicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

#### Reproductive toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

#### Aspiration hazard

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not classified</th>
</tr>
</thead>
</table>

#### Symptoms/injuries after inhalation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Adverse effects not expected from this product.</th>
</tr>
</thead>
</table>

#### Symptoms/injuries after skin contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Adverse effects not expected from this product.</th>
</tr>
</thead>
</table>

#### Symptoms/injuries after eye contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Adverse effects not expected from this product.</th>
</tr>
</thead>
</table>

#### Symptoms/injuries after ingestion

<table>
<thead>
<tr>
<th>Substance</th>
<th>Ingestion is not considered a potential route of exposure.</th>
</tr>
</thead>
</table>

#### Symptoms/injuries upon intravenous administration

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not known.</th>
</tr>
</thead>
</table>

#### Chronic symptoms

<table>
<thead>
<tr>
<th>Substance</th>
<th>Adverse effects not expected from this product.</th>
</tr>
</thead>
</table>

## SECTION 12: Ecological information

### Toxicity

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

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

<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></td>
<td>9.87 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)</td>
<td>9.74 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
<td>11.59 mg/l (Exposure time: 96 h - Species: Pimephales promelas)</td>
</tr>
</tbody>
</table>
### 12.2. Persistence and degradability

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oxygen (19.5 - 23.5%) n-Pentane (0.1 - 0.75%) in balance Nitrogen</strong></td>
<td>Persistence and degradability: No data available.</td>
</tr>
<tr>
<td><strong>Oxygen (7782-44-7)</strong></td>
<td>Persistence and degradability: No ecological damage caused by this product.</td>
</tr>
<tr>
<td><strong>Nitrogen (7727-37-9)</strong></td>
<td>Persistence and degradability: No ecological damage caused by this product.</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **Oxygen (19.5 - 23.5%) n-Pentane (0.1 - 0.75%) in balance Nitrogen** | Log Pow: Not applicable for gas-mixtures.  
   Log Kow: Not applicable for gas-mixtures.  
   Bioaccumulative potential: No data available. |
| **Oxygen (7782-44-7)** | Log Pow: Not applicable for inorganic gases.  
   Bioaccumulative potential: No ecological damage caused by this product. |
| **n-Pentane (109-66-0)** | Log Pow: 3.39  
   Bioaccumulative potential: No ecological damage caused by this product. |
| **Nitrogen (7727-37-9)** | Log Pow: Not applicable for inorganic gases.  
   Bioaccumulative potential: No ecological damage caused by this product. |

### 12.4. Mobility in soil

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **Oxygen (19.5 - 23.5%) n-Pentane (0.1 - 0.75%) in balance Nitrogen** | Mobility in soil: No data available.  
   Ecology - soil: No ecological damage caused by this product. |
| **Oxygen (7782-44-7)** | Ecology - soil: No ecological damage caused by this product. |
| **Nitrogen (7727-37-9)** | Ecology - soil: No ecological damage caused by this product. |

### 12.5. Other adverse effects

- **Effect on ozone layer**: None.
- **Effect on the global warming**: No known ecological damage caused by this product.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- **Waste treatment methods**: Contact supplier if guidance is required. May be vented to atmosphere. Do not discharge into any place where its accumulation could be dangerous. Ensure that the emission levels from local regulations or operating permits are not exceeded.

- **Waste disposal recommendations**: Refer to the CGA Pamphlet P-63 "Disposal of Gases" available at www.cganet.com for more guidance on suitable disposal methods.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

- **In accordance with DOT**
- **Transport document description**: UN1956 Compressed gas, n.o.s. (Oxygen, Nitrogen)
- **UN-No.(DOT)**: UN1956
- **Proper Shipping Name (DOT)**: Compressed gas, n.o.s. (Oxygen, Nitrogen)
Oxygen (19.5 - 23.5%), n-Pentane (0.1 - 0.75%) in balance Nitrogen
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Hazard labels (DOT)

- 2.2 - Non-flammable gas

### DOT Packaging Non Bulk (49 CFR 173.xxx)
- 302;305

### DOT Packaging Bulk (49 CFR 173.xxx)
- 314;315

### DOT Symbols
- G - Identifies PSN requiring a technical name

### DOT Packaging Exceptions (49 CFR 173.xxx)
- 306;307

### DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)
- 75 kg

### DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)
- 150 kg

### DOT Vessel Stowage Location
- A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.

### Additional information

- **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

No additional information available

### 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

### Air transport

**UN-No.(IATA)**
- 1956

**Proper Shipping Name (IATA)**
- COMPRESSED GAS, N.O.S.

**Class (IATA)**
- 2

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

**Oxygen (7782-44-7)**
- Listed on the United States TSCA (Toxic Substances Control Act) inventory

**n-Pentane (109-66-0)**
- Listed on the United States TSCA (Toxic Substances Control Act) inventory

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

**Nitrogen (7727-37-9)**
- Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

**CANADA**

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

**WHMIS Classification**
- Class A - Compressed Gas
- Class C - Oxidizing Material

**n-Pentane (109-66-0)**
- Listed on the Canadian DSL (Domestic Sustances List)

**WHMIS Classification**
- Class B Division 2 - Flammable Liquid
Oxygen (19.5 - 23.5%,)  n-Pentane (0.1 - 0.75%) in balance Nitrogen
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Nitrogen (7727-37-9)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification  Class A - Compressed Gas

EU-Regulations

Oxygen (7782-44-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
n-Pentane (109-66-0)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Nitrogen (7727-37-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
No additional information available

National regulations

Oxygen (7782-44-7)
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 Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
n-Pentane (109-66-0)
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 the Canadian IDL (Ingredient Disclosure List)
Nitrogen (7727-37-9)
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 Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

Oxygen (7782-44-7)
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
n-Pentane (109-66-0)
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
Nitrogen (7727-37-9)
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

Indication of changes : Revised safety data sheet in accordance with OSHA final rule on GHS implementation promulgated March 26, 2012.
Revision date : 09/19/2014
## Oxygen (19.5 - 23.5%,) n-Pentane (0.1 - 0.75%) in balance Nitrogen Safety Data Sheet

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of Calgaz's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

### Other information

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product.

### Full text of H-phrases:

<table>
<thead>
<tr>
<th>Aquatic Chronic 2</th>
<th>Hazardous to the aquatic environment - Chronic Hazard Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asp. Tox. 1</td>
<td>Aspiration hazard Category 1</td>
</tr>
<tr>
<td>Compressed gas</td>
<td>Gases under pressure Compressed gas</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids Category 2</td>
</tr>
<tr>
<td>Ox. Gas 1</td>
<td>Oxidizing gases Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>H270</td>
<td>May cause or intensify fire; oxidizer</td>
</tr>
<tr>
<td>H280</td>
<td>Contains gas under pressure; may explode if heated</td>
</tr>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

**SDS US (GHS HazCom 2012)**

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of Calgaz's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.