Nitrous Oxide

**Description**

- **Formula**: N₂O
- **Synonyms**: Nitrogen Monoxide, Dinitrogen Monoxide, Laughing Gas

**Gas Data**

- **Molecular Weight**: 44.01
- **Density**: 1.947 kg/m³ @ 21.1°C, 101.325 kPa, 0.1215 lb/ft³ @ 70°F, 14.696 psia
- **Specific Volume**: 0.5136 m³/kg @ 21.1°C, 101.325 kPa, 8.230 ft³/lb @ 70°F, 14.696 psia

**Shipping Information**

- **CAS Registry Number**: 10024-97-2
- **UN Number**: UN 1070
- **ECCN Number**: EAR99
- **DOT Proper Shipping Name**: Nitrous Oxide
- **DOT Classification**: 2.2 (Nonflammable Gas)
- **DOT Label**: NON-FLAMMABLE GAS, OXIDIZER
- **TC Shipping Name**: Nitrous Oxide, compressed
- **TC Classification**: 2.2, 5.1
- **TC Label**: NON-FLAMMABLE GAS, NON-POISONOUS GAS, OXIDIZER

**Cylinder Specifications**

<table>
<thead>
<tr>
<th>Cylinder Size</th>
<th>Valve Outlet CGA No.</th>
<th>Pressure psig @ 70°F</th>
<th>Pressure kPa @ 21.1°C</th>
<th>Approximate Ship Weight lb</th>
<th>Approximate Ship Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>326</td>
<td>745</td>
<td>5,137</td>
<td>192</td>
<td>87</td>
</tr>
<tr>
<td>1R</td>
<td>326</td>
<td>745</td>
<td>5,137</td>
<td>98</td>
<td>44</td>
</tr>
<tr>
<td>2</td>
<td>326</td>
<td>745</td>
<td>5,137</td>
<td>94</td>
<td>43</td>
</tr>
<tr>
<td>2R</td>
<td>326</td>
<td>745</td>
<td>5,137</td>
<td>63</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>326</td>
<td>745</td>
<td>5,137</td>
<td>45</td>
<td>20</td>
</tr>
<tr>
<td>3R</td>
<td>326</td>
<td>745</td>
<td>5,137</td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>LB</td>
<td>170</td>
<td>745</td>
<td>5,137</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>QA</td>
<td>326</td>
<td>745</td>
<td>5,137</td>
<td>192</td>
<td>87</td>
</tr>
</tbody>
</table>

**Gas Grade Purity Specifications**

- **Nitrous Oxide, Research Purity 99.999%**
  - Guaranteed Specifications
    - Ammonia < 0.5 ppm
    - Carbon Dioxide < 2.0 ppm
    - Carbon Monoxide < 0.1 ppm
    - Methane < 0.1 ppm
    - Nitrogen < 2.0 ppm
    - NOx < 0.5 ppm
    - Oxygen < 2.0 ppm
    - Water < 2.0 ppm
  - Equipment Recommendations
    - Dual Stage Reg.
    - Single Stage Reg.
  - Model Recommendations
    - Series 3810-326
    - Series 3510-326

- **Nitrous Oxide, Matheson Purity 99.997%**
  - Guaranteed Specifications
    - Carbon Dioxide < 3 ppm
    - Carbon Monoxide < 0.5 ppm
    - Methane < 0.5 ppm
    - Nitrogen < 7 ppm
    - NOx < 1 ppm
    - Oxygen < 3 ppm
    - Water < 3 ppm
  - Equipment Recommendations
    - Dual Stage Reg.
    - Single Stage Reg.
  - Model Recommendations
    - Series 3810-326
    - Series 3510-326
  - Gas Warmer Recommendations
    - Series 6284-326

- **Nitrous Oxide, SFC Purity 99.995%**
  - Guaranteed Specifications
    - Carbon Dioxide < 2 ppm
    - Water < 2 ppm
    - Methane < 1 ppm
    - Nitrogen < 8 ppm
    - Oxygen < 2 ppm
  - Equipment Recommendations
    - Dual Stage Reg.
    - Single Stage Reg.
  - Model Recommendations
    - Series 3120-326
    - Series 3530-326
  - Gas Warmer Recommendations
    - Series 6284-326
Pure Gases

Nitrous Oxide (continued)

<table>
<thead>
<tr>
<th>Gas Grade Purity Specifications</th>
<th>Product Code</th>
<th>Cylinder Size</th>
<th>Content US</th>
<th>Content Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrous Oxide, Ultra High Purity 99.99%</td>
<td>G1969101</td>
<td>1A</td>
<td>60 lb</td>
<td>27.22 kg</td>
</tr>
<tr>
<td>Guaranteed Specifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>&lt;</td>
<td>2 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>&lt;</td>
<td>2 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen</td>
<td>&lt;</td>
<td>10 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen</td>
<td>&lt;</td>
<td>2 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>THC as CH₄</td>
<td>&lt;</td>
<td>2 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A lot analysis will be provided with each cylinder. Please inquire for individual cylinder analysis.

Caution: Not for human consumption.

<table>
<thead>
<tr>
<th>Gas Grade Purity Specifications</th>
<th>Product Code</th>
<th>Cylinder Size</th>
<th>Content US</th>
<th>Content Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrous Oxide, CP Grade 99%</td>
<td>G1570101</td>
<td>1A</td>
<td>60 lb</td>
<td>27.22 kg</td>
</tr>
<tr>
<td></td>
<td>G1570140</td>
<td>2</td>
<td>20 lb</td>
<td>9.07 kg</td>
</tr>
<tr>
<td></td>
<td>G1570150</td>
<td>3</td>
<td>6 lb</td>
<td>2.72 kg</td>
</tr>
<tr>
<td></td>
<td>G1570175</td>
<td>LB</td>
<td>0.5 lb</td>
<td>227 gm</td>
</tr>
</tbody>
</table>

A Certificate of Conformance will be provided on request. Caution: Not for human consumption.

⚠️ WARNING: This product can expose you to chemicals including Nitrous Oxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

⚠️ WARNING: This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.