



# Nitrous Oxide

## Description

Formula: N<sub>2</sub>O  
Synonyms: Nitrogen Monoxide, Dinitrogen Monoxide, Laughing Gas

## Gas Data

Molecular Weight: 44.01  
Density: 1.947 kg/m<sup>3</sup> @ 21.1°C, 101.325 kPa  
0.1215 lb/ft<sup>3</sup> @ 70°F, 14.696 psia  
Specific Volume: 0.5136 m<sup>3</sup>/kg @ 21.1°C, 101.325 kPa  
8.230 ft<sup>3</sup>/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

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

Gas Grade Purity Specifications	Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.	Page No.
<b>Nitrous Oxide, Research Purity 99.999%</b>	G2174504	QA	60 lb	27.22 kg	Dual Stage Reg. Single Stage Reg.	Series 3810-326 Series 3510-326	318 312
<i>Guaranteed Specifications</i>							
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					
<i>A Certificate of Analysis is available on request at a nominal charge. Caution: not for human consumption.</i>							
<b>Nitrous Oxide, Matheson Purity 99.997%</b>	G1882104	QA	60 lb	27.22 kg	Dual Stage Reg. Single Stage Reg. Gas Warmer	Series 3810-326 Series 3510-326 6284-326	318 312 435
<i>Guaranteed Specifications</i>							
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					
<i>A Certificate of Analysis is available on request at a nominal charge. Caution: Not for human consumption.</i>							
<b>Nitrous Oxide, SFC Purity 99.995%</b>	G2468118	1R	39 lb	17.69 kg	Dual Stage Reg.	Series 3120-326	299
<i>Guaranteed Specifications</i>							
Carbon Dioxide	<	2 ppm					
Water	<	2 ppm					
Methane	<	1 ppm					
Nitrogen	<	8 ppm					
Oxygen	<	2 ppm					
<i>A Certificate of Analysis is available on request at a nominal charge. Caution: Not for human consumption.</i>							



## Nitrous Oxide (continued)

Gas Grade Purity Specifications	Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.	Page No.
<b>Nitrous Oxide, Ultra High Purity 99.99%</b>	G1969101	1A	60 lb	27.22 kg	Dual Stage Reg.	Series 3120-326	299
<i>Guaranteed Specifications</i>	G1969140	2	20 lb	9.07 kg	Single Stage Reg.	Series 3530-326	313
Carbon Dioxide < 2 ppm	G1969150	3	6 lb	2.72 kg	LB Regulator	Series 3550-170	314
Carbon Monoxide < 2 ppm	G1969175	LB	0.5 lb	227 gm	Gas Warmer	6284-326	435
Nitrogen < 10 ppm							
Oxygen < 4 ppm							
THC as CH <sub>4</sub> < 2 ppm							
<i>A lot analysis will be provided with each cylinder. Please inquire for individual cylinder analysis.</i>							
<i>Caution: Not for human consumption.</i>							
<b>Nitrous Oxide, CP Grade 99%</b>	G1570101	1A	60 lb	27.22 kg	Dual Stage Reg.	Series 81-326	293
	G1570140	2	20 lb	9.07 kg	Single Stage Reg.	Series 18-326	292
	G1570150	3	6 lb	2.72 kg	LB Regulator	Series 3320-170	302
	G1570175	LB	0.5 lb	227 gm	Gas Warmer	6284-326	435
<i>A Certificate of Conformance will be provided on request. Caution: Not for human consumption.</i>							

**⚠ 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](http://www.P65Warnings.ca.gov).

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