

# Nitrous Oxide



Grade	Semicon 4N5	ULSI 5N
Purity, %	99.995	99.999
Oxygen	≤2 ppmv	≤2.0 ppmv
Nitrogen	≤7 ppmv	≤2.0 ppmv
Carbon Dioxide	≤2 ppmv	≤2.0 ppmv
Carbon Monoxide		≤0.1 ppmv
Methane	≤1 ppmv	≤0.1 ppmv
Water		≤2.0 ppmv
Ammonia		≤0.5 ppmv
Nitric Oxide and Nitrogen Dioxide		≤0.5 ppmv

- A lot analysis is provided for each order. – Individual analysis is also available upon request.
- Pneumatic valves and JIS connections are available upon request.

CYLINDER	Internal Volume	Liters	43.8
	<b>Cylinder Sizes &gt;&gt;</b>		<b>QF/QA/QB</b>
	Content	kg	27.3 or 27
		lbs	60
	Cylinder Pressure @STP	psig	745
		atm	53.4
Change Point*	lbs	16.6	

\*Recommended Cylinder Change Point at NTP, based on Phase Break, or the amount of product left in the cylinder when the liquid phase has completely evaporated and only gaseous product is left (estimate based on ideal gas behavior).

SHIP	DOT Shipping Name	Nitrous Oxide	UN Number	UN 1070	Shipped as
	DOT Classification	2.2 (Non-Flammable Gas)	ECCN #	EAR99	Liquefied
	DOT Label	NON-FLAMMABLE GAS OXIDIZER	Harmonized #	2811.29.0000	Gas

TECHNICAL DATA	Specific Volume	0.543 m <sup>3</sup> /kg
	@NTP	8.7 ft <sup>3</sup> /lb
	CAS No	10024-97-2
	CGA/DISS/JIS	326/712/W22-14R
	Molecular Weight	44.01 g/mol

Critical Temperature	36.4°C	97.6°F
Critical Pressure	73.9 atm	1,052.2 psia

NTP = 21°C or 70°F and 101.3 kPa or 1 atm

Cylinder	Treatment	Nominal Diameter (OD)xHeight*		Material of Construction	
		cm	Inches	Cylinder	Valve
QF	ULTRA-LINE®	23x130/134/143	9x51/52.5/56	CS	SS
QA	ULTRA-LINE®	23x130/134/143	9x51/52.5/56	CS	Brass
QB	ULTRA-LINE II®	23x130/134/143	9x51/52.5/56	CS	SS

\*Height is reported as the distance from the bottom of the cylinder to the cylinder neck/ center of the valve outlet/ top of the handwheel  
CS: Carbon Steel SS: Stainless Steel

