

# Nitrogen Trifluoride



Grade	Semicon 2N7	ULSI 4N	ULSI 4N5
Purity, %	99.7	99.99	99.995
Oxygen		≤10 ppmv	≤5 ppmv
Oxygen and Argon	≤700 ppmv		
Nitrogen	≤700 ppmv	≤10 ppmv	≤5 ppmv
Carbon Dioxide	≤25 ppmv	≤10 ppmv	≤3 ppmv
Carbon Monoxide	≤25 ppmv		≤0.5 ppmv
Water	≤1 ppmv	≤1 ppmv	≤1 ppmv
Carbon Tetrafluoride	≤1500 ppmv	≤40 ppmv	≤25 ppmv
Nitrous Oxide	≤50 ppmv	≤10 ppmv	≤2 ppmv
Acidity as HF	≤1 ppmv	≤5 ppmv	≤1 ppmv
Sulfur Hexafluoride	≤50 ppmv		≤1 ppmv

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

CYLINDER	Internal Volume	Liters	43.8	49
	<b>Cylinder Sizes &gt;&gt;</b>		<b>QF</b>	<b>QK</b>
	Content	kg	20	22.7
		lbs	44	50

SHIP	DOT Shipping Name	Nitrogen Trifluoride	UN Number	UN 2451	Shipped as
	DOT Classification	2.2 (Non-Flammable Gas, Oxidizer)	ECCN #	EAR99	Compressed Gas
	DOT Label	NON-FLAMMABLE GAS AND OXIDIZER	Harmonized #	2826.19.0000	

TECHNICAL DATA	Cylinder Pressure @NTP	1,450 psig 102.97 atm
	Specific Volume @NTP	0.34 m <sup>3</sup> /kg 5.4 ft <sup>3</sup> /lb
	CAS No	7783-54-2
	CGA/DISS/JIS	670/640/W22-14L
	Molecular Weight	71.00 g/mol
	TLV	10 ppm

Critical Temperature	-39.3°C	-38.7°F
Critical Pressure	44.7 atm	657.2 psia

RFO Data	Size, mm	0.254	0.3556	0.508	0.762	1.016
	Size, inches	0.010	0.014	0.020	0.030	0.040
	Flow, sccm	36903	70450	145374	324296	559131
	Flow, scf/h	78	149	308	687	1185

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
QK	ULTRA-LINE®	23.5x140/144/153	9.25x55/56.5/60	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

⚠ 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).

⚠ 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](http://www.P65Warnings.ca.gov).



**MATHESON**  
ask... The Gas Professionals™