



## Nitrogen trifluoride. $\text{NF}_3$

**Product information** Nitrogen trifluoride is an etchant and chamber cleaning agent.

**Characteristics** Colorless gas with characteristic mouldy odor. Highly oxidizing at increased temperatures, can then ignite organic material. Gas density heavier than air (2.4).

Physical data	Molecular weight	[g/mol]	71.002	
	Boiling point	at 1.013 bar [°C]	-129.05	at 14.5 psi [°F]
Density	at 1.013 bar, 15 °C [kg/m <sup>3</sup> ]	3.015	at 1 atm., 70 °F [lb/ft <sup>3</sup> ]	0.184
Vapor pressure	at 0 °C [bar]		at 32 °F [psi]	-
	at 20 °C [bar]		at 70 °F [psi]	-
Flammability range in air (% volume)		Non combustible		

Shipping information	UN number	CAS number	EC number	DOT label	Hazard labels required
	2451	7783-54-2	232-007-1	Nonflammable gas, Oxidizer	ADR Class 2, 20 DOT Class 2.2

Product specification	Purity grade	Typical purity	Typical impurities [ppm]							
			N <sub>2</sub>	Ar+O <sub>2</sub>	H <sub>2</sub> O	CO <sub>2</sub>	CF <sub>4</sub>	SF <sub>6</sub>	CO	N <sub>2</sub> O
4.0N	≥99.99 %	≤5	≤5	≤5	≤5	≤40	≤10	≤1	≤5	≤1

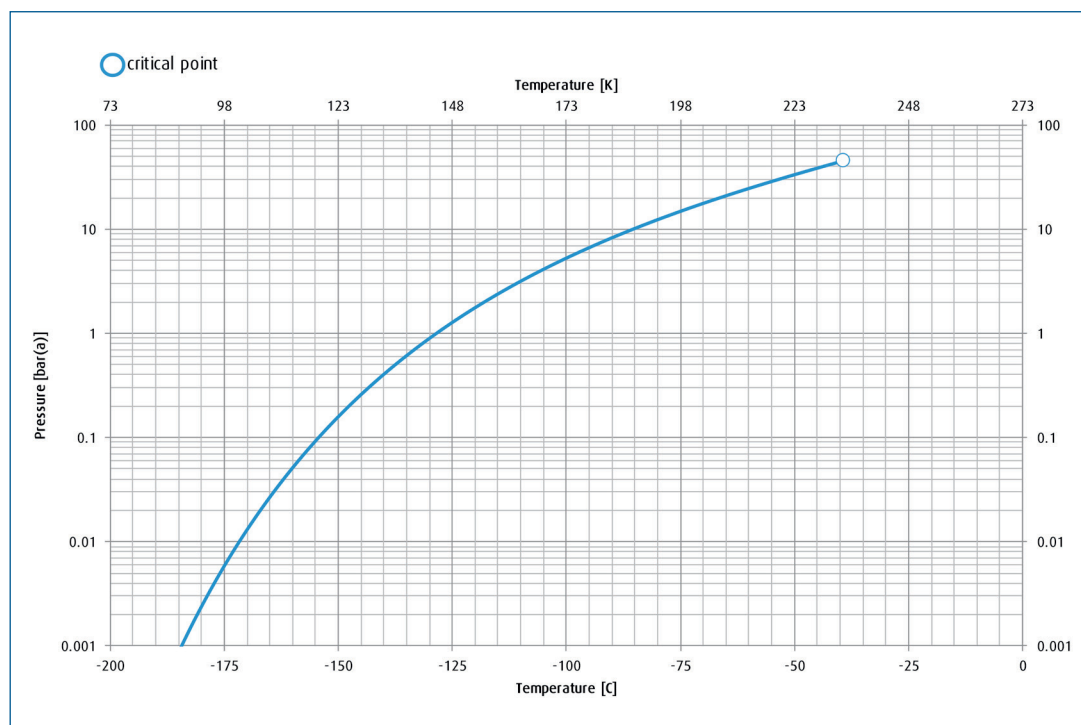
→ Nitrogen trifluoride. Product datasheet.

## Packaging information

	Package options	Cylinder designation	Cylinder internal volume	Cylinder material	Cylinder diameter	Cylinder height to valve outlet	Cylinder tare weight	Fill contents	Pressure (psig) @ 70°	Valve outlet <sup>(2)</sup>	Valve material
GSC	ISO Tube Trailer (40' 8 Tube)	Tube Trailer	18,800L	Steel	24 in	60 in	18000 kg	8400 kg	1500	CGA 640	SS
	ISO Tube Trailer (20' 8 Tube)	Tube Trailer	9300L	Steel	24 in	60 in	9800 kg	4000 kg	1500	CGA 640	SS
	Cylinder	44L	44L	Steel	9 in	52 in	133 kg	22 kg	1500	CGA 640	SS
US	Ton Container	920	446L	Steel	24 in	18 in	1100 lb	485 lb	1570	CGA 640	SS
	Cylinder	204	44L	Steel	9 in	52 in	133 lb	22 lb	1570	CGA 640	SS
EU	Multi-Container Package	12x50	600L	Steel	237 mm	1600 mm	1100 kg	272 kg	1570	CGA 640	SS
	Cylinder	50L	50L	Steel	237 mm	1530 mm	63 kg	22.7 kg	1570	CGA 640/ DIN 8	SS
	Cylinder	10L	10L	Steel	140 mm	880 mm	12 kg	1.5 kg	1570	DIN 8	SS
	Cylinder	2L	2L	Steel	104 mm	370 mm	6 kg	0.3 kg	1570	DIN 8	SS

Please inquire about other package size availability

## Vapor pressure curve



## Additional information

The information, recommendations, and data contained in this publication are intended to give basic guidance for safe handling and use of gases. For more information, please refer to Safety Data Sheets. You can locate these through the [Linde Safety Data Sheet Search](#). It is essential for the safe use of gases that personnel are properly trained and are fully aware of the possible hazards. Further information and advice on any matter relating to the safe handling or use of these products may be obtained from the nearest Linde office.

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