



High-Purity Nitrogen Trifluoride

Nitrogen Trifluoride



Properties and Classification

Appearance: Colorless and odorless gas

UN Number: 2451

CAS Number: 7783-54-2

Liquefied gas

* Refer to MSDS for detailed information on the properties and safety of the product.

Specification

Purity	wt%	Min. 99.99
water	wtpm	Max. 5
Acids	wtpm	Max. 1
CF ₄	wtpm	Max. 90
air	volppm	Max. 100



Cylinder

Item		10L cylinder	47L cylinder
Size	Inside diameter	140mm	232mm
	Height (to the neck portion)	850mm	1370mm
	Height (with a protective cap) *	1000mm	1520mm
	Valve nozzle height (center) *	875mm	1380mm
Loading weight		1kg	5kg, 15kg
Material		Manganese steel	

* Estimated values for when a standard valve is mounted on a standard cylinder.
The accuracy of these values is not guaranteed.

Valve

Nozzle size	22 mm X 14 right-hand threads
Material	BRASS

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NF₃

Physical & Chemical Properties

Item	Unit	Data
Chemical formula		NF ₃
Molecular weight		71
Boiling point		- 129
Melting point		- 208.5
Liquid density (-129° C)	kg/L	1.54
Gas density	g/L	2.98
Critical temperature		- 39.3
Critical pressure	MPa	4.53
Flammability		Not applicable
Toxicity		Not applicable
Latent heat of vaporization (0° C, 1013 kPa)	kJ/kg	117
Maximum permissible concentration (ACGIH)	ppm	10
Explosive limit (in air, 35° C, 101.3 kPa)		—

Temperature - Vapor Pressure Curve

