



High-Purity Ammonia

Ammonia



Properties and Classification

Appearance: Colorless liquid or gas

Odor: Irritating

CAS Number: 7664-41-7

UN Number: 1005

Liquefied gas

Toxic

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



Specification

Purity	vol%	Min. 99.999
H ₂	volppm	Max. 0.5
O ₂	volppm	Max. 0.5
N ₂	volppm	Max. 2.0
CH ₄	volppm	Max. 0.5
CO	volppm	Max. 0.5
H ₂ O	volppm	Max. 1.0

Heavy metals		
Na	wtppb	Max. 5
Zn	wtppb	Max. 5
Fe	wtppb	Max. 50
Cu	wtppb	Max. 5
Ni	wtppb	Max. 5
Cd	wtppb	Max. 1
Cr	wtppb	Max. 2
P	wtppb	Max. 2

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) *	885mm	1400mm
Loading weight		5kg	20kg
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 left-hand threads
Material	SUS304

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NH₃

Physical & Chemical Properties

Item	Unit	Data
Chemical formula		NH ₃
Molecular weight		17.03
Boiling point	°C	-33.35
	°F	-28.1
Melting point	°C	-77.74
Liquid density (0° C, saturated liquid)	kg/L	0.6386
Specific gravity (air: 1)	g/L	0.55
Gas density	g/L	0.890
Critical temperature	°C	132.45
Critical pressure	MPa	11.28
	kg/cm ²	118.8
Flammability		Flammable
Toxicity		Toxic
Latent heat of vaporization (0° C, 1013 MPa)	kJ/kg	1262
Maximum permissible concentration (ACGIH, TLV-TWA)	ppm	25
Explosive limit (in air, 35° C, 101.3 kPa)		—

Temperature — Vapor Pressure Curve

