



High-Purity Hydrogen Bromide

Hydrogen Bromide

HBr

Properties and Classification

Appearance: Colorless gas

UN Number: 1741

Odor: Irritating

Liquefied gas

CAS Number: 10294-34-5

Toxic

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

Specification

Purity	wt%	Min. 99.999
N ₂ +O ₂	wtppm	Max. 2.0
Water	wtppm	Max. 2.0
CH ₄	wtppm	Max. 1.0
CO	wtppm	Max. 1.0
CO ₂	wtppm	Max. 2.0
Total heavy metals	wtppm	Max. 1.0



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, 10kg	50kg
Material		Manganese steel (Clean-S-treated)	

* 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 (Clean-S-treated)

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Physical & Chemical Properties

Item	Unit	Data
Chemical formula		HBr
Molecular weight		80.91
Boiling point	°C	-66.72
	°F	-89
Melting point	°C	-86.9
Liquid density (-66.7° C)	kg/L	2.16
Gas density	g/L	3.33
Specific gravity (air: 1)		2.8 (101.3kPa)
Critical temperature	°C	89.8
Critical pressure	MPa	8.51
	kg/cm ²	86.8
Flammability		Not applicable
Toxicity		Toxic
Latent heat of vaporization (0° C, 1013 MPa)	kJ/kg	215.5
Maximum permissible concentration (ACGIH, TLV-upper limit)	ppm	3
Explosive limit (in air, 35° C, 101.3 kPa)		—

Temperature — Vapor Pressure Curve

