



Clean Gas Hydrogen Bromide

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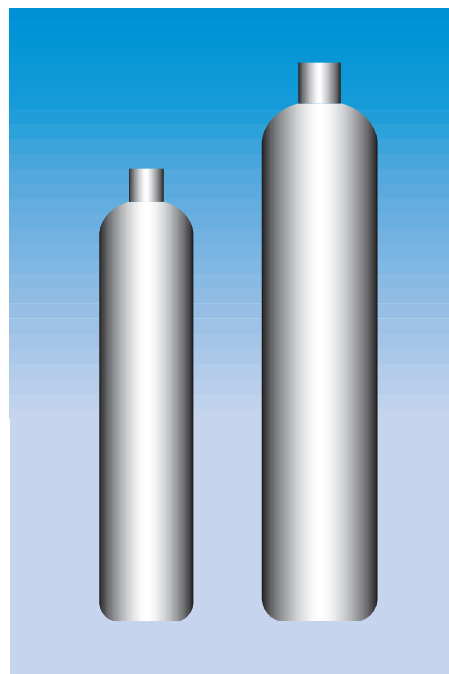
Properties and Classification

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
CH ₄	wtpm	Max. 1.0
CO	wtpm	Max. 1.0
CO ₂	wtpm	Max. 2.0
N ₂ + O ₂	wtpm	Max. 2.0
Water	wtpm	Max. 2.0
Total heavy metals	wtpm	Max. 1.0
Particle	Not smaller than 0.1 micrometer	Max. 60.0



Cylinder

Item		10L cylinder	47L cylinder
Size	Inside diameter	140mm	232mm
	Height (to the neck portion)	850mm	1370mm
	Height (with a protective cap) *	990mm	1510mm
Loading weight		5 , 10	50
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	SUS316L

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Physical & Chemical Properties

Item	Unit	Data
Chemical formula		HBr
Molecular weight		80.910
Boiling point		- 66.720
		- 89.000
Melting point		
Liquid density (0° C, saturated liquid)	kg/L	
Gas density (0° C, saturated liquid)	g/L	
Specific gravity (air: 1)		2.8(101.3kPa)
Critical temperature		90.050
Critical pressure	MPa	8.510
	kg/ cm ²	86.800
Flammability		Not applicable
Toxicity		Toxic
Latent heat of vaporization (0° C, 1013 MPa)	KJ/KG	
Maximum permissible concentration(ACGIH)	ppm	3.000
Explosive limit (in air, 35° C, 101.3 kPa)		

Temperature - Vapor Pressure Curve

