

ELECTRONIC GASES

HYDROGEN BROMIDE HBr

Hydrogen Bromide is a colorless, corrosive, irritating, nonflammable, toxic gas with a suffocating odor. It is shipped as a liquefied gas in steel cylinders under its own vapor pressure.

Container Information

CYLINDER SIZE	CONTENTS		Pressure@21.1°C	327 psig
	LB	KG	Valve Outlet	CGA-330
044	130	59.0	DOT Shipping Description:	Hydrogen Bromide, Anhydrous, 2.3, UN 1048 Poison-Inhalation Hazard Hazard Zone C
016	50	22.7	DOT Shipping Labels	Poison Gas Corrosive
008	25	11.3	DOT Guide No.	15
			CAS Registry No.	10035-10-6

Specifications

COMPONENT	VSLI	UHP
HYDROGEN BROMIDE	99.9999%min	99.999%min
Carbon Dioxide	< 0.5 ppm	< 1 ppm
Nitrogen	< 0.5 ppm	< 2 ppm
Oxygen	< 0.5 ppm	< 1 ppm
THC (as Methane)	< 0.5 ppm	< 0.5 ppm
Carbon Monoxide	< 0.5 ppm	< 1 ppm
Water	< 0.5 ppm	< 1 ppm

SHELF LIFE: 2 years

Physical Properties

Molecular Weight	80.914
Flammability Limits in air	Nonflammable
Specific Gravity, Gas @ 70°F(21.1°C), 1 atm(Air=1)	2.79
Density, Gas @ 70°F(21.1°C), 1 atm	0.209lb/ft³ (3.35g/l)
Specific Volume, Gas @ 70°F(21.1°C), 1 atm	4.78 ft³/lb (0.30l/g)
Melting Density @ 75.1 psia (518 kPa)	-124.35°F (-86.86°C)
Boiling Point @ 1 atm	-88.1°F (-66.72°C)
Critical Temperature	193.6°F (89.8°C)
Critical Pressure	1234.5 psia (85.1 bar)
Toxicity	
PEL/TLV	3 ppm
LC ₅₀ RAT	2880 ppm
IDLH	50 ppm

ULSI Metals Specifications

ELEMENT	SYMBOL	GAS PHASE	LIQUID PHASE
Calcium	Ca	< 4	< 10
Chromium	Cr	< 1	< 10
Copper	Cu	< 5	< 10
Iron	Fe	< 3	< 50
Manganese	Mn	< 5	< 50
Nickel	Ni	< 1	< 10
Sodium	Na	< 1	< 10
Zinc	Zn	< 6	< 50

*all values in ppb