

PURE GASES

HYDROGEN H₂

General Characteristics: A colorless, flammable and odorless gas.

Health Hazards: A simple asphyxiant.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
ULTRA HIGH PURITY Min. Purity 99.999% H ₂ O < 3 ppm, O ₂ < 5 ppm	049	6.6 m ³	Double-stage high purity regulator, refer to page 134 High purity lecture bottle regulator, refer to page 146
	044	6.0 m ³	
	016	2.0 m ³	
	010	1.3 m ³	
	LB	57 L	
HIGH PURITY Min. Purity 99.995% H ₂ O < 10 ppm, O ₂ < 10 ppm	049	6.6 m ³	
	044	6.0 m ³	
	016	2.0 m ³	
	010	1.3 m ³	
INDUSTRIAL Min. Purity 99.8% H ₂ O < 20 ppm, O ₂ < 0.2%	049	6.6 m ³	
	044	6.0 m ³	
	016	2.0 m ³	
	010	1.3 m ³	
EXTRA HIGH PRESSURE Min. Purity 99.999% H ₂ O < 3 ppm, O ₂ < 5 ppm	6K (6000 psig)	14.5 m ³	Piston regulator, refer to page 145

TECHNICAL INFORMATION

Molecular Weight.....	2.02	Dot Name.....	Hydrogen Compressed
Specific Volume.....	192CF/lb	UN No.....	UN1049
Fire Potential.....	4.0 - 75% in Air	Dot Class.....	2.1
TLV-TWA.....	None established	Dot Label.....	Flammable Gas
CGA Valve.....	350, 3HP-703, 2HP-695	Cas Registry.....	1333-74-0
LB.....	180		

* For ULSI (6N) and VLSI (5N5) grades hydrogen, see Electronic Gas section page 91.

HYDROGEN BROMIDE HBr

General Characteristics: A colorless, non-flammable, liquefied and corrosive gas with a penetrating odor. Fumes in moist air. Highly corrosive in the presence of moisture.

Health Hazards: Toxic. Attacks the mucous membranes and the eyes. Can cause lung damage.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
C.P. Min. Purity 99.8% (Liquid Phase)	044	31.8 kg	Stainless-steel high purity single-stage regulator, refer to page 142
	016	13.6 kg	
	010	5.0 kg	Stainless-steel lecture bottle regulator, refer to page 147
	LB	454 g	

TECHNICAL INFORMATION

Molecular Weight.....	80.92	Dot Name.....	Hydrogen Bromide, Anhydrous
Specific Volume.....	4.8CF/lb	UN No.....	UN1048
Fire Potential.....	Non-flammable	Dot Class.....	2.3
TLV-TWA.....	3 ppm (ACGIH 1991-1992)	Dot Label.....	Poison Gas, Corrosive
CGA Valve.....	330	Cas Registry.....	10035-10-6
LB.....	180	Cylinder Pressure @ 70°F.....	320 psig

* For ULSI (5N) and VLSI (4N5) grades hydrogen bromide, see Electronic Gas section page 92.