

# PURE GASES

## ARSINE AsH<sub>3</sub>

- See Electronic Gas Section page 66 -

## BORON TRICHLORIDE BCl<sub>3</sub>

**General Characteristics:** A colorless, corrosive and liquefied gas which is broken down by water to hydrogen chloride and boric acid. Penetrating odor. Forms white smoke in humid air.

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

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
<b>C.P.</b> Min. Purity 99.9% (Liquid Phase) Phosgene < 0.001% Cl <sub>2</sub> < 1 ppm, Silicon < 2 ppm	044 016 010 LB	45.4 kg 18.1 kg 10.0 kg 454 g	Stainless-steel high purity single-stage regulator, refer to page 142  Stainless-steel lecture bottle regulator, refer to page 147

### TECHNICAL INFORMATION

Molecular Weight.....	117.17	Dot Name.....	Boron Trichloride
Specific Volume.....	3.3CF/lb	UN No.....	UN1741
Fire Potential.....	Non-flammable	Dot Class.....	2.3
TLV-TWA.....	None established	Dot Label.....	Poison Gas, Corrosive
CGA Valve.....	660	Cas Registry.....	10294-35-1
LB.....	180	Cylinder Pressure @ 70°F.....	4.4 psig

For VLSI (5N) and Electronic (4N) grades boron trichloride, see Electronic Gas section page 68.

## BORON TRIFLUORIDE BF<sub>3</sub>

**General Characteristics:** A colorless, non-flammable and compressed gas which is broken down by water to hydrogen fluoride and boric acid. Penetrating odor. Forms white smoke in humid air.

**Health Hazards:** Toxic. Attacks eyes and the mucous membranes. Can cause lung damage and a high concentration will cause burns on the skin similar to those that are caused by hydrogen fluoride.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
<b>C.P.</b> Min. Purity 99.5%	051 HP 044 016 7X	43.0 kg 27.2 kg 10.0 kg 200 g	Stainless-steel high purity double-stage regulator, refer to page 135 Stainless-steel lecture bottle regulator, refer to page 147

### TECHNICAL INFORMATION

Molecular Weight.....	67.82	Dot Name.....	Boron Trifluoride
Specific Volume.....	5.6CF/lb	UN No.....	UN1008
Fire Potential.....	Non-flammable	Dot Class.....	2.3
TLV-TWA.....	1 ppm (ACGIH 1991-1992)	Dot Label.....	Poison Gas
CGA Valve.....	330	Cas Registry.....	7637-07-2
LB.....	180	Cylinder Pressure @ 70°F.....	1600 psig

For ULSI (5N) and VLSI (4N5) grades boron trifluoride, see Electronic Gas section page 69.