

PURE GASES

AMMONIA NH₃

General Characteristics: A colorless, non-flammable and liquefied gas with a strong smell.

Health Hazards: Toxic. Highly irritating to the mucous membranes and eyes. Contact with the skin causes severe burns.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
ANHYDROUS Min. Purity 99.99% (Liquid phase)	800 LP	400 kg	Stainless-steel high purity single-stage regulator, refer to page 142
	100 LP	50 kg	
	044	22.7 kg	Stainless-steel lecture bottle regulator, refer to page 147
	016	6.8 kg	
	010	5.0 kg	
	LB	170 g	

TECHNICAL INFORMATION

Molecular Weight.....	17.031	Dot Name.....	Ammonia, Anhydrous, Liquefied
Specific Volume.....	22.6CF/lb	UN No.....	UN1005
Fire Potential.....	15 - 28% in Air	Dot Class.....	2.2
TLV-TWA.....	25 ppm (ACGIH 1991-1992)	Dot Label.....	Non-flammable Gas, Inhalation Hazard
CGA Valve.....	705	Cas Registry.....	7664-41-7
LB.....	110	Cylinder Pressure @ 70°F.....	114 psig

For Bright® (6N5), ULSI (6N), VLSI (5N5) and Electronic (5N) grades ammonia, see Electronic Gas section page 63 and 64.

ARGON Ar

General Characteristics: A colorless, non-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% O ₂ < 3 ppm, H ₂ O < 2 ppm, N ₂ < 5 ppm	051 HP (200 bar)	10.7 m ³	Double-stage high purity regulator, refer to page 134
	049	7.1 m ³	
	044	6.4 m ³	High purity lecture bottle regulator, refer to page 146
	016	2.3 m ³	
	010	1.5 m ³	
	LB	57 L	
HIGH PURITY Min. Purity 99.995% O ₂ < 10 ppm, H ₂ O < 10 ppm, N ₂ < 15 ppm	051 HP (200 bar)	10.7 m ³	
	049	7.1 m ³	
	044	6.4 m ³	
	016	2.3 m ³	
010	1.5 m ³		
EXTRA HIGH PRESSURE Min. Purity 99.999% O ₂ < 3 ppm, H ₂ O < 2 ppm, N ₂ < 5 ppm	6K (400 bar)	16 m ³	Piston regulator, refer to page 145

TECHNICAL INFORMATION

Molecular Weight.....	39.95	Dot Name.....	Argon, Compressed
Specific Volume.....	9.7CF/lb	UN No.....	UN1006
Fire Potential.....	Non-flammable	Dot Class.....	2.2
TLV-TWA.....	None established	Dot Label.....	Non-flammable Gas
CGA Valve.....	580, 3HP-677, 2HP-680	Cas Registry.....	7440-37-1
LB.....	180		

For ULSI (6N) and VLSI (5N5) grades argon, see Electronic Gas section page 65.