

PURE GASES

ETHYLENE C₂H₄

General Characteristics: A colorless, flammable gas with a faint odor.

Health Hazards: A simple asphyxiant.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
RESEARCH Min. Purity 99.99% C ₂ H ₂ < 5 ppm, CO < 2 ppm, CO ₂ < 5 ppm, H ₂ O < 5 ppm, N ₂ < 5 ppm, O ₂ < 2 ppm, Other HC < 50 ppm	044	13.6 kg	Double-stage high purity regulator, refer to page 134 High purity lecture bottle regulator, refer to page 146
	016	5 kg	
	010	3.4 kg	
	LB	113 g	
C.P. Min. Purity 99.5% C ₂ H ₂ < 10 ppm, CO < 5 ppm, CO ₂ < 15 ppm, H ₂ O < 5 ppm, N ₂ < 100 ppm, O ₂ < 25 ppm, Other HC < 2000 ppm	044	13.6 kg	
	016	5 kg	
	010	3.4 kg	
	LB	113 g	

TECHNICAL INFORMATION

Molecular Weight.....	28.05	Dot Name.....	Ethylene, Compressed
Specific Volume.....	13.8CF/lb	UN No.....	UN1962
Fire Potential.....	2.7 - 36% in Air	Dot Class.....	2.1
TLV-TWA.....	None established	Dot Label.....	Flammable Gas
CGA Valve.....	350	Cas Registry.....	74-85-1
LB.....	180	Cylinder Pressure @ 70°F.....	1200 psig

ETHYLENE OXIDE C₂H₄O

General Characteristics: A colorless, flammable and liquefied gas.

Health Hazards: Toxic. Irritates the eyes and the mucous membranes. Can cause lung damage. Is considered to be carcinogenic and could possibly cause genetic damage. Liquid contact with skin causes irritation and damages similar to cold burns.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
HIGH PURITY Min. Purity 99.9% (Liquid Phase) Ethylene Oxide may polymerize on storage, we recommend use within 3 months	¹ 010	5 kg	Stainless-steel manual control valve, refer to page 161
	002	400 g	
	LB	227 g	

TECHNICAL INFORMATION

Molecular Weight.....	44.05	Dot Name.....	Ethylene Oxide
Specific Volume.....	8.8CF/lb	UN No.....	UN1040
Fire Potential.....	3.0 - 100% in Air	Dot Class.....	2.3
TLV-TWA.....	1 ppm (ACGIH 1991-1992)	Dot Label.....	Poison Gas, Flammable Gas
CGA Valve.....	510	Cas Registry.....	75-21-8
LB.....	180	Cylinder Pressure @ 70°F.....	7 psig

1. Available with full length eductor tube and pressurized with nitrogen.

FLUORINE F₂

General Characteristics: Pale yellow gas with a sharp odor. Ignites most organic materials and many metals. Strongest oxidizing agent known. Reacts violently with water. Do not use fluorine without having obtained complete handling instructions.

Health Hazards: Highly toxic. Attacks the eyes and mucous membranes. Causes lung damage.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
ULTRA HIGH PURITY Min. Purity 99.0%	E50	40 kg	*Only use equipment which is carefully cleaned and inert. Nickel and monel are recommended, please ask our representative.

TECHNICAL INFORMATION

Molecular Weight.....	38.00	Dot Name.....	Fluorine, Compressed
Specific Volume.....	10.2CF/lb	UN No.....	UN1045
Fire Potential.....	Non-flammable	Dot Class.....	2.3
TLV-TWA.....	1ppm (ACGIH 1991-1992)	Dot Label.....	Poison Gas, Oxidizer
CGA Valve.....	679	Cas Registry.....	7782-41-4
LB.....	N/A	Cylinder Pressure @ 70°F.....	406 psig

HSG reserves the right to sell pure Fluorine to only those we believe will handle it properly.