PURE GASES

ETHYLENE C_2H_4

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_2H_2 < 5 ppm, CO < 2 ppm, CO_2 < 5 ppm, H_2O < 5 ppm, N_2 < 5 ppm, O_2 < 2 ppm, Other HC < 50 ppm	044 016 010 LB	13.6 kg 5 kg 3.4 kg 113 g	Double-stage high purity regulator, refer to page 134 High purity lecture bottle regulator, refer to page 146
C.P. Min. Purity 99.5% C_2H_2 < 10 ppm, CO < 5 ppm, CO_2 < 15 ppm, H_2O < 5 ppm, N_2 < 100 ppm, O_2 < 25 ppm, Other HC < 2000 ppm	044 016 010 LB	13.6 kg 5 kg 3.4 kg 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 C_2H_4O

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]010 002 LB	5 kg 400 g 227 g	Stainless-steel manual control value, refer to page 161

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 F_2

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 membrances. 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.