

# PURE GASES

## CARBON DIOXIDE CO<sub>2</sub>

**General Characteristics:** A colorless, non-flammable, liquefied and odorless gas.

**Health Hazards:** In high concentrations can paralyze the respiratory center.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
<b>SUPERCRITICAL (SFC/SFE)</b> Min. Purity 99.9995% Specifically manufactured for Supercritical Fluid Chromatography or Supercritical Fluid Extraction	A030 A016	17.7 kg 9.5 kg	SFC/SFE care package kit, refer to page 52
<b>INSTRUMENTAL</b> Min. Purity 99.99% O <sub>2</sub> < 20 ppm, N <sub>2</sub> < 75 ppm, H <sub>2</sub> O < 10 ppm	049 044 016 010 LB	31.8 kg 22.7 kg 9.0 kg 6.4 kg 227 g	Double-stage high purity regulator, refer to page 134  High purity lecture bottle regulator, refer to page 146
<b>HIGH PURITY</b> Min. Purity 99.9% Oil < 5 ppm, H <sub>2</sub> O < 10 ppm, CO < 1 ppm	049 044 016 010	31.8 kg 22.7 kg 9.0 kg 6.4 kg	For high flow application, special laminated aluminum regulator required, please ask our representative
<b>F &amp; B</b> Min. Purity 99.8% H <sub>2</sub> O < 100 ppm, Sulphur compounds < 0.5 ppm	049 044 010	31.8 kg 22.7 kg 6.4 kg	
<b>INDUSTRIAL</b> Min. Purity 99.8% H <sub>2</sub> O < 10 ppm	049 044 010	31.8 kg 22.7 kg 6.4 kg	

All grades are available with full length eductor tube and can be supplied with 1500 psia helium headspace for high pressure application. For VLSI (5N) and ELECTRONIC (4N5) grades, please see Electronic Gas section page 70.

### TECHNICAL INFORMATION

Molecular Weight.....	44.01	Dot Name.....	Carbon Dioxide
Specific Volume.....	8.74CF/lb	UN No.....	UN1013
Fire Potential.....	Non-flammable	Dot Class.....	2.2
TLV-TWA.....	5000 ppm (ACGIH 1991-1992)	Dot Label.....	Non-flammable Gas
CGA Valve.....	320	Cas Registry.....	124-38-9
LB.....	180	Cylinder Pressure @ 70°F.....	830 psig

## CARBON MONOXIDE CO

**General Characteristics:** A colorless, flammable and odorless gas.

**Health Hazards:** Toxic, binds irreversibly to the haemoglobin in the blood. Normally causes a headache as the first symptom.

GAS GRADE/PURITY SPEC.	CYLINDER SIZE	CONTENTS	EQUIPMENT RECOMMENDATIONS
<b>RESEARCH</b> Min. Purity 99.999% O <sub>2</sub> < 2 ppm, N <sub>2</sub> < 2 ppm, H <sub>2</sub> O < 1 ppm, H <sub>2</sub> < 1 ppm, THC < 2 ppm, Ar < 2 ppm	044 016 LB	6.0 m <sup>3</sup> 2.2 m <sup>3</sup> 50 L	Double-stage high purity regulator, refer to page 137  High purity lecture bottle regulator, refer to page 146
<b>ULTRA HIGH PURITY</b> Min. Purity 99.99%, O <sub>2</sub> < 10 ppm, N <sub>2</sub> < 20 ppm, THC < 10 ppm	044 016 LB	6.0 m <sup>3</sup> 2.2 m <sup>3</sup> 50 L	
<b>C.P.</b> Min. Purity 99.5%	044 016 010 LB	6.0 m <sup>3</sup> 2.2 m <sup>3</sup> 1.4 m <sup>3</sup> 50 L	
<b>TECHNICAL</b> Min. Purity 99.0%	044	6.0 m <sup>3</sup>	

### TECHNICAL INFORMATION

Molecular Weight.....	28.01	Dot Name.....	Carbon Monoxide
Specific Volume.....	13.7CF/lb	UN No.....	UN1016
Fire Potential.....	12.5 - 74% in Air	Dot Class.....	2.1
TLV-TWA.....	50 ppm (ACGIH 1991-1992)	Dot Label.....	Poison Gas, Flammable Gas
CGA Valve.....	350	Cas Registry.....	630-08-0
LB.....	180		