



Carbon Dioxide

Description

Synonym: Carbonic Anhydride, Carbonic Acid Gas
Formula: CO₂

Gas Data

Molecular Weight: 44.01
Density: 1.833 kg/m³ @ 21.1°C, 101.325 kPa
0.1144 lb/ft³ @ 70°F, 14.696 psia
Specific Volume: 0.5456 m³/kg @ 21.1°C, 101.325 kPa
8.741 ft³/lb @ 70°F, 14.696 psia

Safety Information

Permissible Exposure Limit (TLV): 5000 ppm

Shipping Information

CAS Registry Number: 124-38-9
UN Number: UN 1013
ECCN Number: 1C980
DOT Proper Shipping Name: Carbon Dioxide
DOT Classification: 2.2 (Non Flammable Gas)
DOT Label: NON-FLAMMABLE GAS
TC Shipping Name: Carbon Dioxide
TC Classification: 2.2
TC Label: NON-FLAMMABLE GAS,
NON-POISONOUS GAS

Cylinder Specifications

Cylinder Size	Valve Outlet CGA No.	Pressure psig @ 70°F	Pressure kPa @ 21.1°C	Approximate Ship Weight	
				lb	kg
1L	320	830	5,724	218	99
1A	320	830	5,724	192	87
1R	320	830	5,724	88	40
2	320	830	5,724	98	44
2R	320	830	5,724	62	28
3	320	830	5,724	47	21
3R	320	830	5,724	34	15
6	320	830	5,724	20	9
7	320	830	5,724	6	3
7A	320	830	5,724	6	3
LB	170	830	5,724	6	3

Gas Grade Purity Specifications	Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.	Page No.			
Carbon Dioxide, Research Purity 99.999%	G2110101	1A	60 lb	27.22 kg	Dual Stage Reg. Single Stage Reg. LB Regulator Leak Detector Detector Tube Cyl. Valve Wrench	Series 3120-320 Series 3530-320 Series 3550-170 8066 8014-126SF TW-5	299 313 314 406 391 430			
<i>Guaranteed Specifications</i>	G2110118	1R	39 lb	17.69 kg						
Carbon Monoxide <	0.2 ppm	G2110140	2	24 lb				10.89 kg		
Hydrogen <	1 ppm	G2110150	3	8 lb				3.63 kg		
Nitrogen <	5 ppm	G2110178	6	3.53 ft ³				100 L		
Oxygen <	2 ppm	G2110183	7B	1.77 ft ³				50 L		
Water <	2 ppm	G2110182	7A	0.88 ft ³				25 L		
THC as Methane <	4 ppm									
<i>A Certificate of Analysis will be provided with each cylinder at a nominal charge.</i>										
Carbon Dioxide, SFC Purity 99.999%	G2412118	1R	39 lb	17.69 kg				Dual Stage Reg. Single Stage Reg. Leak Detector Detector Tube Cyl. Valve Wrench	Series 3120-320* Series 3530-320* 8066 8014-126SF TW-5	299 313 406 391 430
<i>Guaranteed Specifications</i>	G2658748	2R	20 lb	9.07 kg						
Nitrogen <	5 ppm	G2658749	3R	8 lb	3.63 kg					
Oxygen <	5 ppm									
THC as Methane <	4 ppm									
Total Halocarbons <	50 ppb									
Water <	1 ppm									
<i>A Certificate of Analysis will be provided with each cylinder at a nominal charge.</i>										
<i>Supplied with full length eductor tube. The 1R can be pressurized to 1500 psig with helium and FLET: order G2659694ETHE.</i>										
<i>*Regulators for gas phase only</i>										



Carbon Dioxide (continued)

Gas Grade Purity Specifications	Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.	Page No.
Carbon Dioxide, Coleman Instrument 99.99%	G2401101	1A	60 lb	27.22 kg	Dual Stage Reg.	Series 1250-320	296
<i>Guaranteed Specifications</i>	G2401140	2	24 lb	10.89 kg	Single Stage Reg.	Series 3530-320	313
Oxygen < 20 ppm	G2401150	3	8 lb	3.63 kg	LB Regulator	Series 3550-170	314
Nitrogen < 50 ppm	G2401175	LB	0.5 lb	227 gm	Gas Warmer	6284-320	436
					Leak Detector	8066	406
					Detector Tube	8014-126SF	391
					Cyl. Valve Wrench	TW-5	430
<i>A Certificate of Conformance will be provided on request.</i>							
Carbon Dioxide, Bone Dry 99.8%	G1123312	1L	70 lb	31.75 kg	Dual Stage Reg.	Series 81-320**	293
	G1123301	1A	60 lb	27.22 kg	Single Stage Reg.	Series 18-320**	292
	G1123340	2	24 lb	10.89 kg	LB Regulator	Series 3320-170**	302
	G1123350	3	8 lb	3.63 kg	Gas Warmer	6284-320	435
	G1123375	LB	0.5 lb	227 gm	Leak Detector	8066	406
					Detector Tube	8014-126SF	391
					Cyl. Valve Wrench	TW-5	430
					Manual Control Valve (for liquid)	52A-320	417
<i>1A, 40 lbs CO₂, FLET, up to 2,000 psig helium head pressure: order item G2659697ETHE.</i>							
<i>1A, 60 lbs CO₂, full length eductor tube - FLET - order item G265969F.</i>							
<i>A Certificate of Conformance will be provided on request.</i>							
<i>By quotation, all except LB can be furnished with full length eductor tubes for liquid withdrawal.</i>							
<i>**Regulators for gas phase only</i>							
Carbon Dioxide, CP Grade 99.5%	G1123112	1L	70 lb	31.75 kg	Dual Stage Reg.	Series 81-320**	293
	G1123101	1A	60 lb	27.22 kg	Single Stage Reg.	Series 18-320**	292
	G1123140	2	24 lb	10.89 kg	Gas Warmer	6284-320	435
	G1123150	3	8 lb	3.63 kg	Leak Detector	8066	406
					Detector Tube	8014-126SF	391
					Cyl. Valve Wrench	TW-5	430
					Manual Control Valve (for liquid)	52A-320	417
<i>A Certificate of Conformance will be provided on request.</i>							
<i>By request, all can be furnished with full length eductor tubes for liquid withdrawal.</i>							
<i>**Regulators for gas phase only</i>							
Carbon Dioxide, UHP, 99.995%	G2670450	1A	60 lb	27.22 kg	Manual Control Valve (for liquid)	52A-320	417
<i>Impurities</i>	G2670451*	1A	60 lb	27.22 kg	Gas Warmer	6284-320	435
Oxygen < 10 ppm	G2670456	1R	39 lb	17.69 kg	Leak Detector	8066	406
Nitrogen < 20 ppm	G2670452	2	24 lb	10.84 kg	Detector Tube	8014-126SF	391
THC as Methane < 5 ppm					Cyl. Valve Wrench	TW-5	430
Water < 5 ppm							
<i>*With FLET</i>							