

Hydrogen H₂

Synonym: Molecular Hydrogen

Physical Constants of Gas

Molecular Weight 2.016
 Specific Volume 191.3 CF/lb. (11.9 m³/kg)
 Boiling Point -423°F (-252.8°C) 1 atm
 Gas Density 70°F 1 atm 0.085 kg/m³

Cylinder Data

CGA Valve Outlet 350, 724

Shipping Data

Shipping Class 70
 DOT/TC Name Hydrogen, Compressed
 DOT/TC Class 2.1 (Flammable Gas)
 WHMIS Class AB1
 DOT Label Flammable Gas
 CAS Registry No. 1333-74-0
 UN No./ATA No. UN1049

Safety Information

Flammable high-pressure gas.
 Flammability limits: lower 4%; upper 75%.
 Can form explosive mixture with air.
 May ignite if valve is open to air.
 Burns with an invisible flame.

Specifications									Recommended Equipment	
Grade	Purity (Minimum)	Size	Contents		Pressure		Weight		Description Model Number	Page
			CF	m ³	psig	bar	lbs.	kg		
ALPHAGAZ 2 CO < 0.1 ppm CO ₂ < 0.5 ppm H ₂ O < 0.5 ppm N ₂ < 1 ppm O ₂ < 0.5 ppm THC < 0.1 ppm	99.9998%	49	261	7	2400	166	145	66	Two-Stage Regulator Q1-318B-350	270
		49 x 16	4176	118	2400	166	2580	1170		
		44	219	6	2265	156	135	61		
		44 x 6*	1314	37	2265	156	885	401		
ALPHAGAZ 1 H ₂ O < 3 ppm O ₂ < 2 ppm THC < 0.5 ppm	99.999%	49	261	7	2400	166	145	66	Two-Stage Regulator Q1-318B-350	270
		49 x 16	4176	118	2400	166	2580	1170		
		44	219	6	2265	156	135	61		
		44 x 6*	1314	37	2265	156	885	401		
Electronic Grade 3 CO + CO ₂ < 0.1 ppm H ₂ O < 0.5 ppm N ₂ < 0.5 ppm O ₂ < 0.5 ppm THC < 0.1 ppm	99.9999%	49	261	7	2400	166	145	66	Two-Stage Regulator Q1-318B-350 Q1-215B-350	270 271
		44	219	7	2000	138	135	61		
		16	66	2	2000	138	66	30		
Electronic Grade 2 CO < 1 ppm CO ₂ < 1 ppm H ₂ O < 1 ppm N ₂ < 1 ppm O ₂ < 1 ppm THC < 0.2 ppm	99.9995%	49	261	7	2400	166	146	66	Two-Stage Regulator Q1-318B-350 Q1-215B-350 Q1-14C-350	270 271 275
		44	219	7	2265	156	136	61		
		16	66	2	2000	138	66	30		
Electronic Grade 1 CO < 2 ppm CO ₂ < 1 ppm H ₂ O < 3 ppm N ₂ < 4 ppm O ₂ < 1 ppm THC < 0.5 ppm	99.999%	49	261	7	2400	166	146	66	Two-Stage Regulator Q1-318B-350 Q1-215B-350 Q1-14C-350	270 271 275
		44	219	7	2265	156	136	61		
		16	66	2	2000	138	66	30		

* Not available in Canada.