

Hydrogen (H₂)

A flammable, colorless, odorless, compressed gas at high pressure.

Grade	% Purity	O ₂	H ₂ O	THC	CO	CO ₂	Ar	N ₂
Research ⁽¹⁾	99.9999	0.5	0.5	0.1	0.1	0.1	0.5	0.5
Ultra-Pure Carrier (UPC)	99.9995	1	1	0.5	1 ⁽²⁾	1 ⁽²⁾		3
Semiconductor ^(#)	99.999	1	2	0.5	1 ⁽²⁾	1 ⁽²⁾		5
Alphagaz1 with SMARTOP™	99.999	1	2	0.5	1 ⁽²⁾	1 ⁽²⁾		5
Ultra High Purity (UHP)	99.999	1	2	0.5	1 ⁽²⁾	1 ⁽²⁾		5
High Pressure	99.995	4	3					

Concentrations given are ppm by volume unless otherwise specified.

Notes

⁽¹⁾ Total of impurities listed shall not exceed 1 ppm.

⁽²⁾ CO + CO₂ shall not exceed 1 ppm

^(#) Semiconductor grade valve material is brass for standard CGA connection. Cylinders can be provided with SS or DISS valves and additional proper regulator options upon request.

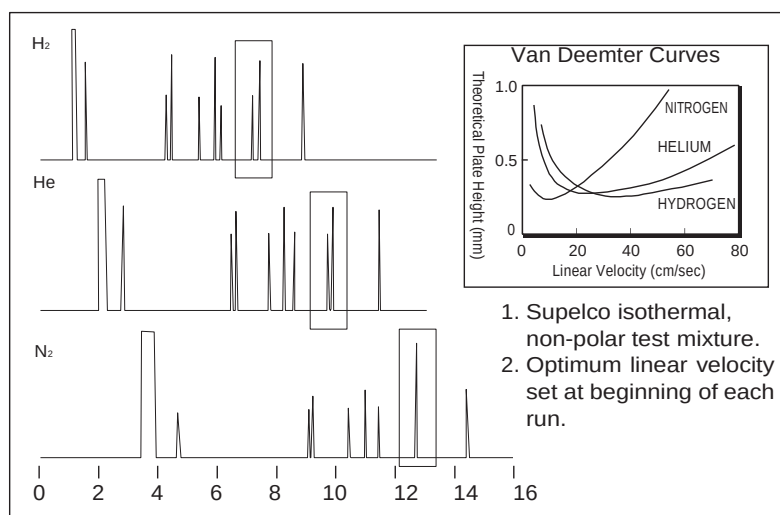
PRODUCT	Ordering Information					Equipment Recommendations		
	Cylinder Size	Contents ft³	Standard Valve Outlet (CGA)	Product Number	Cylinder Pressure at 70°F (psig)	Description Product Number	Delivery Pressure Range (psig)	Page Number
Research	300 200 80 35	260 216 85 34	350 350 350 350	HY R300 HY R200 HY R80 HY R35	2400 2,000 2,000 2,000	Two-Stage Regulators Y12-N245 * 350 Y12-T265 * 350 Y12-244 * 350	A = 0-25 B = 0-50 D = 0-100	E21 E23 E12
	Certificate of Analysis included							
Ultra-Pure Carrier (UPC)	300 200 80 35	260 216 85 34	350 350 350 350	HY UPC300 HY UPC200 HY UPC80 HY UPC35	2,400 2,000 2,000 2,000			
	Individual or Batch Certificate of Analysis available upon request							
Semiconductor	300 200	260 216	350 350	HY SM300 HY SM200	2,400 2,000	Single-Stage Regulators Y11-N245 * 350 Y11-T265 * 350 Y11-244 * 350	A = 0-25 B = 0- 50 D = 0- 100 G= 0-500**	E20 E22 E11
	Individual Certificate of Analysis available upon request							
Alphagaz1 with SMARTOP	300	260	350	HY AZ1300SMT	2,400			
	Individual Certificate of Analysis available upon request							
Ultra High Purity (UHP)	300 200 80 35	260 216 85 34	350 350 350 350	HY UHP300 HY UHP200 HY UHP80 HY UHP35	2,400 2,000 2,000 2,000	*Insert delivery pressure range code	**Single stage only	
	Individual or Batch Certificate of Analysis available upon request							
High Pressure	6K 3K	453 318	703 695	HY HP6K HY HP3K	6,000 3,500	Single stage Regulators Y11-N198*(CGA) Y11-820*(CGA)	J = 0-4000 K = 0-6000	E62 E61
	Individual or Batch Certificate of Analysis available upon request							

Hydrogen (H₂) Cont.

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Technical Data & Shipping Information

Molecular Weight	2.01588
Specific Volume	191.9 cf/lb @70° F & 1 ATM
Flammability Limits in Air	4.0 - 75% in Air
U.S. DOT Name	Hydrogen, Compressed
ID Number	UN 1049
U.S. DOT Hazard Class	2.1
U.S. DOT Label	Flammable Gas
CAS Registry	1333-74-0



When used as a carrier gas, hydrogen typically provides higher resolution at higher linear velocities than both helium and nitrogen.



Consider using a hydrogen generator to supply your FID carrier gas and/or fuel gas.

Airgas Quality Policy

The purpose of the Airgas Quality System is to continually improve our manufacturing and related processes to provide our customers with the highest product purity, consistency, and service.