

Hydrogen (H₂)

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

Grade	% Purity	O ₂	H ₂ O	THC	Ar	CO	CO ₂	N ₂
Research ⁽¹⁾	99.9999	0.5	0.5	0.1	0.5	0.1	0.1	0.5
Ultra Pure Carrier	99.9995	1	1	0.5		1 ⁽²⁾	1 ⁽²⁾	3
Semiconductor ^(#)	99.999	1	2	0.5		1 ⁽²⁾	1 ⁽²⁾	5
Ultra High Purity	99.999	1	2	0.5		1 ⁽²⁾	1 ⁽²⁾	5
Zero Grade	99.998	5	3	0.5				
High Purity/High Pressure	99.995	4	3					
Prepurified	99.99	10	5					

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 ft ³	Standard Valve Outlet (CGA)	Product Number	Cylinder Pressure at 70°F (psig)	Description Product Number	Delivery Pressure Range (psig)	Page Number			
Research	300	260	350	HY R300	2,400	Two-Stage Regulators Y12-N145 * 350 Y12-244 * 350 Y12-N245 * 350 Y12-T265 * 350 Single-Stage Regulators Y11-N145 * 350 Y11-244 * 350 Y11-T265 * 350 Y11-N245 * 350	A = 0-25 B = 0-50 D = 0-100 E = 0-150 F = 0-250 G = 0-500**	E21 E12 E21 E23 E20 E11 E22 E20			
	200	216	350	HY R200	2,000						
	80	85	350	HY R80	2,000						
	35	34	350	HY R35	2,000						
Individual or Batch Certificate of Analysis available upon request.											
Ultra Pure Carrier (UPC)	300	260	350	HY UPC300	2,400						
	200	216	350	HY UPC200	2,000						
	80	85	350	HY UPC80	2,000						
	35	34	350	HY UPC35	2,000						
Certificate of Analysis included.											
Semiconductor	300	260	350	HY SM300	2,400						
	200	216	350	HY SM200	2,000						
	80	85	350	HY SM80	2,000						
	35	34	350	HY SM35	2,000						
Individual or Batch Certificate of Analysis available upon request.											
Ultra High Purity (UHP)	300	260	350	HY UHP300	2,400						
	200	216	350	HY UHP200	2,000						
	80	85	350	HY UHP80	2,000						
	35	34	350	HY UHP35	2,000						
Individual or Batch Certificate of Analysis available upon request.											
Zero	300	260	350	HY Z300	2,400						
	200	216	350	HY Z200	2,000						
	80	85	350	HY Z80	2,000						
	35	34	350	HY Z35	2,000						
Individual or Batch Certificate of Analysis available upon request.											
High Purity / High Pressure	300	260	350	HY HP300	2,400						
	200	216	350	HY HP200	2,000						
	80	85	350	HY HP80	2,000						
	35	34	350	HY HP35	2,000						
	6K	453	703	HY HP6K	6,000						
	3K	318	695	HY HP3K	3,500						
Individual or Batch Certificate of Analysis available upon request.											
Prepurified	300	260	350	HY PP300	2,400						
	200	216	350	HY PP200	2,000						
	80	85	350	HY PP80	2,000						
	35	34	350	HY PP35	2,000						
Individual or Batch Certificate of Analysis available upon request.											

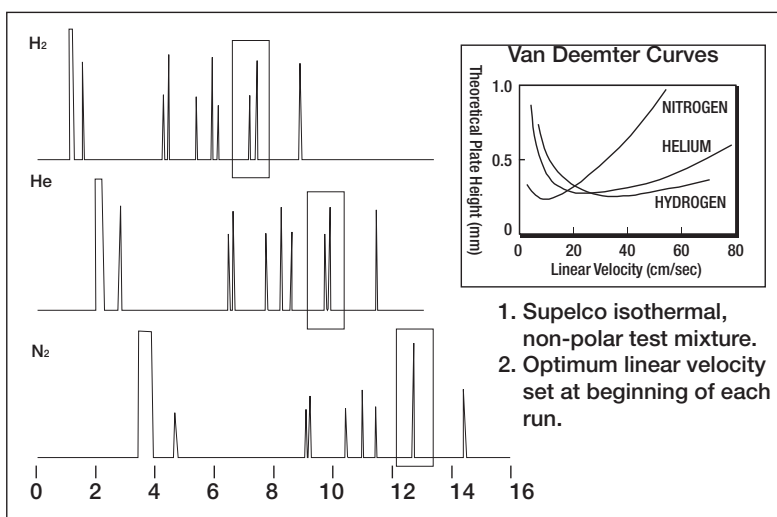
* Insert Delivery Pressure Range Code
** Single Stage Only

Hydrogen (H₂) Cont.

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

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.