

Helium (He)

A colorless, odorless, nonflammable, inert gas.

Grade	% Purity	O ₂	H ₂ O	THC	CO	CO ₂	Ar	N ₂
BIP® Technology	99.9997	10 ppb	20 ppb	100 ppb				3
Research ⁽¹⁾	99.9999	0.5	0.2	0.1	0.1	0.1	0.5	0.5
Chromatographic	99.9999	0.5	0.2	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	1	0.5	1 ⁽²⁾	1 ⁽²⁾		5
Ultra High Purity (UHP)	99.999	1	1	0.5	1 ⁽²⁾	1 ⁽²⁾		5
LaserPlus™ Ultra	99.999 ⁽³⁾	1	2	0.5				
LaserPlus™	99.998 ⁽³⁾		5	1				
Laser	99.999 ⁽³⁾	1	1	0.5				
Zero	99.998	4	3	0.5				
High Purity/High Pressure	99.997	5	3					

Concentrations given are ppm by volume unless otherwise specified.

Notes

Purity levels given are excluding Neon.

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

(2) Total CO + CO₂ shall not exceed 1 ppm

(3) Details of Laser grades can be found in the Special Applications section.

^(#)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
BIP® Technology	300	291	580	HE BIP300	2,640	Two-Stage Regulators Y12-244 * 580 Y12-N245 * 580 Y12-T265 * 580	A = 0-25 B = 0-50 D = 0-100 E = 0-150	E12 E21 E23
	Certificate of Conformance included.							
Research	300	291	580	HE R300	2,640	Single-Stage Regulator Y11-N145 * 580 Y11-244 * 580 Y11-T265 * 580 Y11-N245 * 580	A = 0-25 B = 0-50 D = 0-100 E = 0-150	E20 E11 E22 E20
	200	213	580	HE R200	2,200			
	80	84	580	HE R80	2,200			
	35	33	580	HE R35	2,200			
Certificate of Analysis included.					* Insert Delivery Pressure Range Code			
Chromatographic	300	291	580	HE CH300	2,640			
	200	213	580	HE CH200	2,200			
	80	84	580	HE CH80	2,200			
	35	33	580	HE CH35	2,200			
Individual or Batch Certificate of Analysis available upon request.								
Ultra Pure Carrier (UPC)	300	291	580	HE UPC300	2,640	Two-Stage Regulators Y12-N145 * 580 Y12-244 * 580 Y12-N245 * 580	A = 0-25 B = 0-50 D = 0-100 E = 0-150 F = 0-250	E21 E12 E21
	200	213	580	HE UPC200	2,200			
	80	84	580	HE UPC80	2,200			
	35	33	580	HE UPC35	2,200			
Individual or Batch Certificate of Analysis available upon request.								
Semiconductor	300	291	580	HE SM300	2,640	Single-Stage Y11-N145 * 580 Y11-244 * 580 Y11-N245 * 580		E20 E11 E20
	200	213	580	HE SM200	2,200			
Individual or Batch Certificate of Analysis available upon request.								
Ultra High Purity (UHP)	300	291	580	HE UHP300	2,640			
	200	213	580	HE UHP200	2,200			
	80	84	580	HE UHP80	2,200			
	35	33	580	HE UHP35	2,200			
Individual or Batch Certificate of Analysis available upon request.					* Insert Delivery Pressure Range Code			


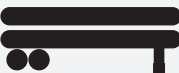
Airgas Quality Policy

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.



Helium (He) Cont.

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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
Zero 	300	29	580	HE Z300	2,640	Two-Stage Regulators Y12-N245 * 580 Y12-244 * 580	A = 0-25 B = 0-50 D = 0-100 E = 0-150 F = 0-250	E21 E12
	200	213	580	HE Z200	2,200			
High Purity / High Pressure 	80	84	580	HE Z80	2,200	Single-Stage Regulators Y11-N245 * 580	E20 E11	
	35	33	580	HE Z35	2,200			
	Individual or Batch Certificate of Analysis available upon request.							
	300	291	580	HE HP300	2,640			
	200	213	580	HE HP200	2,200			
	80	84	580	HE HP80	2,200			
	35	33	580	HE HP35	2,200			
6K	512	677	HE HP6K	6,000				
3K	328	680	HE HP3K	3,500				
Individual or Batch Certificate of Analysis available upon request.								
Liquid	Various sizes, volumes, and grades available upon request. Individual or Batch Certificate of Analysis available upon request.					* Insert Delivery Pressure Range Code		

Technical Data & Shipping Information		For LaserPLUS™ Applications, see SA14.
Molecular Weight	4.0026	
Specific Volume	96.65 cf/lb @70° F & 1 ATM	
Flammability Limits in Air	Nonflammable	
U.S. DOT Name	Helium, Compressed or Refrigerated Liquid	
ID Number	UN 1046 or UN1963	
U.S. DOT Hazard Class	2.2	
U.S. DOT Label	Nonflammable Gas	
CAS Registry	7440-59-7	

Airgas provides BIP® Gases in argon, helium and nitrogen, all with premium-grade purity. The BIP® Technology, with the purifier inside, is more efficient than traditional point-of-use purifiers, since the process takes place in the high-pressure, lower-velocity environment within the cylinder. That more thoroughly exposes the purifier medium to any impurities. Traditional in-line purifiers operate in low-pressure, high-velocity conditions, which is less ideal. External purifiers also introduce the potential for leaks and require constant maintenance.

All BIP® built-in purifiers use a 0.5 micron frit to filter particles. The purifiers go through rigorous testing and are guaranteed for the life of the cylinder.



Airgas offers a wide range of gas supply modes, including high-pressure cylinders, liquid cylinders (or dewars), MicroBulk and bulk. Your Airgas specialty gas representative can help you decide which option is best for your operation. Be sure to ask about our unique line of specialty gas equipment, including automatic changeover systems for uninterrupted gas supply.