

Nitrogen (N₂)

A colorless, odorless, nonflammable gas or a colorless, odorless, nonflammable cryogenic liquid.

Grade	% Purity	O ₂	H ₂ O	THC	CO	CO ₂	H ₂	NO _x	SO ₂
BIP Technology	99.9999	10 ppb	20 ppb	100 ppb					
Research Plus	99.9999	0.2	0.2	0.1	0.3	0.1			
Research	99.9997	0.5	0.5	0.2	0.5	0.5	2		
Semiconductor ^(#)	99.9993	1	1	0.5	1 ⁽¹⁾	1 ⁽¹⁾			
Continuous Emissions Monitoring	99.9995			0.1	0.5	1		0.1	0.1
Vehicle Emissions Part 1065	99.999	2		0.05	1	10		0.02	
Ultra Pure Carrier (UPC)	99.9993	1	1	0.5	1 ⁽¹⁾	1 ⁽¹⁾			
Ultra High Purity (UHP)	99.999	1	1	0.5	1 ⁽¹⁾	1 ⁽¹⁾			
LaserPlus™ - Ultra	99.999	1	2	0.5					
LaserPlus™	99.998		5	1					
Laser	99.999	1	1	0.5					
Zero Grade	99.998	4	3	0.5					
High Purity/High Pressure	99.998	5	3						

Concentrations given are ppm by volume unless otherwise specified.

Notes

Purities do not include Argon impurities @ <100 ppm

⁽¹⁾ Combined CO and 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.

Details of Laser Grades can be found in the Special Applications section.

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	304	580	NI BIP300	2,640	Two-Stage Regulators Y12-N245 * 580 Y12-T265 * 580 Single-Stage Regulators Y11-N245 * 580 Y11-244 * 580 Y11-T265 * 580	A = 0-25 B = 0-50 D = 0-100	E21 E23
	Certificate of Conformance included.							
Research Plus	300	304	580	NI RP300	2,640			
	200	235	580	NI RP200	2,200			
	80	93	580	NI RP80	2,200			
	35	36	580	NI RP35	2,200			
Certificate of Analysis included.								
Research	300	304	580	NI R300	2,640			
	200	235	580	NI R200	2,200			
	80	93	580	NI R80	2,200			
	35	36	580	NI R35	2,200			
Certificate of Analysis included.								
Semiconductor	300	304	580	NI SM300	2,640			
	200	235	580	NI SM200	2,200			
Individual or Batch Certificate of Analysis available upon request.					* Insert Delivery Pressure Range Code			
Continuous Emissions Monitoring (CEM)	300	304	580	NI CZ300	2,640	Two-Stage Regulators Y12-N245 * 580 Y12-244 * 580 Single-Stage Regulators Y11-N245 * 580 Y11-244 * 580	A = 0-25 B = 0-50 D = 0-100 E = 0-150 F = 0-250 G = 0-500**	E21 E12
	200	235	580	NI CZ200	2,200			
	150A	144	580	NI CZ15A	2,000			
	80	93	580	NI CZ80	2,200			
	35	36	580	NI CZ35	2,200			
Batch Certificate of Analysis included. Complies with 40 CFR Part 72.2 for Continuous Emission Monitoring								
Vehicle Emissions Part 1065	300	304	580	NI VE300	2,640			
	200	235	580	NI VE200	2,200			
	150A	144	580	NI VE15A	2,000			
	80	93	580	NI VE80	2,200			
	35	36	580	NI VE35	2,200			
Batch Certificate of Analysis included. Complies with 40 CFR Part 1065.750					* Insert Delivery Pressure Range Code ** Single Stage Only			

Nitrogen (N₂) Cont.

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

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
Ultra Pure Carrier (UPC)	300	304	580	NI UPC300	2,640	Two-Stage Regulators Y12-N245 * 580 Y12-244 * 580 Single-Stage Regulators Y11-N245 * 580 Y11-244 * 580	A = 0-25 B = 0-50 D = 0-100 E = 0-150 F = 0-250 G = 0-500**	E21 E12 E20 E11
	200	235	580	NI UPC200	2,200			
80	93	580	NI UPC80	2,200				
35	36	580	NI UPC35	2,200				
Individual or Batch Certificate of Analysis available upon request.								
Ultra High Purity (UHP)	300	304	580	NI UHP300	2,640			
	200	235	580	NI UHP200	2,200			
80	93	580	NI UHP80	2,200				
35	36	580	NI UHP35	2,200				
Individual or Batch Certificate of Analysis available upon request.								
Zero	300	304	580	NI Z300	2,640			
	200	235	580	NI Z200	2,200			
80	93	580	NI Z80	2,200				
35	36	580	NI Z35	2,200				
Individual or Batch Certificate of Analysis available upon request.								
High Purity / High Pressure	300	304	580	NI HP300	2,640	Single-Stage Regulators Y11-N198J (CGA)† Y11-N198K (CGA)† Y11-820H	0-2,000 0-4,000 0-6,000	E62 E62 E61
	200	235	580	NI HP200	2,200			
	80	93	580	NI HP80	2,200			
	35	36	580	NI HP35	2,200			
	6K	482	677	NI HP6K	6,000			
	3K	337	680	NI HP3K	3,500			
Individual or Batch Certificate of Analysis available upon request.								
Liquid	Various sizes, volumes, and grades available upon request.					† Insert Delivery Pressure Range Code		
	Individual or Batch Certificate of Analysis available upon request.							

* Insert Delivery Pressure Range Code
 ** Single Stage Only

† Insert Delivery Pressure Range Code

Technical Data & Shipping Information	
Molecular Weight	28.0134
Specific Volume	13.81 cf/lb @70° F & 1 ATM
Flammability Limits in Air	Nonflammable
U.S. DOT Name	Nitrogen, Compressed
ID Number	UN 1066
U.S. DOT Hazard Class	2.2
U.S. DOT Label	Nonflammable Gas
CAS Registry	7727-37-9

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.