

Nitrogen (N₂)

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

Product Specifications	Minimum Purity**	O ₂	H ₂ O	THC	CO	CO ₂	H ₂	NOx	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		
Continuous Emissions Monitoring (CEM)	99.9995%			≤ 0.1	≤ 0.5	≤ 1		≤ 0.1	≤ 0.1
Vehicle Emissions Part 1065	99.999%	≤ 2		≤ 0.05	≤ 1	≤ 10		≤ 0.2	
Ultra Pure Carrier (UPC)	99.9993%	≤ 1	≤ 1	≤ 0.5	* ≤ 1	* ≤ 1			
Ultra High Purity (UHP)	99.999%	≤ 1	≤ 1	≤ 0.5	* ≤ 1	* ≤ 1			
Zero	99.998%	≤ 4	≤ 3	≤ 0.5					
High Purity / High Pressure	99.998%	≤ 5	≤ 3						

Concentrations given are ppm by volume unless otherwise specified.

* CO + CO₂ ≤ 1 ppm ** Excluding Argon

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			
	Certificate of Conformance provided.							
Research Plus	300	304	580	NI RP300	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 *E = 0-150 F = 0-250 *G = 0-500	E21 E23
	200	230	580	NI RP200	2,200			
	80	79	580	NI RP80	2,200			
	35	36	580	NI RP35	2,200			
Certificate of Analysis included.								
Research	300	304	580	NI R300	2,640	* Only available for the N245 series	E20 E12 E22	
	200	230	580	NI R200	2,200			
	80	79	580	NI R80	2,200			
	35	36	580	NI R35	2,200			
Certificate of Analysis included.								
* Insert Delivery Pressure Range Code								
Continuous Emissions Monitoring (CEM)	300	304	580	NI CZ300	2,640			
	200	230	580	NI CZ200	2,200			
	150A	142	580	NI CZ15A	2,000			
	80	79	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	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	230	580	NI VE200	2,200			
	150A	142	580	NI VE15A	2,000			
	80	79	580	NI VE80	2,200			
	35	36	580	NI VE35	2,200			
Batch Certificate of Analysis included. Complies with 40 CFR Part 1065.750								
Ultra Pure Carrier (UPC)	300	304	580	NI UPC300	2,640	* Only available for the N245 series	E20 E11	
	200	230	580	NI UPC200	2,200			
	80	79	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	230	580	NI UHP200	2,200			
	80	79	580	NI UHP80	2,200			
	35	36	580	NI UHP35	2,200			
	Individual or Batch Certificate of Analysis available upon request.							
* Insert Delivery Pressure Range Code								



BIP® purifier technology is an **AIR PRODUCTS** innovation.
 BIP® is a registered trademark of Air Products and Chemicals, Inc.
 (US Trademark 2,521,752).
 BIP® purifier technology is protected by US patent no. 0591840.

Nitrogen (N₂) 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	304	580	NI Z300	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	230	580	NI Z200	2,200			
	80	79	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	E60 E60 E61
	200	230	580	NI HP200	2,200			
	80	79	580	NI HP80	2,200			
	35	36	580	NI HP35	2,200			
	6K	494	677	NI HP6K	6,000			
	3K	335	680	NI HP3K	3,500			
Individual or Batch Certificate of Analysis available upon request.					†Insert CGA Valve Number			
Liquid	Various sizes, volumes, and grades available upon request. Individual or Batch Certificate of Analysis available upon request.							

For Laser Grade, see Special Applications Section

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, or Refrigerated Liquid
ID Number	UN 1066 or UN 1977
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.