

Argon Ar

Cylinder color: Dark green

Argon is an inert gas that is often used in shielded arc processes for welding aluminum, stainless steel, bronze and copper. In these processes, argon is used as a shielded gas, either in pure form or in combination with predetermined percentages of oxygen, carbon dioxide or helium, depending on the metal being welded. The shielding gas provides an inert atmosphere during the welding to prevent oxidation or other chemical change of the metals that would be detrimental to the weld.

Argon is also used for inerting in other industries such as wine-making & food applications.



ITEM NUMBER	SIZE	VOLUME ¹		CGA CONNECTION	TYPICAL CYLINDER PRESSURES @ 15°C / 70°F
		m ³	scf		
GAS-ARG9COP	9	1.38	49.81	580	14 960 kPa (2217 psig)
GAS-ARG16	16	7.75	99.26	580	16 820 kPa (2492 psig)
GAS-ARG22	22	3.43	123.77	580	14 960 kPa (2217 psig)
GAS-ARG50	50	9.32	336.28	580	17 820 kPa (2640 psig)
GAS-ARG50XPR	50 XPR	15.06	543.11	680	30 380 kPa (4500 psig)
GAS-ARGBP50XPR	16 X 50 XPR	240.96	8689.75	680	30 380 kPa (4500 psig)
GAS-ARG160LC	160 L	119.50	4309.61	Gas - 580 Liquid - 295	1585 kPa (230 psig)
GAS-ARG180LC	180 L	133.11	4800.31	Gas - 580 Liquid - 295	1585 kPa (230 psig)
GAS-ARG240LC	240 L	162.68	5867.04	Gas - 580 Liquid - 295	1585 kPa (230 psig)
GAS-ARG450LC	450 L	352.58	12715.48	Gas - 580 Liquid - 295	1585 kPa (230 psig)

¹ m³ @ 15°C; scf @ 70°F

² 16 standard cylinder BULKPAK.

UN Number: Gas - UN1006 / Liquid - UN1951 Hazard Class: GAS - 2.2 / Liquid - 2.2

Carbon Dioxide CO₂

Cylinder color: Light grey

In addition to its well-known and extensive use as the carbonating and dispensing medium in the beverage industry, carbon dioxide has numerous other widely varying uses in many different industries.

For example, in metal fabricating operations, CO₂ is widely used as a shielding gas in a semi-automatic welding process.

In the food industry, CO₂ is employed for processing, packaging, transportation and refrigeration of meat products, frozen foods, dairy products and as an inert atmosphere over perishable packaged products.



ITEM NUMBER	SIZE	VOLUME		CGA CONNECTION	TYPICAL CYLINDER PRESSURES [vapour pressure] @ 15°C / 70°F
		kg	lb		
GAS-CO29COP	9	5.90	13.00	320	1590 kPa / 830 psig
GAS-CO214	14 AL	9.07	20.00	320	1590 kPa / 830 psig
GAS-CO237	37	22.68	50.00	320	1590 kPa / 830 psig
GAS-CO244	44	29.30	64.60	320	1590 kPa / 830 psig
GAS-CO2SYP37	37	22.68	50.00	320	1590 kPa / 830 psig
GAS-CO2SYP44	44	29.30	64.60	320	1590 kPa / 830 psig
GAS-CO2160LC	160 L	168	370.38	Gas - 320 Liquid - 320	2413 kPa / 350 psig
GAS-CO2180LC	180 L	187	412.26	Gas - 320 Liquid - 320	2413 kPa / 350 psig
GAS-CO2240LC	240 L	240	529.11	Gas - 320 Liquid - 320	2413 kPa / 350 psig

UN Number: Gas - UN1013 / Liquid - UN2187 Hazard Class: Gas - 2.2 / Liquid - 2.2

Compressed Air

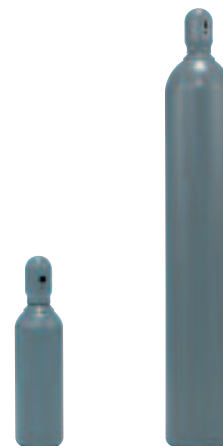
Cylinder color: Dark grey

Industrial compressed air is typically used to run pneumatic or air tools, inflate tires and clean parts. Breathing grade compressed air is used in applications requiring a portable source of air to breathe.

ITEM NUMBER	SIZE	VOLUME ¹		CGA CONNECTION	TYPICAL CYLINDER PRESSURES @ 15°C / 70°F
		m ³	scf		
Industrial Grade:					
GAS-AIR44	44	6.53	325.48	346	14 960 kPa / 2217 psig
Breathing Grade:					
GAS-AIRBRE9COP	9	1.31	47.1	346	14 960 kPa / 2217 psig
GAS-AIRBRE44	44	6.53	325.48	346	14 960 kPa / 2217 psig

¹ m³ @ 15°C; scf @ 70°F

UN Number: Gas UN1002 Hazard Class: Gas - 2.2



Helium (Industrial) He

Cylinder color: Brown

Helium is used considerably in the welding industry as an inert shielding gas for arc welding. It is used both as a pure gas and in mixtures with argon for TIG or MIG welding.

On some applications, helium has the advantage over argon in gas-shielded arc welding because it provides greater arc heat for the same welding currents and arc length. This results in deeper penetration, which is preferable for welding heavier materials, when greater welding speed is required, or when metals of high thermal conductivity are to be welded.

ITEM NUMBER	SIZE	VOLUME ¹		CGA CONNECTION	TYPICAL CYLINDER PRESSURE @ 15°C / 70°F
		m ³	scf		
GAS-HEL50	50	8.10	292.07	580	17 820 kPa / 2640 psig
GAS-HELBP50	16 x 50	129.58	4673.04	580	17 820 kPa / 2640 psig

¹ m³ @ 15°C; scf @ 70°F

UN Number: Gas - UN1046 Hazard Class: Gas - 2.2



Helium (Balloon Grade) He

Cylinder color: Lime Green

One of the major properties of helium is that it's much lighter than air. Consequently, the entertainment industry frequently uses helium to fill balloons.

Take note that inhaling helium can be deadly; it can cause anoxia. Oxygen is needed to maintain life. If another gas is inhaled, such as helium, it displaces the much-needed oxygen and can cause death.



ITEM NUMBER	SIZE	VOLUME ¹		CGA CONNECTION	TYPICAL CYLINDER PRESSURES @ 15°C / 70°F	# BALLOONS FILLED ²
		m ³	scf			
GAS-HELBAL9COP	9	1.21	43.64	155	14 960 kPa (2217 psig)	155
GAS-HELBAL11	11 AL	1.49	53.63	580	14 960 kPa (2217 psig)	190
GAS-HELBAL16	16	2.42	87.16	580	16 820 kPa (2492 psig)	310
GAS-HELBAL50	50	8.09	291.76	580	17 820 kPa (2640 psig)	1050

¹ m³ @ 15°C; scf @ 70°F

² Based on 25 cm (10") balloons.

UN Number: Gas - UN1046 Hazard Class: Gas - 2.2

Hydrogen H₂

Cylinder color: Turquoise

As a fuel gas with oxygen, hydrogen produces a relatively low flame temperature of 5,125°F (2,830°C) and it is most useful for the brazing of aluminum and magnesium and for lead welding. Because hydrogen can be safely compressed to overcome underwater pressures, oxy-hydrogen cutting torches are sometimes employed by divers on salvage operations. Mixed in small quantities with argon, hydrogen brings significant improvements in weld quality for stainless steels.

Hydrogen is also increasingly used in plastic brushing applications.



ITEM NUMBER	SIZE	VOLUME ¹		CGA CONNECTION	TYPICAL CYLINDER PRESSURE @ 15°C / 70°F
		m ³	scf		
GAS-HYD44	44	5.41	195.08	350	13 610 kPa (2015 psig)

¹ m³ @ 15°C; scf @ 70°F

UN Number: Gas - UN1049 Hazard Class: Gas - 2.1

Nitrogen N₂

Cylinder color: Light brown

Nitrogen is used in purging applications for the heating/ventilation/plumbing industries.

Large volumes of nitrogen are required by oil refineries and petrochemical industries for purging and blanketing operations.

Nitrogen is being used at a sharply increasing rate by the food industry. In its liquid form, nitrogen is employed to quick-freeze a wide variety of perishable foods, some of which cannot be successfully frozen by conventional methods. In its gaseous form, nitrogen is used in storage facilities for fresh produce to delay normal ripening and deterioration.

ITEM NUMBER	SIZE	VOLUME ¹		CGA CONNECTION	TYPICAL CYLINDER PRESSURES @ 15°C / 70°F
		m ³	scf		
GAS-NIT9COP	9	1.27	45.64	580	14 960 kPa (2217 psig)
GAS-NIT11	11 AL	1.53	55.32	580	14 960 kPa (2217 psig)
GAS-NIT16	16	2.48	89.54	580	16 820 kPa (2492 psig)
GAS-NIT16AL	16 AL	2.26	81.61	580	14 960 kPa (2217 psig)
GAS-NIT50	50	8.46	305.01	580	17 820 kPa (2640 psig)
GAS-NIT50XPR	50 XPR	13.03	469.79	680	30 380 kPa (4500 psig)
GAS-NITBP50XPR	16 x 50 XPR	208.43	7516.62	680	30 380 kPa (4500 psig)
GAS-NIT160LC	160 L	100.40	3620.87	Gas - 580 Liquid - 295	1585 kPa (230 psig)
GAS-NIT180LC	180 L	112.21	4046.86	Gas - 580 Liquid - 295	1585 kPa (230 psig)
GAS-NIT240LC	240 L	136.68	4929.26	Gas - 580 Liquid - 295	1585 kPa (230 psig)
GAS-NIT450LC	450 L	291.93	10527.92	Gas - 580 Liquid - 295	1585 kPa (230 psig)
GAS-NIT160LCLW	160 L	100.40	3620.87	Gas - 580 Liquid - 295	1585 kPa (230 psig)
GAS-NIT240LCLW	240 L	136.68	4929.26	Gas - 580 Liquid - 295	1585 kPa (230 psig)

¹ m³ @ 15°C; scf @ 70°F

² 16 standard cylinder BULKPAK.

UN Number: Gas - UN1066 / Liquid - UN1977 Hazard Class: Gas - 2.2 / Liquid - 2.2

