

**Nitrogen** Nitrogen is an abundant gas which forms 78% of the earth's atmosphere. Although it is only present at very low concentrations in the lithosphere, it can be found in most organic substances and is used across many industries.

It is sourced from the distillation of air through the cryogenic air separation process.

## Specifications

	Ultra High Purity	High Purity
BOC Material Code	234	034
N <sub>2</sub>	≥99.999%	≥99.99%
H <sub>2</sub> O	<2 ppm	<10 ppm
O <sub>2</sub>	<2 ppm	<10 ppm
C <sub>n</sub> H <sub>m</sub>	<1 ppm	-
CO <sub>2</sub>	<1 ppm	-
Cylinder Size - Pressure	BP - 137 bar D, E - 163 bar G2 - 200 bar	D, E, G, MAN6, MAN15, MAN16, MAN18, CRA4, CRA9 - 163 bar

## Physical Properties

Property	Value
CAS Registry Number	7727-37-9
Molecular Weight	28.014 g/mol
Boiling Point (at 1.013 bar)	-195.8°C / 77.35 K
Density (at 1.013 bar, 15°C)	1.185 kg/m <sup>3</sup>
Vapour Pressure, 0°C	-
Vapour Pressure, 20°C	-
Flammability in air (% volume)	Non-combustible
Specific Volume (at 1.013 bar, 15°C)	0.844 m <sup>3</sup> /kg

## Dangerous Goods Information

UN Number	Dangerous Goods Class
1066	2.2
NITROGEN, COMPRESSED	



## Compatibility

Legend: ✓ Good, • Fair, ✗ Avoid

Aluminium	✓	Copper	✓	Polyethylene	✓
Buna® N	✓	Kel-F®	✓	PVC	✓
Brass	✓	Monel®	✓	Stainless steel	✓
Butyl rubber	✓	Neoprene®	✓	Teflon®	✓
Carbon steel	✓	Nylon®	✓	Viton®	✓

## Industries



Auto



Chem



Energy



Food



Manuf



Medical



Metal



OEM



Petrol



Pharma



R & D



Semi

Recommended  
Cylinder Regulator\*

BASELINE®	Max. Outlet Pressure		Outlet	Product Code	
	Bar	psi		Brass	Stainless Steel
Single Stage	1	15	1/4"	M5724-516-281	M5730-507-281
			1/8"	M5724-515-281	M5730-506-281
	3.5	50	1/4"	M5725-516-281	M5731-507-281
			1/8"	M5725-515-281	M5731-506-281
	7	100	1/4"	M5726-516-281	M5732-507-281
			1/8"	M5726-515-281	M5732-506-281
	10.5	150	1/4"	M5727-516-281	M5733-507-281
			1/8"	M5727-515-281	M5733-506-281
	17	250	1/4"	M5728-516-281	M5734-507-281
			1/8"	M5728-515-281	M5734-506-281
	35	500	1/4"	-	M5735-507-281
			1/8"	M5729-515-281	M5735-506-281
Dual Stage	1	15	1/4"	M5628-516-281	M5633-507-281
			1/8"	M5628-515-281	M5633-506-281
	3.5	50	1/4"	S5629-516-281	M5634-507-281
			1/8"	M5629-515-281	M5634-506-281
	7	100	1/4"	M5630-516-281	M5635-507-281
			1/8"	M5630-515-281	M5635-506-281
	10.5	150	1/4"	S5631-516-281	M5636-507-281
			1/8"	M5631-515-281	M5636-506-281
	17	250	1/4"	M5632-516-281	M5637-507-281
			1/8"	M5632-515-281	M5637-506-281

\*Not suitable for BP size cylinder.

## Applications

## Analytical

- Carrier gas in gas chromatography
- Zero gas for analytical instruments
- Balance gas in mixtures
- Inerting of epitaxial reactors
- Superconductivity
- Liquid chromatography-mass spectrometry

## Food and Beverage

- Modified Atmosphere Packaging (MAP)
- Freezing of delicate foods

## Industrial

- Blanketing
- Purging
- Pressure transfer of flammable chemicals
- Purge or carrier gas in the semiconductor industry
- Heat treatment of metals
- Production of ammonia
- Fire extinguishing in mines
- Fill tyres to reduce wear and limit the risks of blow outs
- Cold traps to improve the efficiency of vacuum pumps
- Shrink fitting of close tolerance components
- Cryogenic grinding of plastics, rubbers and other chemical products
- Nuclear industry

## Medical

- Storage of biological materials
- Cryo surgery

