

PRODUCT DATA SHEET

Nitrogen (N₂)

Nitrogen is a colourless, odourless, non-toxic, almost totally inert gas comprising approximately 79% by volume of air. It is non-flammable and will not support combustion. Nitrogen is supplied in cylinders as a high pressure gas, or in insulated containers as a liquid.

Hazards

- High pressure compressed gas
- Asphyxiant in high concentrations.

Classifications (Nitrogen Technical)

Gas	Purity
Nitrogen technical	99,5%

Material Description	Mass (kg)	Cylinder Capacity (ℓ)	Pressure @ 20°C (Bar)	Valve Outlet Connection	Item Number
NIT TEC CYL 11,0 KG	11,0	50,0	200	3/4" BSPF right hand female	42-SE
NIT TEC CYL 4,4 KG	4,4	20,0	200	3/4" BSPF right hand female	42-JE
NIT TEC CYL 2,2 KG	2,2	10,0	200	3/4" BSPF right hand female	42-IE
NIT TEC MCP 15 X 11,0 KG	165,0	MCP	200	3/4" BSPF right hand female	42-ME15

Higher grades and purities of this product are available from Afrox
Specifications are included in the 'Special Products and Chemicals' section

Classifications (Nitrogen High Purity)

Gas	Purity
Nitrogen high purity	99,997%

Material Description	Mass (kg)	Cylinder Capacity (ℓ)	Pressure @ 20°C (Bar)	Valve Outlet Connection	Item Number
NIT HP CYL 11,0 KG	11,0	50,0	200	3/4" BSPF right hand female	98-SE
NIT HP MCP 15 X 11,0 KG	165,0	MCP	200	3/4" BSPF right hand female	98-ME15
NIT LASER GAS MCP 15 X 11,0 KG	165,0	MCP	200	3/4" BSPF right hand female	98-ME15-LAS

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Physical Data	
Appearance/odour	Colourless and odourless
Molecular weight	28,0134
Specific volume at 20°C and 101,325 kPa	861,5 l/kg
Boiling point at 101,325 kPa	-195,8°C
Critical temperature	146,9°C
Relative density (air = 1) at 1 atm and 25°C	0,967
Density, gas at 101,325 kPa and 25°C	1,1455 kg/m ³
Flammability	N/A

Uses and Features

- Among the many uses for gaseous nitrogen are flow testing, gauge calibration, plastic forming, aerosol propellant, powering air tools, mechanical agitation in photo processing, metal de-gassing, pipeline testing, pressure testing cables and the handling and transfer of flammable liquids
- To prevent the undesirable presence of oxygen, nitrogen is valuable in furnaces, metal plating and tinning, chemical processing, food packing, wine making, paint and varnish manufacture, tube manufacture, packaging and preserving rubber products and optics
- Dry nitrogen gas is used as a purging medium in drying refrigeration systems, catalytic towers in refineries, chemical processing, electronic tube and light bulb manufacture
- Wherever moisture may not be tolerated, dry nitrogen is the preferred grade
- Nitrogen is also used for the inert packaging of foods, sparging wines, pressurisation of head spaces in liquid containers and conveyance of beverages in pressurised pipe systems
- Carrier gas in chromatography, calibration gas and scientific research.

Precautions in Use

- Wear leather gloves, safety gloves and safety shoes when handling cylinders
- Use only approved pressure rated equipment
- Open cylinder valve slowly
- Close cylinder valve when not in use
- Cylinders should be secured from falling over
- Refer to MSDS for more information.

Material Compatibility

- Nitrogen is non-corrosive and the vast majority of materials are compatible provided equipment is designed to withstand process pressure.

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