

Nitrogen ECD

Product Designation	Nitrogen ECD
Physical state	gaseous, compressed
Chemical symbol	N ₂
Purity	99,999 vol.%
Other names	Nitrogenium E 941

Impurities	Maximum value
Oxygen	3 vol. ppm
Hydrocarbons	1 vol. ppm
Moisture	5 vol. ppm
Hydrochlorofluorocarbons	0,001 SF ₆ equivalent

Delivery formats

In steel cylinders and 12-cylinder bundles

Descriptions	cylinders/container volumes	Filling pressure	Content
Nitrogen ECD T50 RCyl	50 l	200 bar	9,60 m ³

Unless otherwise stated, these refer to filling pressure at 288,15K (15°C) and to content at 288,15K (15°C) and 1,013 bar.

Other delivery formats

on request

Alumini® 12, 200 Nitrogen 5.0

in static and mobile tanks: Liquid nitrogen 4.8, 5.0, 6.0, Protadur® E 941 and Secudur® N

in steel cylinders and bundles: Nitrogen 3.0, 4.0, 4.8, 5.0, 5.5, 6.0, ECD, Secudur® N and Protadur® E 941

in 300 bar technology: Nitrogen 3.0, 4.8, 5.0, Secudur® N, Protadur® E 941

Inspection certificate accompanies delivery of this product.

Properties	asphyxiant
Valve connection	DIN 477 No. 10 (W 24.32 x 1/14)
Shoulder colour	jet black (RAL 9005)
Suitable pressure regulators	WEGA range: see brochure: "Good on Top: Pressure Regulators for Specialty Gases".

Typical applications

in metrology as a purging and zero gas

in gas chromatography as a carrier gas

for inerting of atmospheres

Nitrogen ECD

Conversions

1 m ³	at 288.15 K (15°C); 1 bar	=	1,171 kg
1 m ³		=	1,447 l liquid
1 kg		=	0,854 m ³
1 kg		=	1,236 l liquid
1 l liquid	at T boiling point; 1 bar	=	0,691 m ³
1 l liquid		=	0,809 kg

Physical data:

Molar Mass	Molar mass	28,01 g mol ⁻¹
Liquid State	Boiling Point	77,35 (-195,8) K (°C)
	Heat of Evaporation	198,70 kJ kg ⁻¹
	Liquid Density	808,6 kg m ⁻³
Gaseous state	Density (at 273.15 K and 1.013 bar)	1,25 kg m ⁻³
	Density Ratio to Air (at 288.15 K and 1.013 bar)	0,97
	Specific heat (at 298.15 K and 1.013 bar)	1,04 kJ kg ⁻¹ K ⁻¹
	Thermal Conductivity (at 288.15 K and 1.013 bar)	0,0250 J s ⁻¹ m ⁻¹ K ⁻¹
Critical Point	Temperature	126,2 (-147,0) K (°C)
	Pressure	34,00 bar
	Density	314 kg m ⁻³
Triple Point	Temperature	63,2 (-210,0) K (°C)
	Vapour Pressure	0,1253 bar
	Heat of Fusion	25,8 kJ kg ⁻¹
Additional operating	Ignition Point	-- K (°C)
	Ignition Range in Air	-- vol.%
	Calorific Value to DIN 51850	-- kJ kg ⁻³

The provided data, values and information corresponds to the state of knowledge at the time of printing. They assert no claim for accuracy or completeness and in this respect do not absolve the user from their duty of verification.
 Status: 01.2013