

Specidur® Nitrogen

Product Designation	Specidur® Nitrogen
Physical state	gaseous, compressed
Chemical symbol	N ₂
Other names	Nitrogenium E 941

Impurities

	Maximum value
Carbon monoxide	1 vol. ppm
Nitrogen monoxide + nitrogen dioxide	20 Vol.-ppb
Dinitrogen monoxide	20 Vol.-ppb
Oxygen	2 vol. ppm
Hydrocarbons	50 Vol.-ppb
Ammonia	0,1 vol. ppm
Carbon dioxide	10 vol. ppm

Delivery formats

In steel cylinders and 12-cylinder bundles

Descriptions	cylinders/container volumes	Filling pressure	Content
Specidur® Nitrogen T50 RCyl	50	200 bar	9,6 m ³
Specidur® Nitrogen RBundle12	12x50	200 bar	115,2 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

Requirements according to EU regulation 2017/654, 2017/1151, 582/2011 and US standard CFR § 1065.750 fulfilled.

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

on the measurement of vehicle emissions from engines

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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

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