



Nitrous Oxide. N₂O

Product information Nitrous oxide is an oxygen precursor for silicon oxide, silicon oxynitride as well as other low-k dielectric thin films, and metallic oxides.

Characteristics Oxidiser. Colorless and odorless gas. Gas density is heavier than air.

Physical data	Molecular weight	[g/mol]	44.013
	Boiling point	at 1.013 bar [°C]	-88.48 at 14.5 psi [°F]
	Density	at 1.013 bar, 15 °C [kg/m ³]	1.873 at 1 atm., 70 °F [lb/ft ³]
	Vapor pressure	at 0 °C [bar]	37.5 at 32 °F [psi]
		at 20 °C [bar]	58.5 at 70 °F [psi]
	Flammability range in air (% volume)	Non combustible	

Product specification	Purity grade	Typical purity	Typical impurities [ppm]							
			N ₂	O ₂ +Ar	CO	CO ₂	H ₂ O	CH ₄	NO	NO ₂
	5N	≥99.999 %	3	1	1	1	1	0.5	1	1

Shipping information	UN number	CAS number	EC number	DOT label	Hazard labels required
	1070 (Compressed)	10224-97-2	233-032-0	Nonflammable	ADR Class 2, 20 30 (Refrigerated Liquid) DOT Class 2.2

Packaging information	Package options	Cylinder designation	Cylinder internal volume	Cylinder material	Cylinder diameter	Cylinder height to valve outlet	Cylinder tare weight	Fill contents	Pressure (psig) @ 70°	Valve outlet ⁽²⁾	Valve material
US	Ton container	920	446L	Steel	24 in	18 in	1100 lb	665 lb	745	CGA 712	SS
	Cylinder	302	46L	Aluminum	9 in	52 in	98 lb	65 lb	745	CGA326/ CGA712	SS
	Cylinder	152	29.5L	Aluminum	8 in	49 in	49.5 lb	40 lb	745	CGA326/ CGA712	SS
	Cylinder	32	6L	Aluminum	6.9 in	15.7 in	15 lb	6 lb	745	CGA326/ CGA712	SS
Valve and package option combinations depends on Grade.											
China/LLH	ISO Tube Trailer	Tube Trailer	11000L	Steel	610 mm	1500 mm	13680 kg	6800 kg	800	CGA 712	SS
	Ton container	470L	470L	Steel	610 mm	450 mm	1100 kg	300 kg	800	CGA 712	SS
	Cylinder	47L	47L	Steel	230 mm	1320 mm	75 kg	30 kg	800	CGA 712	SS

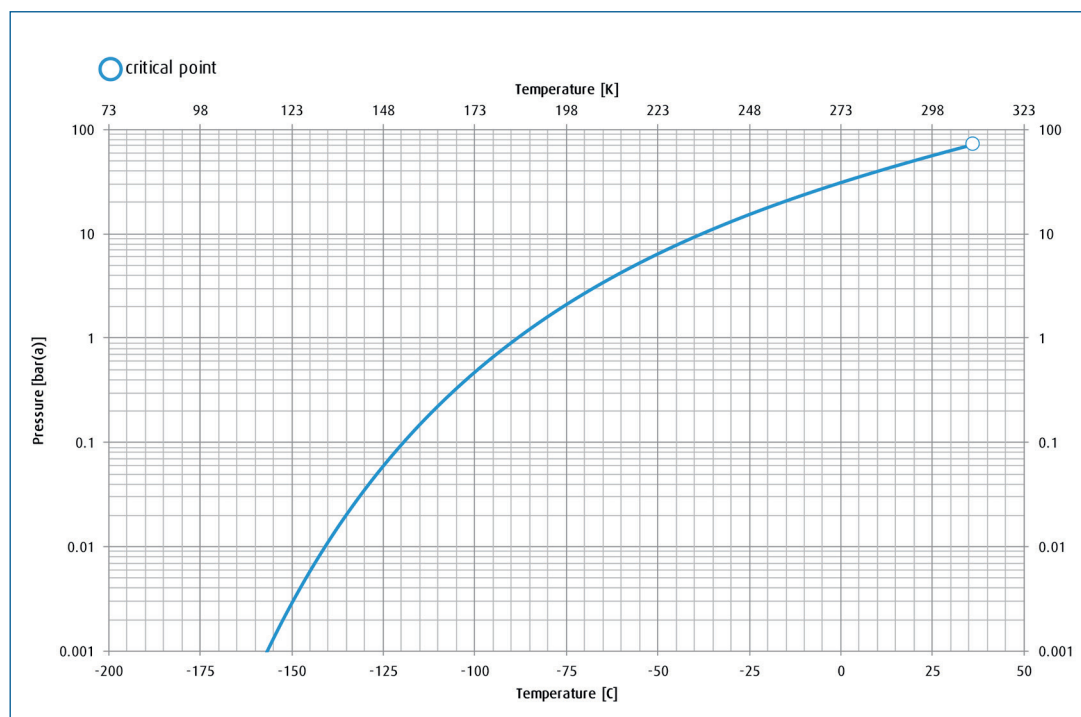
→ Nitrous Oxide. Product datasheet.

Packaging information

	Package options	Cylinder designation	Cylinder internal volume	Cylinder material	Cylinder diameter	Cylinder height to valve outlet	Cylinder tare weight	Fill contents	Pressure (psig) @ 70°	Valve outlet ⁽²⁾	Valve material
EU	Cylinder MCP	12x50	600L	Steel	237 mm	1700 mm	1000 kg	445 kg	745	DIN 11	SS
	Cylinder MCP	12x40	480L	Aluminum	230 mm	1600 mm	700 kg	360 kg	745	CGA712	SS
	Cylinder	50L	50L	Steel	237 mm	1500 mm	70 kg	37 kg	745	DIN 11	SS
	Cylinder	40L	40L	Aluminum	240 mm	1350 mm	45 kg	30 kg	745	CGA712	SS
	Cylinder	10L	10L	Steel	200 mm	110 mm	24 kg	7 kg	745	DIN 11	SS
Korea	ISO Tube Trailer (40', 6 Tube)	Tube Trailer	13800L	Steel	610 mm	1500 mm	11500 kg	10000 kg	800	CGA 712	SS
	Ton container	470L	470L	Steel	610 mm	450mm	745 kg	300 kg	800	CGA 712/ JIS22R	SS
	Cylinder	47L	47L	Steel	237 mm	1450 mm	65 kg	27 kg	800	CGA 712	SS

Please inquire about other package size availability

Vapor pressure curve



Additional information

The information, recommendations, and data contained in this publication are intended to give basic guidance for safe handling and use of gases. For more information, please refer to Safety Data Sheets. You can locate these through the [Linde Safety Data Sheet Search](#). It is essential for the safe use of gases that personnel are properly trained and are fully aware of the possible hazards. Further information and advice on any matter relating to the safe handling or use of these products may be obtained from the nearest Linde office.

Please visit www.linde.com/electronics for Linde Electronics sales offices information.