



Boron trichloride. BCl₃

Product information BCl₃ is the main gas composition in High-K and metal anisotropic plasma etch. Atomic layer etch and pulsed plasma etch. BCl₃ is mainly used for fine etching of aluminum circuits in the manufacturing process of LCD panels.

Characteristics Liquefied gas, decomposes in water to hydrogen chloride and boric acid. Forms white fumes in humid air. Pungent odor. Highly corrosive. Gas density is heavier than air.

Physical data	Molecular weight	[g/mol]	117.17	
	Boiling point	at 1.013 bar [°C]	12.5	at 14.5 psi [°F]
Density	at 1.013 bar, 15 °C [kg/m ³]	5.162	at 1 atm., 70 °F [lb/ft ³]	0.315
Vapor pressure	at 0 °C [bar]	0.63	at 32 °F [psi]	9.09
	at 20 °C [bar]	1.33	at 70 °F [psi]	19.91
Flammability range in air (% volume)	Non-combustible			

Product specification	Purity grade	Typical purity	Typical impurities [ppm]					
			N ₂	O ₂ +Ar	CO	CO ₂	COCl ₂	CH ₄
5.0N	≥99.999 %	≤4	≤1	≤0.5	≤1	≤0.5	≤0.5	≤50
5.5N	≥99.99995 %	≤1	≤0.5	≤0.5	≤1	≤0.5	≤0.5	≤25

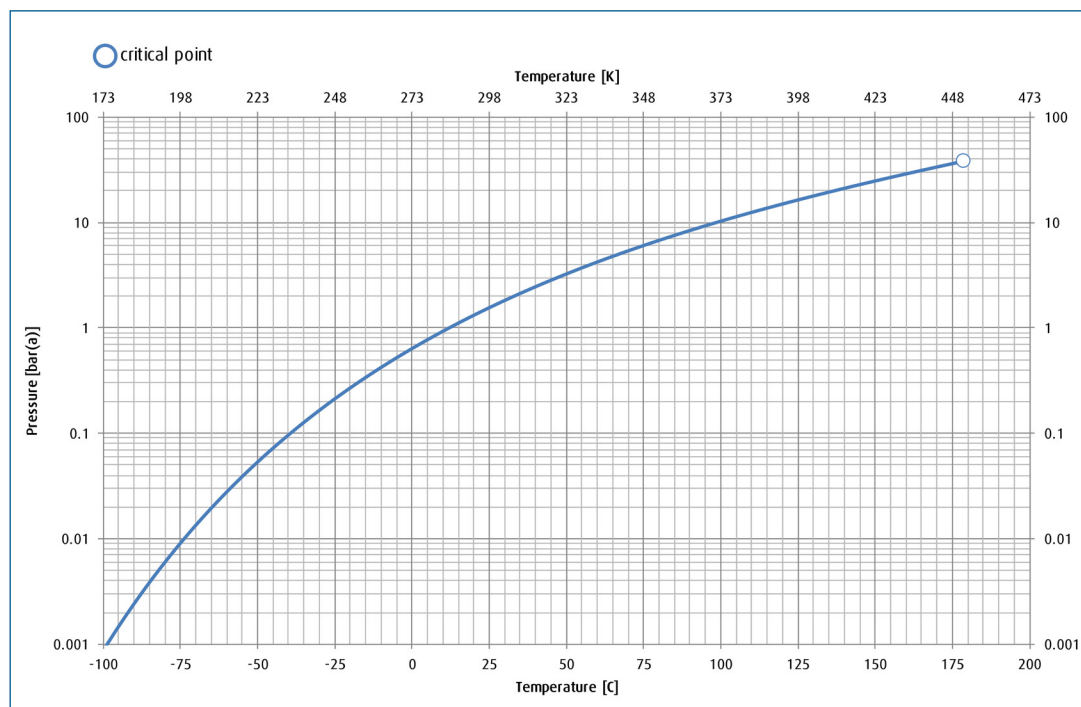
Contact our team for higher grade or different specification products.

Shipping information	UN number	CAS number	EC number	DOT label	Hazard labels required
	1741	10294-34-5	233-658-4	Poison gas	ADR Class 2, 2 TC DOT Class 2.3

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° F	Valve outlet	Valve material
US	Cylinder	209	44 L	Nickel plated steel	9 in	52 in	130 lb	110 lb	4.4	CGA 634	SS
	Cylinder	89	16L	Nickel plated steel	7 in	33.25 in	70 lb	40 lb	4.4	CGA 634	SS
	Cylinder	39	8L	Nickel plated steel	7 in	19.5 in	40 lb	20 lb	4.4	CGA 634	SS
EU	Cylinder	50L	50 L	Steel	237 mm	1530 mm	63 kg	50 kg	4.4	DIN 8	SS
	Cylinder	47L	47L	Stainless Steel	219 mm	1550 mm	48 kg	50 kg	4.4	DIN 8	SS
	Cylinder	10L	10L	Stainless Steel	142 mm	830 mm	10 kg	10 kg	4.4	DIN 8	SS
	Cylinder	10L	10L	Steel	140 mm	880 mm	12 kg	10 kg	4.4	DIN 8	SS
	Cylinder	44L	44L	C ₂ Mo steel	228 mm	1320 mm	58 kg	50 kg	4.4	CGA 660/ DISS 634	SS

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.