



Technical Products, Inc.

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Boron Nitride Grade A Material Specifications

Boron Nitride is easily machined into complex shapes. Boron Nitride is typically used in electronic, vacuum, microcircuit and high temperature furnace fixtures.

Physical Properties	Units	A
Crystalline Phase		Hexagonal BN
Color		White
Density	g/cc min	2

Mechanical Properties	Units	A
Directionality		⊥
Flexural Strength	MPa	94 65
Young's Modulus	GPa	47 74
RT Compression	MPa	143 186
Open Porosity	%	2.84
Hardness - Knoop	Kg/mm ²	20

Thermal Properties	Units	A
Directionality		⊥
Coefficient of Thermal Expansion (10-6)	25 – 400°C	3.0 3.0
	400 – 800°C	2.0 1.4
	800 – 1200°C	1.9 1.8
	1200 – 1600°C	5.0 4.8
	1600 – 1900°C	7.2 6.1
Max. Use Temperature Oxidizing / Inert	°C	850 - 1200
Thermal Conductivity @ 25°C	W/mK	30 34
Specific Heat @ 25°C	J/gK	0.86

Electrical Properties	Units	A
Directionality		⊥
Dielectric Strength	KV/mm	88
Dielectric Constant	@1 MHz	4.6 4.2
Dissipation Factor	@1 MHz	1.2E-03 3.4E-03
RT Resistivity (ohm cm)	Ω cm	>10 ¹³ >10 ¹⁴

**The information provided in this table is a compilation of publicly available data. This information is provided for comparison purposes only, and is not intended to be warrantable. Further, *Technical Products, Inc.* disclaims any and all liability from errors, in accuracies, or omissions.