Boron Nitride Grade AX05 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	AX05
Crystaline Phase		Hexagonal BN > 99%
Color		White
Density	g/cc min	1.9

Mechanical Properties	Units	AX05
Directionality		∥ ⊥
Flexural Strength	MPa	22 21
Young's Modulus	GPa	17 71
RT Compression	MPa	25
Open Porosity	%	19.3
Hardness - Knoop	Kg/mm^2	4

Thermal Properties	Units	AX05
Directionality		∥ ⊥
Coefficient of Thermal Expansion (10-6)	25 – 400ºC 400 – 800ºC 800 – 1200ºC 1200 – 1600ºC 1600 – 1900ºC	-2.3 -0.7 -2.5 1.1 1.6 0.4 0.9 0.3 0.5 0.9
Max. Use Temperature Oxidizing / Inert	ºC	850 - 2000
Thermal Conductivity @ 25ºC	W/mK	78 130
Specific Heat @ 25ºC	J/gK	0.81

Electrical Properties	Units	AX05
Directionality		∥ ⊥
Dielectric Strength	KV/mm	79
Dielectric Constant	@1 MHz	4.0 4.0
Dissipation Factor	@1 MHz	1.2E-03 3.0E-04
RT Resistivity (ohm cm)	Ω cm	$>10^{13}$ $>10^{14}$

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