Boron Nitride Grade HP 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	HP
Crystaline Phase		Hexagonal BN
Color		White
Density	g/cc min	2

Mechanical Properties	Units	HP
Directionality		∥ ⊥
Flexural Strength	MPa	59 45
Young's Modulus	GPa	40 60
RT Compression	MPa	96
Open Porosity	%	
Hardness - Knoop	Kg/mm^2	16

Thermal Properties	Units	HP
Directionality		∥ ⊥
Coefficient of Thermal Expansion (10-6)	25 – 400ºC 400 – 800ºC 800 – 1200ºC 1200 – 1600ºC 1600 – 1900ºC	0.6 0.4 1.1 0.8 1.5 0.9 2.8 2.7 - -
Max. Use Temperature Oxidizing / Inert	ºC	850 - 1150
Thermal Conductivity @ 25ºC	W/mK	27 29
Specific Heat @ 25ºC	J/gK	0.81

Electrical Properties	Units	HP
Directionality		∥ ⊥
Dielectric Strength	KV/mm	>10
Dielectric Constant	@1 MHz	4.3 4.0
Dissipation Factor	@1 MHz	1.5E-03 2.1E-03
RT Resistivity (ohm cm)	Ω cm	$>10^{13}$ $>10^{13}$