Boron Nitride PCBN2000

General Properties

Hot pressed for strength, PCBN2000 is an advanced composite, a boron nitride/silica compound delivering excellent dielectric performance and insulation. This material has excellent thermal shock resistance while delivering low thermal expansion.

PCBN2000 is easily machined and has good flexural strength for a boron nitride.

Applications

- Aerospace for electric propulsion discharge channels/Hall effect thrusters
- Plasma/corona insulators
- Plasma constraints in PVD systems
- Wear and corrosion resistance
- Ultra high vacuum insulators

Typical Properties

Properties	Unit	PCBN2000
Density	g/cm^3	2.1
CTE, RT to 1000°C (para)	10^{-6}k^{-1}	<2.5
CTE, RT to 1000°C (perp)	10^{-6}k^{-1}	<2.0
Flexural Strength (para)	MPa @25°C	>50
Flexural Strength (perp)	MPa @25°C	>50
Young's Modulus (para)	GPa	35
Young's Modulus (perp)	GPa	45
Dielectric Strength	kV/mm	>125
BN	%	43
Sio2	%	53
B203	%	<0.5

The values presented are mean and typical of those resulted from test samples. They are provided as an indication only to serve as guidance in the design of ceramic components and are not guaranteed in any way. The actual values can vary according to the shape and size of the designed component.

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