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Advanced Technical Ceramic Solutions

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 Modulus (para)	GPa	35
Young Modulus (perp)	GPa	45
Dielectric Strength	kV/mm	>125
BN	%	43
SiO ₂	%	53
B ₂ O ₃	%	<0.5

NOTE: This data shows typical values and does not represent a specification.



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