

GENERAL PROPERTIES

BN8000 is a high-purity boron nitride material that possesses good thermal shock resistance, high electrical resistivity, excellent chemical inertness and a density of 1.3g/cc³. The material exhibits low thermal expansion, high thermal conductivity and has proven to be an excellent barrier to carbon diffusion in a variety of sintering applications.

BN8000 incorporates near-net forming & pressure-less sintering technology to be one of the most cost-effective BN component options available. The material is available in a variety of shapes (including sleeves, tubes, washers, insulators, spools, and flanges) and sizes (up to ø350mm x 200mm or 500mm x 300mm x 50mm). Additionally, Kennametal Sintec offers made-to-order parts and custom solutions upon request.



Example of BN8000 Flanges and Cylinder

PHYSICAL PROPERTIES

Property	Unit	BN8000
Temperature	°C	850, Air 2000, Inert
BN Purity	%	99
Density	g/cm ³	1.3
B ₂ O ₃	%	<0.2
CTE, RT to 1500°C	10 ⁻⁶ k ⁻¹	1.3
Specific Heat	J/gm•K	0.8
Flexural Strength	MPa at 25°C	40.1
Elastic Modulus	GPa	22
Hardness	HL	225
Thermal Conductivity	W/m ² •k	30
Dielectric Constant at 1MHz	—	4.1
Electrical Resistivity	Ω•cm	>10 ¹⁵
Chemical Inertness	—	Ar/N ₂ /H ₂ /Si/C/CH ₄

APPLICATIONS

- High-temperature and high-voltage electrical insulators
- Thyristors electrical insulators

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

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