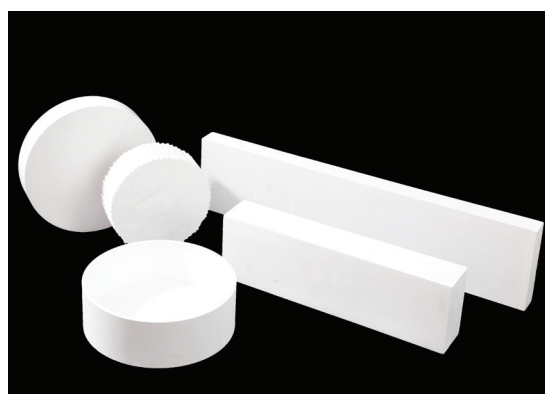


GENERAL PROPERTIES

BN9000 is a high-purity boron nitride material with a low thermal coefficient of expansion, good thermal shock resistance, high thermal conductivity, and a density of 1.6g/cc³. The material has proven to be a strong barrier to carbon diffusion and for a variety of sintering applications and atmospheres.

BN9000 incorporates near-net forming and 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 and sizes (up to 350mm x 310mm x 50mm). Additionally, Kennametal Sintec offers made-to-order parts and custom solutions upon request.



Example of BN9000 Boxes and Shapes

PHYSICAL PROPERTIES

| Property | Unit | BN9000 |
|-------------------------------|----------------------------------|---|
| Temperature | °C | 850, Air 2000, Inert |
| BN Purity | % | 99 |
| Density | g/cm ³ | 1.6 |
| B ₂ O ₃ | % | <0.1 |
| CTE, RT to 1500°C | 10 ⁻⁶ k ⁻¹ | 1.2 |
| Flexural Strength | MPa at 25°C | 22.1 |
| Elastic Modulus | GPa | 17 |
| Hardness | HL | 320 |
| Thermal Conductivity | W/m ² •k | 36 |
| Dielectric Constant at 1MHz | — | 4.6 |
| Resistivity | Ω•cm | >10 ¹⁵ |
| Chemical Inertness | — | Ar/N ₂ /H ₂ /Si/C/CH ₄ |

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

APPLICATIONS

- Insulators
- Semiconductor equipment
- Jigs for molding glass
- Nozzles and crucibles
- Paving plates

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