

General Properties

BNP-2 is a boron nitride aluminum nitride composite. The thermal conductivity of BNP-2 is 5 times that of Alumina while offering equivalent flexural strength.

Applications

- Vacuum furnace seals.
- Nuclear.
- Casting nozzles.
- High-temperature bearings.

Physical Properties

Property	Unit	BNP-2
Maximum Use Temperature	°C	1020 (oxidizing) 1900 (inert)
Young's Modulus at RT	GPa	34,1 para 75,2 perp
Volume Resistivity at RT	Ohm-cm	>10 ¹⁴ para >10 ¹⁵ perp
Specific Heat (700 °C)	J/g °C	1,500
Dielectric Strength	KV/mil	40
Hardness (Knoop)	kg/mm ²	3,42–4,91
Dielectric Constant at RT	—	7,1
Thermal Conductivity at 25 °C	W/m*K	92,6
CTE, RT to 1500 °C	10 ⁻⁶ K ⁻¹	0,57 para -0,46 perp
Flexural Strength	MPa at 25 °C	300
Compressive Strength	MPa at 25 °C	<1070
Density	g/cm ³	2,9
Open Porosity	%	0
Ca	ppm	450
Cr	ppm	60
Mg	ppm	<20
Ni	ppm	<10
Fe	ppm	<50
Si	ppm	<15
O	%	0.8

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

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