

General Properties

BNP-4 is a boron nitride silica composite. BNP-4 is completely resistant to moisture and has a MIL-I-10A grade of L542 — a test requiring immersion in water for 48 hours prior to testing at elevated frequencies.

Applications

- Crucibles.
- Refractories for glass making.
- High-temperature electrical insulators and supports.

Physical Properties

Property		Unit	BNP-4
Maximum Use Temperature		°C	1400 (inert) 850 (air)
Volume Resistivity	at RT	Ohm-cm	1,7x10 ¹⁵ para 5,1x10 ¹⁵ perp
	at 150 °C		2,4x10 ¹³ para 3,3x10 ¹³ perp
Surface Resistivity	at RT	Ohms/	8,5x10 ¹⁶
	at 150 °C		1,4x10 ¹⁵
Dielectric Strength (tested up to 25 kV)	10 mil thick	V/mil	1670 para 65748 perp
	25 mil thick		>1000 para >39370 perp
Dielectric Constant (@ 1MHz)	at RT	—	4,21 para 3,87 perp
Microwave Frequency (8.8 GHz)	at RT	—	3,86 para 4,08 perp
Dissipation Factor (Loss Tangent)	1 MHz at RT	—	0,0016 para 0,0035 perp
	1 MHz at 150 °C		0,0017 para 0,0055 perp
	8.8 GHz at RT		0,0011 para 0,0005 perp
Loss Factor	1 MHz at RT	—	0,0067 para 0,0140 perp
	1 MHz at 150 °C		0,0230 para 0,0077 perp
	8.8 GHz at RT		0,0042 para 0,0020 perp
BN		%	<40
SiO ₂		%	<60

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

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SALES OFFICES

Americas

Phone: 203 513 2860
americas.sintec@kennametal.com

United Kingdom (UK)

Phone: +44 0 1633 63 65 00
emea.sintec@kennametal.com

Europe/Middle East/Africa

Phone: +49 0 8861 2308 0
emea.sintec@kennametal.com

Asia Pacific

Phone: 852 2572 8991
ap.sintec@kennametal.com

China

Phone: +86 21 3718 0518
ap.sintec@kennametal.com

