



### Boron Nitride Material Properties & Typical Applications

Grade	BN99	BN-A	BN-B	BN-C	BN-D	BN-E
Compositions	BN > 99%	BN+AL+SI	BN+ZR+Al	BN+SiC	BN+ZrO2	BN+AlN
Color	White	White Graphite	White Graphite	Greyish- Green	White Graphite	Greyish- Green
Density(g/cm <sup>3</sup> )	1.9	2.20-2.30	2.25-2.35	2.40-2.50	2.80-2.90	2.80-2.90
25°C Resistivity (Ω • cm)	>10 <sup>14</sup>	>10 <sup>13</sup>	>10 <sup>13</sup>	>10 <sup>12</sup>	>10 <sup>12</sup>	>10 <sup>13</sup>
Max Service Temp.(°C)						
● Oxygen	850	900	900	900	900	900
● Longstanding	1800	1750	1750	1800	1800	1750
● In High Vacuum	2000	1750	1750	1800	1800	1750
● Inert Gas(N2,AR2)						
Three-point Flexural Strength(Mpa)	35	65	65	80	90	90
Compressive Strength(Mpa)	85	145	145	175	220	220
Coefficient of Thermal Expansion 25~1000°C (10 <sup>-6</sup> /K)	1.8	2.0	2.0	2.8	3.5	2.8
Thermal Conductivity @ 25°C (W/mK)	78 para 130 perp	78 para 130 perp	78 para 130 perp	85 para 140 perp	85 para 140 perp	190 para 260 perp
High Temp. Electric Furnace Accessories (High Temp. Insulating Tube, etc.)	√	√	√	√	√	√
Metal Evaporation Crucible	√					√
Accessories for melting metals and glasses	√	√	√	√	√	√
Mould Accessories for Melting of Precious Metals and Special Alloys			√			√
High Temperature High-Loaded Supporting Components			√		√	√
Transfer Tube and Nozzle for Melting Metals	√	√	√	√	√	√