

Boron Nitride Material Properties-SU0012

Properties	Unit	UHB	HB	BC	BMS	BMA	BSC	BMZ	BAN	BSN
Main Composition	-	BN>99.7%	BN>99%	BN>97.5%	BN+SiO ₂	BN+Al ₂ O ₃	BN+SiC	BN+ZrO ₂	BN+AlN	BN+Si ₃ N ₄
Color	-	White	White	White	White Graphite	White Graphite	Greyish-Green	White Graphite	Greyish-Green	Gray Black
Density	g/cm ³	1.6	2	2.0~2.1	2.2~2.3	2.25~2.35	2.4~2.5	2.8~2.9	2.8~2.9	2.2~2.3
Three-Point Bending Strength	MPa	18	35	35	65	65	80	90	90	/
Compressive Strength	MPa	45	85	70	145	145	175	220	220	400~500
Thermal Conductivity	W/(m·k)	35	40	32	35	35	45	30	85	20~22
Thermal Expansion Coefficient (20~1000°C)	10 ⁻⁶ /K	1.5	1.8	1.6	2	2	2.8	3.5	2.8	/
Max Using Temperature In Atmosphere In Inactive Gas In High Vacuum (Long Time)	°C	900 2100 1800	900 2100 1800	900 2100 1900	900 1750 1750	900 1750 1750	900 1800 1800	900 1800 1800	900 1750 1750	900 1750 1700
Room Temperature Electric Resistivity	Ω·cm	>10 ¹⁴	>10 ¹⁴	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹²	>10 ¹²	>10 ¹³	/
Typical Application	-	Nitrides Sintering	High Temperature Furnace	High Temperature Furnace	Powder Metallurgy	Powder Metallurgy	Powder Metallurgy	Metal Casting	Powder Metallurgy	Metal Casting
High Temperature Electrical Furnace Components	-	-	√	√	√	√	√	√	√	√
Metal Vaporize Crucible			√	√					√	√
The Container of Metal or Glass Melting	-	√	√	√	√	√	√	√	√	√
The Casting Mould Components of The Precious Metal and Special Alloy.	-	-	-	√	-	√	-	-	√	√
High Temperature Support Part	-	-	-	-	-	√	-	√	√	√
Nozzle and Transport Tube of The Melting Metal	-	-	√	√	√	√	√	√	√	√
Nitrides Sintering (Sagger and Setter Plate)	-	√	-	-	-	-	-	-	-	-

Remark: The value is just for review, different using conditions will have a little difference.