

Technical Data Sheet

Product Name: Silicon Nitride Welding Rod
Catalog No.: SC0911
Appearance/Color: Black Solid
Shape: Rod
Purity: 97%~99%



Properties

Properties	Value	Unit
Color	Grey	-
Density	3.21	g/cm ³
Compressive Strength	3000	MPa
Flexural Strength	800	MPa
Weibull-Modulus m	15	-
Fracture Toughness K _{IC}	6.5	MPa m ^{1/2}
Young's Modulus E	320	GPa
Poisson Ratio	0.28	-
Hardness Vickers (HV 1)	16	GPa
Thermal Properties		
Maximum Temperature		
Inert Gas	1200	°C
Air	1100	°C
Thermal Conductivity	25	
@ 20°C	28	W/mK
@ 1000	16	W/mK
Thermal Expansion		
20–100°C	2	10 ⁻⁶ /K
20–1000°C	3.5	10 ⁻⁶ /K
Thermal Shock parameter R1	600	K
Thermal Shock parameter R2	15	W/mm
Electrical Properties		
Resistivity at 20°C	10 ¹²	Ωcm
Resistivity at 800°C	10 ⁷	Ωcm
Dielectric constant	6	1 MHz

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By..... *W. J. ...*