



Silicon Nitride Tube

Silicon Nitride Tube is a covalent bond compound with high strength, low density, and high temperature resistance. Nextgen Advanced Materials supplies the Silicon Nitride Tube with high quality and fast delivery. Meanwhile, the customization is available.

Product Description

Nextgen Advanced Materials INC is manufacturer & supplier who mainly produces Silicon Nitride Tube with many years of experience. Hope to build business relationship with you. Silicon nitride tube is made of a high-melting-point ceramic material that is extremely hard and relatively chemically inert. Si₃N₄ is a man-made compound synthesized through several different chemical reaction methods. Due to the even performance in high temperature, Si₃N₄ is a commonly used ceramic material in the metallurgical industry. It has excellent thermal shock resistance due to the microstructure. The creep and oxidation resistance of Si₃N₄ is also superior, its low thermal conductivity and high wear resistance also make it an outstanding material that can withstand conditions of most industrial applications.



Specification

Color	Grey
Mechanical Properties	
Density	3.21 g/cm ³
Compressive Strength	3000 MPa
Flexural Strength	800 MPa

Weibull-Modulus m	15
Fracture Toughness K _{1c}	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
Maximum Temperature (Air)	1100°C
Thermal Conductivity @ 20°C	28 W/mK
Thermal Conductivity @ 1000°C	16 W/mK
Thermal Expansion (20–100°C)	2*10 ⁻⁶ /K
Thermal Expansion (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 MHz