

■ **Introduction:**

Si3N4 Silicon nitride ceramic sliding sleeve is a kind of high performance mechanical seal material, with strong wear resistance, corrosion resistance and high temperature resistance. Si3N4 ceramic sliding sleeve is made of silicon nitride powder, sintered at high temperatures. Silicon nitride ceramic sleeve are widely used in various mechanical equipment, such as centrifugal pumps, mixers, compressors, mechanical seals and other fields. Its advantages include abrasion resistance, corrosion resistance, high temperature resistance, high hardness, high strength, low thermal expansion coefficient and good insulation performance.

■ **Technical data sheet:**

Properties	Unit	Data
Si3 N4 Content	%	≧92%
Density	g/cm <sup>3</sup>	≧3.1
Relative Density	g/cm <sup>3</sup>	>99.6
Elasticity Modulus	Gpa	300-500
Crushing Load Ratio	(25℃)%	≧45
Hardness	(Hv)Mpa	1800-2000
Fracture Toughness	Mpa•m <sup>1/2</sup>	7.0-8.5
Flexural Strength	Mpa	≧600
Poisson Ratio	/	0.25
Coefficient of linear expansion	10 <sup>-6</sup> K <sup>-1</sup>	3.2-3.4
Heat Conductivity	W•(M•K) <sup>-1</sup>	20-25
Surface smoothness	/	≤0.3
Electrical isolation	KV	≧20
Acid&Alkali Resistance	/	excellent
Magnetism	/	Without
Working Temperature	℃	1400

■ **Advantages:**

1. Good oxidation resistance: Sliding sleeve with Si3N4 material have good oxidation resistance and can be used in high temperature environment for a long time
2. Good thermal conductivity: the thermal conductivity of Si3N4 ceramic sliding drivepipe is very high, which can transfer heat energy quickly and reduce the temperature of friction parts.
3. High density: The density of silicon nitride ceramics can reach 3.2g/cm<sup>3</sup>, which is stronger than ordinary ceramic materials.
4. Good corrosion resistance: Sliding sleeve with Si3N4 material have strong acid and alkali resistance, high temperature resistance and corrosion resistance, can be used in harsh working environment for a long time.

