

■ Introduction:

Si3N4 Silicon nitride thermocouple protection tube is a kind of tubular ceramic material used to protect the thermocouple. Silicon nitride thermocouple protection tube has high temperature, corrosion resistance, wear resistance, impact resistance and other advantages, suitable for high temperature, strong corrosion environment temperature measurement.

The production process of Si3N4 thermocouple protection tube mainly includes raw material treatment, forming, sintering, processing and other steps. The protective tube has high hardness and strength, which can effectively protect the thermocouple from damage.

Thermocouple protection tube with Si3N4 material is widely used in the field of high temperature measurement in metallurgy, chemical industry, electric power and other industries.

■ Technical data sheet:

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

■ Advantages:

1. High temperature resistance: Silicon nitride thermocouple protection tube can bear high temperature environment, the highest use temperature can reach 1800℃.
2. Wear resistance: Si3N4 thermocouple protection tube has excellent hardness and wear resistance, and can be used in high-speed fluids for a long time.
3. High safety: Thermocouple protection tube with Si3N4 material non-toxic, tasteless, non-radioactive, safe and reliable.
4. High accuracy: Silicon nitride tube for Temperature Measurement can provide high precision temperature

Si3N4 Silicon nitride thermocouple protection tube
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measurement with less error.

