

■ **Introduction:**

Wear resistant silicon nitride ceramic tile plate is a kind of high temperature ceramic material, Silicon nitride lining tile made of silicon nitride powder by pressing, sintering and other processes. Si₃N₄ ceramic lining plate has the characteristics of high hardness, high strength, high wear resistance, high temperature resistance, corrosion resistance and so on. Wear resistant Si₃N₄ tile is widely used in mechanical engineering, chemical industry, electronics, petroleum, metallurgy, aerospace and other fields.

■ **Technical data sheet:**

Properties	Unit	Data
Si ₃ N ₄ 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 hardness: It has a Mohs hardness of 9.5, which is stronger than ordinary ceramics and metals
2. High purity: It has excellent insulation and thermal conductivity.
Corrosion resistance, with good acid and alkali corrosion resistance, can be used in corrosive environment for a long time.
3. Good wear resistance : with good wear resistance, can work in high speed friction and wear environment for a long time.

