

## Properties of Silicon Nitride

	Unit	Value
Chemical Composition		Si <sub>3</sub> N <sub>4</sub>
<b><u>Mechanical</u></b>		
Density	g/cm <sup>3</sup>	3.23
Porosity	%	0.5>
Modulus of Rupture, RT	Mpa	980
Young's Modulus	Gpa	300
Poisson's Ratio		0.29
Hardness, Hv	Gpa	16.2
Fracture Toughness	Mpa√m	6
<b><u>Thermal</u></b>		
Thermal Expansion Coefficient	K	3.4 X 10 <sup>-6</sup>
Thermal Conductivity, RT	W/m·K	16
Thermal Shock Resistance, ΔT	°C	650