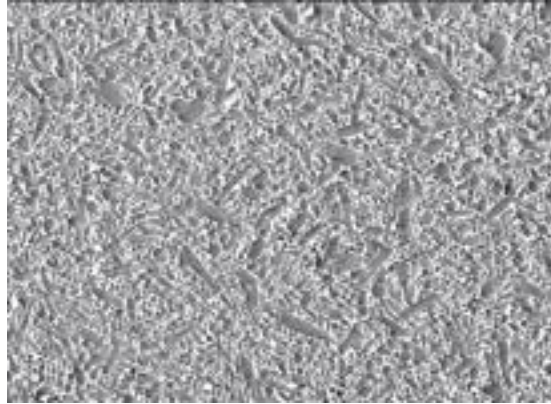


Silicon Nitride Typical Physical Properties



Physical Property	Units	Typical Value
Composition	-	Si <sub>3</sub> N <sub>4</sub>
Grain Size	μm	1 - 5
Density	g/cc	3.23
Hardness (Vickers)	HV <sub>0.3</sub> kg/mm <sup>2</sup>	1400
Compressive Strength	MPa	3500
Flexural Strength	MPa	950
Weibull Modulus	-	11
Fracture Toughness	MPa-m <sup>1/2</sup>	8
Poisson's Ratio	-	0.23
Tensile Strength	MPa	400
Modulus of Elasticity	GPa	290
Thermal Conductivity	W/mK	28
Coefficient of Thermal Expansion 20 - 1000°C	1 x 10 <sup>-6</sup> /°C	3.0
Thermal Shock Resistance	ΔT°C	900
Electrical Resistivity	Ω- cm	10 <sup>12</sup>
Dielectric Constant (1MHz)		8

All properties are at room temperature (20°C) unless otherwise stated.