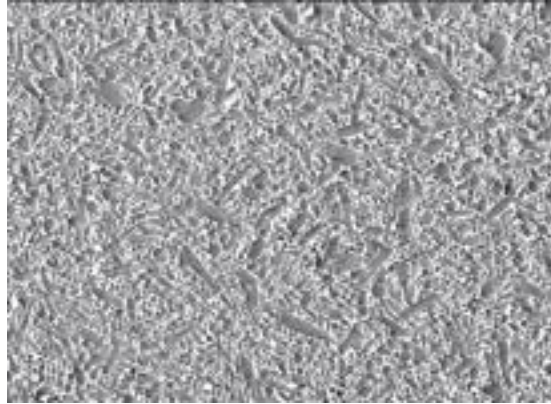


Silicon Nitride Typical Physical Properties



Physical Property	Units	Typical Value
Composition	-	Si ₃ N ₄
Grain Size	μm	1 - 5
Density	g/cc	3.23
Hardness (Vickers)	HV _{0.3} kg/mm ²	1400
Compressive Strength	MPa	3500
Flexural Strength	MPa	950
Weibull Modulus	-	11
Fracture Toughness	MPa-m ^{1/2}	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 ⁻⁶ /°C	3.0
Thermal Shock Resistance	ΔT°C	900
Electrical Resistivity	Ω- cm	10 ¹²
Dielectric Constant (1MHz)		8

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