



PROPERTIES OF ALUMINA CERAMIC TILE

Property	SI Units (English Units)	
Alumina Content	weight %	90%
Surface Finish: As Fired	mm (m'in)	1.6 (63)
Density	g/cm ³ (lbs./ft. ³)	3.52 (215)
Young's Modulus, 20°C	GPa (10 ⁶ psi)	270 (39)
Shear Modulus, 20°C	GPa (10 ⁶ psi)	110 (16.0)
Hardness, Vickers, 20°C	GPa (Kg/mm ²)	9.0 (918)
Flexural Strength, 20°C	MPa (10 ³ psi)	275 (40)
Weibull Modulus, 20°C		24
Compressive Strength, 20°C	GPa (10 ³ psi)	1.77 (256)
Fracture Toughness, 20°C	MPa m ^{1/2}	3.75
Thermal Conductivity, 20°C	W/m·K	18
Thermal Expansion, 20° -800°C	x10 ⁻⁶ /°C (°F)	8.30 (4.61)
Thermal Shock Resistance, T _c	°C (°F)	250° (482°)
Maximum Use Temperature	°C (°F)	1250° (2282°)
Water Absorption		None
Gas Permeability		None
Grain Size (Equivalent Diameter)	Φ (m'in)	3.4 (118-158)