

Alumina – 99.8% Dense Aluminum Oxide

Alumina Ceramics have excellent electrical, wear resistant, and high temperature properties. Our Alumina products also exhibit excellent mechanical strength, and can operate at safe operating temperatures up to 1650 C. Typical applications include, but are not limited to, high temperature thermocouple insulators, Resistance Temperature Detector (RTD's), Differential Thermal Analysis (DTA's) components, electrical heating elements, fuses, igniters, resistors, stand offs, thermocouple cores, load banks, ovens, furnaces, connectors, knife sharpeners, substrates, heat sinks, sensors and spacers

Mechanical, Electrical, Thermal and Physical Properties

Material Grade 99.8% Alumina Oxide

Physical Properties

Water Absorption (%)	impervious:0.00
Density (g/cc)	3.9
Color	White

Mechanical Properties

Flexural Strength (1K PSI)	55
Compressive Strength (1K PSI)	350
Tensile Strength (1K PSI)	25
Hardness (Moh's Scale)	9
Impact Resistance (Inch-Lbs.)	7

Electrical Properties

Dielectric Strength (Volts/Mil)	250
Dielectric Constant (@1MHz)	9
Loss Index (@1MHz)	0.001

Thermal Properties

C.O.T.E. (20-650 C)	7.9×10^{-6}
Safe Operating Temperature (C)	1650
Thermal Conductivity (W/m-C)	30

Note: This information is for design guidance only. Du-Co will not guarantee this information as absolute values. Various geometries can affect properties