

Material characteristics

Material

Alumina ceramics

Type

A-997

Short description

Aluminiumoxide ceramics

Chemical Analysis (in Mass %)

Al₂O₃ > 99,7

Table of Characteristics

Density	g/cm ³	3,9
Porosity	%	0
Average Grain Size	µm	5

Mechanical Properties

Bending Strength (4 pt.)	MPa	340
Modulus of Elasticity	GPa	380
Fracture Toughness	MPa m ^{1/2}	4,3

Thermal Properties

Maximum Working Temperature	°C	to 1650
Coefficient of Thermal Expansion (20 - 1000° C)	10 ⁻⁶ K ⁻¹	8,5
Thermal Conductivity at 100 °C	W/mK	22

Electrical Properties

Specific Resistance at 20° C	Ωcm	10 ¹⁴
Dielectric Strength	kV/mm	> 25

These values are typical ceramic material properties and may vary according to product configuration and manufacturing process.