

MATERIAL DATA SHEET

Material type: Alumina

A0479T
Properties of Microstructure

Alumina Content		%	99,5
Density	JIS R 1634	g/cm ³	3,95
Water Absorption		%	0
Mean Grain Size		µm	-

Mechanical Properties

Hardness (HV 9.807N)	JIS R 1610	GPa	16,3
Compressive strength	JIS R 1608	MPa	
Flexural strength	JIS R 1601	MPa	470
Modulus of Elasticity	JIS R 1602	GPa	390
Poisson's ratio	JIS R 1602		
Fracture toughness	JIS R 1607	MPa*m ^{1/2}	

Thermal Properties

Specific Heat 20°C	JIS R 1611	J/gK	
Thermal Conductivity	JIS R 1611	W/mK	30
Expansion coefficient 40-400°C	JIS R 1618	10 ⁻⁶ /K	7,6
Expansion coefficient 40-800°C	JIS R 1618	10 ⁻⁶ /K	
Thermal Shock Temperature Difference (in water)	JIS R 1648	°C	

Electrical Properties

Dielectric strength	JIS C 2141	kV/mm	13
Specific Resistance 20°C	JIS C 2141	Ω•cm	>10 ¹²
Specific Resistance 300°C	JIS C 2141	Ω•cm	
Specific Resistance 500°C	JIS C 2141	Ω•cm	
Dielectric constant (1 MHz)	JIS C 2141		10,2
Dielectric Loss Angle (1 MHz)	JIS C 2141	10 ⁻⁴	
Typical Colour			

The values are typical material properties and may vary according to products configuration and manufacturing process.