KYOCERA Fineceramics Solutions GmbH
Steinzeugstraße 92, 68229 Mannheim
Tel. +49 621 40547-500
www.kyocera-solutions.de

MATERIAL DATA SHEET

Material type: Aluminium Nitride

AN2000

Properties of Microstructure

Alumina Content		%	-
Density	JIS R 1634	g/cm³	3.2
Water Absorption		%	0
Mean Grain Size		µm	-

Mechanical Properties

Hardness (HV 9.807N)	JIS R 1610	GPa	11.2
Compressive strength	JIS R 1608	MPa	-
Flexural strength	JIS R 1601	MPa	220
Modulus of Elasticity	JIS R 1602	GPa	310
Poisson's ratio	JIS R 1602		0.24
Fracture toughness	JIS R 1607	$MPa*m^{1/2}$	-

Thermal Properties

Specific Heat 20°C	JIS R 1611	J/gK	0.72
Thermal Conductivity	JIS R 1611	W/mK	67
Expansion coefficient 40-400°C	JIS R 1618	10^{-6}/K	4.6
Expansion coefficient 40-800°C	JIS R 1618	10^{-6}/K	5.2
Thermal Shock Temperature Difference (in water)	JIS R 1648	°C	-

Electrical Properties

Dielectric strength	JIS C 2141	kV/mm	16
Specific Resistance 20°C	JIS C 2141	Ω•cm	$>10^{14}$
Specific Resistance 300°C	JIS C 2141	Ω•cm	10^{11}
Specific Resistance 500°C	JIS C 2141	Ω•cm	10^{9}
Dielectric constant (1 MHz)	JIS C 2141		8.5
Dielectric Loss Angle (1 MHz)	JIS C 2141	10^{-4}	2
Typical Colour			ivory

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