



DATA SHEET

Machinable Glass Ceramic (MACOR)

Description:

MACOR machinable glass ceramic has a continuous use temperature of 800°C and a peak temperature of 1000°C. It is non-wetting, exhibits zero porosity, and won't deform. It is an excellent insulator at high voltages, various frequencies, and high temperatures. When properly baked out, it won't outgas in vacuum environments.

Physical Properties

PROPERTY	TEST	UNITS	MACOR
Colour			White
Density	ASTM-C20	g/cc	2.52
Porosity	ASTM-373	%	0
Flexural Strength (20°C)	ASTM-F417	KPSI	13
Compressive Strength (20°C)	ASTM-C773	KPSI	50
Hardness	KNOOP 1000 gm	KNOOP	250
Thermal Conductivity (20°C)	ASTM-C408	W/mK	1.46
Coefficient of Thermal Expansion (25-1000°C)	ASTM-C372	1X10 ⁻⁶ /°C	9.3
Maximum No Load Temperature		°C	1000
Thermal Shock Resistance T _c		°C	200
Dielectric Strength	ASTM-D116	Ac-kV/mm	10
Dielctric Constant (1 MHz)	ASTM-D150		6.03
Dielectric Loss (1 MHz)	ASTM-D150		0.0047
Volume Resistivity 25°C	ASTM-D1829	Ohm-cm	>10 ¹⁶

Production Capabilities

- Lapping & polishing to 2 microinch Ra
- Manual, CNC and high precision machining

Please note that all values quoted are based on test pieces and may vary according to component design. These values are not guaranteed in anyway whatsoever and should only be treated as indicative and for guidance only.