

Machinable Ceramics – Typical Properties

Composition		Machinable Cordierite	Machinable Alumina	Machinable Glass Ceramic
Al ₂ O ₃	%	40	90	15
SiO ₂	%	50	10	50
MgO	%	8		20
K ₂ O	%			10
Property				
Max Service Temperature	°C (°F)	1300 (2350)	1350 (2450)	1000 (1800)
Bulk Density	g/cm ³	1.0	1.8	2.5
Open Porosity	%	60	50	<0.5
Modulus of Rupture (room Temp)	MPa	7	10	100
Modulus of Elasticity	GPa	15	20	65
Thermal Conductivity	W/mK	0.5		65
Thermal Expansion (20-1000°C)	x10 ⁻⁶ /K	3	7	7
KIC Fracture Toughness	MPam ^{1/2}			1.5
Volume Resistance	Ωcm			<10 ¹⁴
Dielectric Constant	-			6
Dielectric Strength	kV/mm			15

Machining ceramics can generate airborne dust that is hazardous to health. Cutting machines should be enclosed where possible, with suitable dust extraction equipment used. Dust masks are recommended for infrequent or small jobs.

This information is given in good faith but does not constitute a specification or guarantee.