

CeramTec GRADE A LAVA Machinable Ceramic

Category : Ceramic , Machinable Ceramic

Material Notes:

GRADE A LAVA is a machineable ceramic that exhibits good electrical and heat resistance. It is excellent in applications where close tolerances must be held. This material is available in a variety of shapes and sizes.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CeramTec-GRADE-A-LAVA-Machinable-Ceramic.php

Physical Properties	Metric	English	Comments
Density	2.30 g/cc	0.0831 lb/in ³	DIN EN 623-2 / ASTM-C373 / ASTM-C20
Water Absorption	2.0 - 3.0 %	2.0 - 3.0 %	DIN EN 623-2 / ASTM-C373

Mechanical Properties	Metric	English	Comments
Vickers Microhardness	<= 400	<= 400	HV 0.5; DINV ENV 843-4
Tensile Strength at Break	17.2 MPa	2490 psi	ACMA Test #4 / DIN EN 843-1
Flexural Strength	61.9 MPa	8980 psi	20 x 40 mm
Compressive Strength	275 MPa	39900 psi	ASTM C-773-88 / DIN 51067T1

Thermal Properties	Metric	English	Comments
CTE, linear	3.30 $\mu\text{m}/\text{m}\cdot\text{C}$	1.83 $\mu\text{in}/\text{in}\cdot\text{F}$	
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	
	3.60 $\mu\text{m}/\text{m}\cdot\text{C}$	2.00 $\mu\text{in}/\text{in}\cdot\text{F}$	
	@Temperature 20.0 - 1000 °C	@Temperature 68.0 - 1830 °F	
	3.60 $\mu\text{m}/\text{m}\cdot\text{C}$	2.00 $\mu\text{in}/\text{in}\cdot\text{F}$	
	@Temperature 20.0 - 600 °C	@Temperature 68.0 - 1110 °F	ASTM-C373
Thermal Conductivity	1.60 W/m-K	11.1 BTU-in/hr-ft ² -°F	DIN EN 821-2 / ASTM-C408
Maximum Service Temperature, Air	1000 °C	1830 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	ASTM-D257
	5.3	5.3	

Dielectric Constant Electrical Properties	Metric @Frequency 1.00e+6 Hz	English @Frequency 1.00e+6 Hz	IEC 672-1 / ASTM-C150 Comments
Dielectric Strength	3.15 kV/mm	80.0 kV/in	6.35 mm (1/4") IEC 672-1
Dissipation Factor	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	
Dielectric Loss Index	0.053 @Frequency 1.00e+6 Hz	0.053 @Frequency 1.00e+6 Hz	IEC 672-1 / ASTM-D149,150

Descriptive Properties	Value	Comments
Color	Pink	
Te Value (°C)	620	

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