

Accuratus MACOR Machinable Glass Ceramic

Category : Ceramic , Glass , Glass Ceramic , Machinable Ceramic

Material Notes:

Macor is cast as a two phase glass. After casting, it is heat treated causing crystallization of one phase giving rise to its glass-like and ceramic-like characteristics. Key Properties of MACOR: Machinable Glass Ceramic; Low thermal conductivity; Low dielectric constant; High electrical resistance; Excellent resistance to high voltage puncture; Easily machined; Hermetic with no post-machining firing required. Typical Uses of MACOR: Machinable Glass Ceramic; Electrical spacers in vacuum systems; Thermal insulators in heated or cooled assemblies; High intensity lamp reflectors; Crystal supports; Laser cavity components; Microcircuit and photonics packaging. General MACOR Machinable Glass Ceramic Information: Macor exhibits good thermal shock resistance and mechanical toughness when compared to conventional glasses with similar thermal and mechanical properties. Macor is usable in an air atmosphere to 1000° C. In vacuum systems, where the temperature exceeds 600° C, fluorine evolution will occur manifesting itself as boron trifluoride or hydrofluoric acid. Macor is attacked by halogen acids at elevated temperatures. It is significantly more resistant to NaOH. Alkali salts have a negligible corrosion effect. Macor is easily machined using standard metal working tools. It is fully dense and hermetic requiring no firing after machining to develop its physical properties. Tolerances of less than 10 microns (.0005") are easily maintained. Information provided by Accuratus.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Accuratus-MACOR-Machinable-Glass-Ceramic.php

Physical Properties	Metric	English	Comments
Density	2.52 g/cc	0.0910 lb/in ³	
Porosity	0.00 %	0.00 %	

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	66.9 GPa	9700 ksi	
Flexural Strength	94.0 MPa	13600 psi	
Compressive Strength	345 MPa	50000 psi	
Poissons Ratio	0.29	0.29	
Fracture Toughness	1.53 MPa-m ^{1/2}	1.39 ksi-in ^{1/2}	
Shear Modulus	25.5 GPa	3700 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	12.6 µm/m-°C	7.00 µin/in-°F	
Specific Heat Capacity	0.790 J/g-°C	0.189 BTU/lb-°F	
Thermal Conductivity	1.50 W/m-K	10.4 BTU-in/hr-ft ² -°F	

Maximum Service Temperature, Air Thermal Properties	1000 °C Metric	1830 °F English	no load Comments
--	-------------------	--------------------	---------------------

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+14$ ohm-cm	$\geq 1.00\text{e}+14$ ohm-cm	
Dielectric Constant	6.0 @Frequency 1000 Hz	6.0 @Frequency 1000 Hz	
Dielectric Strength	40.0 kV/mm	1020 kV/in	
Dielectric Loss Index	0.0050 @Frequency 1000 Hz	0.0050 @Frequency 1000 Hz	

Descriptive Properties	Value	Comments
Color	White	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China