

Mykroy/Mycalex MM 800 Machining Grade Glass-bonded Mica Composite

Category : Ceramic , Glass , Glass Ceramic , Machinable Ceramic

Material Notes:

MM 800 (formerly MM 1600) is a compression molded glass mica composite that is the perfect alternative to high performance plastics where high temperature, good dielectric strength and good arc resistance are required. This material is softer than other high temperature machinable ceramics allowing for the fabrication of intricate or complex shapes. It can be drilled or tapped and can accommodate helical inserts. In addition, no post firing is required after fabrication. Product Benefits: Higher operating temperature Exceptional dimensional stability High compressive strength Higher thermal shock resistance Completely inorganic Does not burn or outgas Impervious to moisture, oils, and gases Withstands thermal cycling Low thermal conductivity High dielectric strength Low electrical loss High arc resistance Vacuum tight Can be glued with epoxy, sealing glass, or ceramic adhesives Synthetic Mica Filler Glass bonded mica specification ASTM D1049. Typical data below provided by Mykroy/Mycalex Ceramics.

Order this product through the following link:

http://www.lookpolymers.com/polymer_MykroyMycalex-MM-800-Machining-Grade-Glass-bonded-Mica-Composite.php

Physical Properties	Metric	English	Comments
Density	2.74 g/cc	0.0990 lb/in ³	
Water Absorption	0.00 %	0.00 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell A	47	47	
Hardness, Rockwell H	90	90	
Tensile Strength at Break	41.4 MPa	6000 psi	
Modulus of Elasticity	79.3 GPa	11500 ksi	
Flexural Strength	93.1 MPa	13500 psi	
Compressive Strength	276 MPa	40000 psi	
Izod Impact, Notched	0.961 J/cm	1.80 ft-lb/in	

Thermal Properties	Metric	English	Comments
CTE, linear	9.00 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	5.00 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 25.0 $^\circ\text{C}$	@Temperature 77.0 $^\circ\text{F}$	
	10.46 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	5.811 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 250 $^\circ\text{C}$	@Temperature 482 $^\circ\text{F}$	
	10.69 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	5.939 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	

Thermal Properties	@Temperature 500 °C Metric	@Temperature 932 °F English	Comments
	15.81 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	8.783 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 750 °C	@Temperature 1380 °F	
Specific Heat Capacity	0.874 J/g-°C	0.209 BTU/lb-°F	
Thermal Conductivity	1.02 W/m-K	7.08 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	870 °C	1600 °F	Continuous

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.60e+15 ohm-cm	2.60e+15 ohm-cm	
Surface Resistivity per Square	5.00e+13 ohm	5.00e+13 ohm	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Dielectric Constant	6.91	6.91	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	18.9 kV/mm	480 kV/in	
Dissipation Factor	0.0030	0.0030	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Loss Index	0.0207	0.0207	1 MHz
Arc Resistance	300 sec	300 sec	

Descriptive Properties	Value	Comments
Color	Off White	

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