

Mykroy/Mycalex MM 600 Machining Grade Glass-bonded Mica Composite

Category : Ceramic , Glass , Glass Ceramic , Machinable Ceramic

Material Notes:

Formerly known as grade MM 1100. Synthetic mica filler. Does not burn. Excellent radiation resistance (3 x 10¹⁰ Rads-Cobalt). This ceramoplastic material is a versatile and efficient insulating material designed to meet the exacting demands of technical markets, worldwide. Glass-Bonded Mica is the only inorganic material to bridge the performance materials gap between organic plastics and ceramics. This unique high performance technical ceramic is a union of finely powered electrical quality glass and precisely defined and classified mica. The union of mica and glass takes place under simultaneous pressure and heat, transforming the materials into a new composition that inherits all the insulating advantages of both constituents. These materials are easily machined, mold like plastic, and have a wide range of operating temperatures. They find applications in the aircraft, laser, communications, aerospace, cryogenic, electronic, radiation, semiconductor, computer, automotive, and power distribution industries. Typical data below provided by Mykroy/Mycalex Ceramics.

Order this product through the following link:

http://www.lookpolymers.com/polymer_MykroyMycalex-MM-600-Machining-Grade-Glass-bonded-Mica-Composite.php

Physical Properties	Metric	English	Comments
Density	2.80 g/cc	0.101 lb/in ³	
Moisture Absorption at Equilibrium	0.00 %	0.00 %	Nil

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell A	47	47	
Hardness, Rockwell H	91	91	
Tensile Strength, Ultimate	34.5 MPa	5000 psi	
Modulus of Elasticity	73.1 GPa	10600 ksi	
Flexural Strength	75.8 MPa	11000 psi	
Compressive Strength	221 MPa	32000 psi	
Izod Impact, Notched	0.694 J/cm	1.30 ft-lb/in	

Thermal Properties	Metric	English	Comments
CTE, linear	9.39 μm/m-°C	5.22 μin/in-°F	
	@Temperature 500 °C	@Temperature 932 °F	
	9.74 μm/m-°C	5.41 μin/in-°F	
	@Temperature 350 °C	@Temperature 662 °F	
	10.48 μm/m-°C	5.822 μin/in-°F	

Thermal Properties	Metric @ Temperature 25.0 °C	English @ Temperature 77.0 °F	Comments
Specific Heat Capacity	0.4602 J/g-°C	0.1100 BTU/lb-°F	
Thermal Conductivity	1.32 W/m-K	9.16 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	600 °C	1110 °F	Continuous

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	
Surface Resistivity per Square	1.00e+11 ohm	1.00e+11 ohm	
Dielectric Constant	6.8 @Frequency 1e+6 Hz	6.8 @Frequency 1e+6 Hz	
Dielectric Strength	16.5 kV/mm	420 kV/in	
Dissipation Factor	0.0017 @Frequency 1e+6 Hz	0.0017 @Frequency 1e+6 Hz	
Dielectric Loss Index	0.012	0.012	1 MHz
Arc Resistance	345 sec	345 sec	

Descriptive Properties	Value	Comments
Color	Cream	

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