Mykroy/Mycalex MM 500 Machining Grade Glass-bonded Mica Composite

Category : Ceramic , Glass , Glass Ceramic , Machinable Ceramic

Material Notes:

Synthetic mica filler. Does not burn. Better radiation resistance (3 x 10^10 Rads-Cobalt) than grade 400.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-500-Machining-Grade-Glass-bonded-Mica-Composite.php

Physical Properties	Metric	English	Comments
Density	2.70 g/cc	0.0975 lb/in³	
Moisture Absorption at Equilibrium	0.00 %	0.00 %	Nil

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell A	46	46	
Hardness, Rockwell H	90	90	
Tensile Strength, Ultimate	41.4 MPa	6000 psi	
Modulus of Elasticity	82.7 GPa	12000 ksi	
Flexural Strength	86.2 MPa	12500 psi	
Compressive Strength	276 MPa	40000 psi	
Izod Impact, Notched	0.908 J/cm	1.70 ft-lb/in	

Thermal Properties	Metric	English	Comments
CTE, linear	10.53 µm/m-°C @Temperature 350 °C	5.850 µin/in-°F @Temperature 662 °F	
	11.57 µm/m-°C @Temperature 25.0 °C	6.428 µin/in-°F @Temperature 77.0 °F	
Specific Heat Capacity	0.5021 J/g-°C	0.1200 BTU/lb-°F	

Thermal Properties	Metric	English	Comments
Thermal Conductivity	1.15 W/m-K	7.98 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	400 °C	752 °F	Continuous

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	
Surface Resistivity per Square	1.00e+12 ohm	1.00e+12 ohm	
Dielectric Constant	6.9 @Frequency 1e+6 Hz	6.9 @Frequency 1e+6 Hz	
Dielectric Strength	20.9 kV/mm	530 kV/in	
Dissipation Factor	0.0013 @Frequency 1e+6 Hz	0.0013 @Frequency 1e+6 Hz	
Dielectric Loss Index	0.0090	0.0090	1 MHz
Arc Resistance	260 sec	260 sec	

Descriptive Properties	Value	Comments
Color	Light Gray	

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