

Mykroy/Mycalex MM 451 Molding Grade Glass-bonded Mica Composite

Category : Ceramic , Glass , Glass Ceramic

Material Notes:

Natural mica filler. Does not burn. ROHS Compliant. 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 powdered 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-451-Molding-Grade-Glass-bonded-Mica-Composite.php

Physical Properties	Metric	English	Comments
Density	2.50 g/cc	0.0903 lb/in ³	
Moisture Absorption at Equilibrium	0.00 %	0.00 %	Nil

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell A	47	47	
Flexural Strength	86.2 MPa	12500 psi	
Flexural Modulus	35.2 GPa	5110 ksi	
Compressive Strength	310 MPa	45000 psi	
Izod Impact, Notched	4.27 J/cm	8.00 ft-lb/in	

Thermal Properties	Metric	English	Comments
CTE, linear	10.10 $\mu\text{m}/\text{m}\cdot\text{°C}$	5.611 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	11.9 $\mu\text{m}/\text{m}\cdot\text{°C}$	6.64 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 250 °C	@Temperature 482 °F	
	12.9 $\mu\text{m}/\text{m}\cdot\text{°C}$	7.14 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 450 °C	@Temperature 842 °F	
Thermal Conductivity	0.640 W/m-K	4.44 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	450 °C	842 °F	Continuous

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Volume Resistivity	3.90e+14 ohm-cm	3.90e+14 ohm-cm	
Surface Resistivity per Square	3.70e+10 ohm	3.70e+10 ohm	
Dielectric Constant	6.29	6.29	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	20.9 kV/mm	530 kV/in	
Dissipation Factor	0.0037	0.0037	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Loss Index	0.023	0.023	1 MHz

Descriptive Properties	Value	Comments
Color	Dark Green	

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