

Mykroy/Mycalex (Mica) 500 Material Specifications

Mykroy/Mycalex® is the most versatile and efficient electrical and thermal insulating material produced to meet the demands of technical markets. This material is softer than other high temperature machinable ceramics allowing for the fabrication of intricate shapes. It can be drilled or tapped and can accommodate helical inserts. The material is dimensionally stable at temperatures ranging from -240°C to 800°C.

Physical Properties	Units	M500
Density	g/cm ³	2.7
Color	-	Light Gray
Water Absorption	%	Nil
Mica Filler	-	Synthetic
Flammability	-	Does Not Burn

Mechanical Properties	Units	M500
Compressive Strength	psi / Mpa	40,000 / 276
Tensile Strength	psi / Mpa	6000 / 41.4
Modulus of Elasticity	psi x 10 ⁶ GPa	12.0 82.7
Impact Strength IZOD (notched)	FT-lbs/in J/cm	1.7 0.908
Flexural Strength	psi / Mpa	12,500 / 86.2
Hardness Rockwell	H / A	90 / 46

Thermal Properties	Units	M500
Max. Use Temperature	°F / °C	930 / 500
Thermal Conductivity	W/m.K	1.15
Coefficient of Thermal Expansion (x10 ⁻⁶)	/° C @ 25 °C @ 350 °C @ 500 °C @ 750 °C	11.57 10.53 - -
Specific Heat	cal/g/°C	0.12

Electrical Properties	Units	M500
Dielectric Strength	V/mil	530
	kV/mm	20.9
Arc Resistance	Seconds	260
Dissipation Factor	1 MHz	0.0013
Loss Index	1 MHz	0.009
Surface Resistivity	Ω/sq (25° C)	10 ¹²
Volume Resistivity	Ω-cm (25° C)	10 ¹⁴
Dielectric Constant	1 MHz	6.9

**The information provided in this table is a compilation of publicly available data. This information is provided for comparison purposes only, and is not intended to be warrantable. Further, Technical Products, Inc. disclaims any and all liability from errors, in accuracies, or omissions.