



PROFESSIONAL PLASTICS, INC.

Leading Global Supplier of Engineered Plastic Shapes

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Mycalex MM400, MM500, MM1100 & MM1600 Property Comparison to Advanced Thermoplastics

Material	MM 400	MM 500	MM 1100	MM 1600	Torlon 4203	Ultem 2300	Peek	Norplex P95	
Matrix/ Binder	Glass				PAI	PEI	PEEK	Polyimide	
Filler / Reinforcement	Natural Mica	Synthetic (Fluorophlogopite) Mica			30% Glass	30% Glass	30% Glass	Woven Glass	
Unit									
Maximum Continuous Temp	°F	750	750	1100	1600	500	340	480	465
	°C	400	400	595	875	260	171	249	240
Specific Gravity	gm/cc	2.5	2.7	2.8	2.74	1.41	1.51	1.54	1.84
Tensile Strength	psi	6,000	6,000	5,000	6,000	18,000	24,500		
Compressive Strength	psi	45,000	40,000	32,000	40,000	24,000	32,000	26,000	70,000
Flexural Strength	psi	13,000	12,500	11,000	13,500	24,000	30,000	28,000	66,000
Izod Impact	ft-lb/in	1.8	1.7	1.3	1.8	2	1.6	1.4	11.5
	J/cm	0.961	0.908	0.694	0.961	1.07	0.85	0.75	6.1
Coeff Thermal Expansion	°F x 10 ⁻⁵	0.7	0.68	0.66	0.46	1.7	1.1	1.2	0.56
	°C x 10 ⁻⁵	1.27	1.22	1.18	0.82	3.06	1.98	2.16	1
Thermal Conductivity	BTU-in/hr-ft ² -°F	6.05	8	9.2	7.1	1.8	1.56	2.98	
	W/m-K	0.87	1.15	1.32	1.02			0.43	
Dielectric Strength	V/mil	730	530	420	480	580	770	500	850
Dielectric Constant	1 MHz	6.7	6.9	6.8	6.91	4.2	3.7		
Dissipation Factor	1 MHz	0.0018	0.0013	0.0017	0.003	0.026	0.0015		0.01
Water Absorption	%	0	0	0	0		0.16	0.1	0.35

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