



# CRYSTEX COMPOSITES LLC

*Mykroy/Mycalex Ceramics*

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## MACHINABLE GRADES TECHNICAL DATA SHEET

<u>General Properties</u>	<u>UNIT</u>	<u>MM 400</u>	<u>MM 500</u>	<u>MM 600</u>	<u>MM 800</u>
Density	g/cm <sup>3</sup>	2.6	2.7	2.8	2.74
Moisture Absorption	%	Nil	Nil	Nil	Nil
Color	---	D-Gray*	L-Gray*	Cream	Off White
Mica Filler	---	Natural	Synthetic	Synthetic	Synthetic
Flammability	DOES NOT BURN				
<u>Thermal Properties</u>					
Max. Continuous Use Temperature	°F	750	930	1100	1470
	°C	400	500	600	800
Thermal Conductivity	W/m.K	.87	1.15	1.32	1.02
Coefficient of Thermal Expansion (x10 <sup>-6</sup> )	/°C @ 25°C	12.5	11.57	10.48	9
	@ 350°C	11.0	10.53	9.74	10.46
	@ 500°C	---	---	9.39	10.69
	@ 750°C	---	---	---	15.81
Specific Heat	cal/g/°C	0.12	0.12	0.11	0.209
<u>Electrical Properties</u>					
Dielectric Strength	V/mil	730	530	420	480
	kV/mm	28.7	20.9	16.5	18.9
Arc Resistance	Seconds	245	260	345	300
Dissipation factor	1 MHz	0.0018	0.0013	0.0017	.003
Loss Index	1 MHz	0.012	0.009	0.012	.0207
Surface Resistivity	Ω/sq (25°C)	10 <sup>9</sup>	10 <sup>12</sup>	10 <sup>11</sup>	5 x 10 <sup>13</sup>
Volume Resistivity	Ω-cm (25°C)	10 <sup>10</sup>	10 <sup>14</sup>	10 <sup>12</sup>	2.6 x 10 <sup>15</sup>
Dielectric Constant	1 MHz	6.7	6.9	6.8	6.91
<u>Mechanical Properties</u>					
Tensile Strength	psi	6000	6000	5000	6000
	MPa	41.4	41.4	34.5	41.4
Flexural Strength	psi	13,000	12,500	11,000	13,500
	MPa	89.6	86.2	75.9	93.1
Compressive Strength	psi	45,000	40,000	32,000	40,000
	MPa	310	276	221	276
Modulus of Elasticity	psi x10 <sup>6</sup>	11.0	12.0	10.6	11.5
	GPa	75	82.7	73.1	79.3
Hardness - Rockwell	H	90	90	91	90
	A	46	46	47	47
Impact Strength— IZOD (notched)	Ft-lbs/in	1.8	1.7	1.3	1.8
	J/cm	0.961	0.908	0.694	0.961

Glass Bonded Mica Summary Specification – ASTM D 1039

\* : D = Dark; L = Light

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