NORPLEX MICARTA
HIGH-PERFORMANCE COMPOSITES

WaveMax 5000

TECHNICAL DATA BULLETIN

GRADE: SP525M **NEMA GRADE:** --- **U. L. LISTED:** N

DESCRIPTION: Non-woven substrate combined with high temperature, static dissipative epoxy resin. SP525M has superior machining properties, and is capable of producing thin walls with high strength for finely machined parts. It has excellent mechanical strength at elevated temperatures. The continuous operating temperature is over 200°C. Short excursions to temperatures approaching 360°C, such as in wave soldering or IR re-flow, will not adversely affect the life of this material.

THICKNESS TESTED: 0.315" (12.5mm)

TYPICAL PROPERTIES

GENERAL PHYSICAL PROPERTIES		UNITS	VALUE
Specific Gravity		-	1.80
Rockwell Hardness – M-Scale		-	110
Moisture Absorption (.315")		%	0.07
Flexural Strength – (.315") – Condition A	LW	psi	30,000
	CW		26,000
Flexural Strength at Elevated Temperature (.315") – E-1/150 T-150	LW	psi	13,600
	CW		11,500
Flexural Modulus – (.315")	LW	kpsi	2.20
	CW		2.10
Tensile Strength – (.315")	LW	psi	23,000
	CW		17,000
Izod Impact Strength – E-48/50 – (.315")	LW	ft-lb/in	5.00
	CW	notched	4.50
Compressive Strength – (.315") – Flatwise		psi	50,000

THERMAL & ELECTRICAL PROPERTIES		UNITS	VALUE
Continuous Operating Temperature		°C	275
Coefficient of Thermal Expansion (.220")	X-axis	"/"/°Cx10^{-6}	22.1
	Y-axis		22.5
	Z-axis		24.7
Surface Resistivity		Ohms/sq	10^5 - 10^9
Volume Resistivity		Ohm-cm	10^4 - 10^{11}
Resin Degradation Temperature - T_d		°C	360[1]

1 The thermal degradation temperature, Td, is that temperature at which the bonds between the molecules in the resin system begin to break. Maintaining temperatures of this magnitude and above will cause degradation of the system/laminate.

This data, while believed to be accurate and based on reliable analytical methods, is for informational purposes only. The terms and conditions of the agreement under which it is sold will govern any sales of this product. Data supplied above are "typical values"; not to be considered "specification values".

Last Revision: April 17, 2005 ros r