

Industrial Laminates/Norplex SP525M (WaveMax 5000) Glass Fabric

Category : Polymer , Thermoset

Material Notes:

Description: Non-woven substrate combined with high temperature, static dissipative epoxy resin. Superior machining properties. Capable of producing thin walls with high strength for finely machined parts. Excellent mechanical strength at elevated temperatures. The continuous operating temperature is 190°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: 0.062" & 0.315"

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industrial-LaminatesNorplex-SP525M-WaveMax-5000-Glass-Fabric.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.75 - 1.85 g/cc	1.75 - 1.85 g/cc	
Moisture Absorption at Equilibrium	0.070 % @Thickness 8.00 mm	0.070 % @Thickness 0.315 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	100 - 120	100 - 120	
Tensile Strength, Yield	117 MPa @Thickness 8.00 mm	17000 psi @Thickness 0.315 in	CW
	159 MPa @Thickness 8.00 mm	23000 psi @Thickness 0.315 in	LW
Flexural Strength	79.3 MPa @Thickness 8.00 mm	11500 psi @Thickness 0.315 in	at Elevated Temperature (CW E-1/150, T-150)
	93.8 MPa @Thickness 8.00 mm	13600 psi @Thickness 0.315 in	at Elevated Temperature (CW E-1/150, T-150)
	179 MPa @Thickness 8.00 mm	26000 psi @Thickness 0.315 in	CW
	207 MPa @Thickness 8.00 mm	30000 psi @Thickness 0.315 in	LW
Flexural Modulus	14.5 GPa @Thickness 8.00 mm	2100 ksi @Thickness 0.315 in	CW
	15.2 GPa @Thickness 8.00 mm	2200 ksi @Thickness 0.315 in	LW

Mechanical Properties	Metric	English	Comments
Compressive Strength	245 MPa	5000 psi	Flatwise
	@Thickness 8.00 mm	@Thickness 0.315 in	
Izod Impact, Unnotched	2.40 J/cm	4.50 ft-lb/in	CW, E-48/50
	@Thickness 8.00 mm	@Thickness 0.315 in	
	2.67 J/cm	5.00 ft-lb/in	LW, E-48/50
	@Thickness 8.00 mm	@Thickness 0.315 in	

Thermal Properties	Metric	English	Comments
CTE, linear	22.1 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	12.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	x-axis
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	22.5 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	12.5 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	y-axis
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
	24.7 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	13.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	z-axis
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
Maximum Service Temperature, Air	275 $\text{Å}^\circ\text{C}$	527 $\text{Å}^\circ\text{F}$	Continuous Operating Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	10000 - 1.00e+11 ohm-cm	10000 - 1.00e+11 ohm-cm	
Surface Resistivity per Square	1e+05 - 1.00e+9 ohm	1e+05 - 1.00e+9 ohm	

Descriptive Properties	Value	Comments
Resin Degradation Temperature	360 $\text{Å}^\circ\text{C}$	

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