

## Industrial Laminates/Norplex NP130 Glass Fabric

Category : Polymer , Thermoset

### Material Notes:

Description: Woven glass fabric combined with a halogenated epoxy resin system. Produced to printed circuit board quality standards.

Flame retardant, meets UL-94 flammability classification V-0. Thickness Tested: 0.0620", 0.125" & 0.500".

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Industrial-LaminatesNorplex-NP130-Glass-Fabric.php](http://www.lookpolymers.com/polymer_Industrial-LaminatesNorplex-NP130-Glass-Fabric.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.75 - 1.85 g/cc	1.75 - 1.85 g/cc	ASTM D792
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Moisture Absorption at Equilibrium	0.15 %	0.15 %	ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	90 - 110	90 - 110	ASTM D785
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Tensile Strength, Yield	262 MPa	38000 psi	CW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	310 MPa	45000 psi	LW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Modulus of Elasticity	16.5 GPa	2400 ksi	CW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	18.6 GPa	2700 ksi	LW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Flexural Strength	414 MPa	60000 psi	CW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	483 MPa	70000 psi	LW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Compressive Strength	379 MPa	55000 psi	ASTM D695
	@Thickness 12.7 mm	@Thickness 0.500 in	
Shear Strength	152 MPa	22000 psi	ASTM D732
	@Thickness 15.7 mm	@Thickness 0.620 in	

Mechanical Properties	Metric <sub>cm</sub>	English <sub>lb/in</sub>	Comments
Izod Impact, Unnotched	@Thickness 12.7 mm	@Thickness 0.500 in	CW, Cond E-48/50; ASTM D256
	7.47 J/cm @Thickness 12.7 mm	14.0 ft-lb/in @Thickness 0.500 in	LW, Cond E-48/50; ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	5.56 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	x-axis; IPC-TM 650-2.4.24
	@Thickness 1.57 mm, Temperature 20.0 $\text{Å}^\circ\text{C}$	@Thickness 0.0620 in, Temperature 68.0 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	12.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	6.67 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	x-axis; IPC-TM 650-2.4.24
	@Thickness 1.57 mm, Temperature 20.0 $\text{Å}^\circ\text{C}$	@Thickness 0.0620 in, Temperature 68.0 $\text{Å}^\circ\text{F}$	
Maximum Service Temperature, Air	140 $\text{Å}^\circ\text{C}$	284 $\text{Å}^\circ\text{F}$	
Glass Transition Temp, Tg	127 $\text{Å}^\circ\text{C}$	261 $\text{Å}^\circ\text{F}$	Tg
Flammability, UL94	V-0	V-0	
	@Thickness 1.57 mm	@Thickness 0.0620 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	4.8	4.8	Permittivity, Cond D-24/23; ASTM D150
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Strength	29.5 kV/mm	750 kV/in	Cond D-48/50; ASTM D229 S.T.
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Breakdown	31.5 kV/mm	800 kV/in	Cond A; ASTM D229 S.T.
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Breakdown	54000 V	54000 V	Cond D-48/50; ASTM D229 S/S
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Breakdown	65000 V	65000 V	Cond A; ASTM D229 S/S
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dissipation Factor	0.025	0.025	Cond D-24/23; ASTM D150
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Arc Resistance	100 sec	100 sec	ASTM D495
	@Thickness 3.17 mm	@Thickness 0.125 in	
	150 V	150 V	

Comparative Tracking Index		Metric		English		ASTM D3638	
Electrical Properties		@ Thickness 3.17 mm		@ Thickness 0.125 in		Comments	
Descriptive Properties		Value		Comments			
Bond Strength		2200 lb		0.5", ASTM D229			
Color		Natural, Black					

## Contact Songhan Plastic Technology Co.,Ltd.

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