

## Industrial Laminates/Norplex NP634 Laminate

Category : Polymer , Thermoset , Carbon Fiber/Thermoset Composite

### Material Notes:

Description: Warm punching, composite grade with woven glass covers for improved flexural, tensile and impact strength. Electrical properties comparable to NP611. Thickness Tested: 0.062", 0.125" and 0.500"

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_industrial-LaminatesNorplex-NP634-Laminate.php](http://www.lookpolymers.com/polymer_industrial-LaminatesNorplex-NP634-Laminate.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.35 - 1.45 g/cc	1.35 - 1.45 g/cc	ASTM D792
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Moisture Absorption at Equilibrium	0.72 %	0.72 %	ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85 - 105	85 - 105	ASTM D785
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Tensile Strength, Yield	139 MPa	20100 psi	CW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	165 MPa	23900 psi	LW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Modulus of Elasticity	10.3 GPa	1500 ksi	CW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	12.4 GPa	1800 ksi	LW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Flexural Strength	308 MPa	44600 psi	CW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	356 MPa	51600 psi	LW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Compressive Strength	286 MPa	41500 psi	ASTM D695
	@Thickness 12.7 mm	@Thickness 0.500 in	
Shear Strength	96.5 MPa	14000 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
	1.76 J/cm @Thickness 12.7 mm	3.30 ft-lb/in @Thickness 0.500 in	LW, Cond E-48/50; ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	15.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	8.33 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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	13.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	7.22 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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	125 $\text{Å}^\circ\text{C}$	257 $\text{Å}^\circ\text{F}$	
Flammability, UL94	HB	HB	
	@Thickness 1.57 mm	@Thickness 0.0620 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	5.2	5.2	Permittivity, Cond D-24/23; ASTM D150
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Strength	21.7 kV/mm	550 kV/in	Cond D-48/50; ASTM D229 S.T.
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Breakdown	23.6 kV/mm	600 kV/in	Cond A; ASTM D229 S.T.
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Breakdown	7000 V	7000 V	Cond D-48/50; ASTM D229 S/S
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Breakdown	53000 V	53000 V	Cond A; ASTM D229 S/S
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dissipation Factor	0.037	0.037	Cond D-24/23; ASTM D150
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Arc Resistance	120 sec	120 sec	ASTM D495
	@Thickness 3.17 mm	@Thickness 0.125 in	
Comparative Tracking Index	200 V	200 V	ASTM D3638
	@Thickness 3.17 mm	@Thickness 0.125 in	

Electrical Properties	Metric	English	Comments
Descriptive Properties		Value	Comments
Bond Strength		1500 lb	0.5", ASTM D229
Color		Natural, Black	

## Contact Songhan Plastic Technology Co.,Ltd.

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