

Industrial Laminates/Norplex NP625 Paper Base Laminate

Category : Polymer , Thermoset , Phenolic

Material Notes:

Description: Paper phenolic grade with better moisture resistance than NP612. Requires less heat to punch and shear than NP611.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industrial-LaminatesNorplex-NP625-Paper-Base-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	2.3 %	2.3 %	ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	65 - 85	65 - 85	ASTM D785
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Tensile Strength, Yield	71.7 MPa	10400 psi	CW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	85.5 MPa	12400 psi	LW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Modulus of Elasticity	5.86 GPa	850 ksi	CW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	6.89 GPa	1000 ksi	LW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Flexural Strength	117 MPa	17000 psi	CW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	131 MPa	19000 psi	LW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Compressive Strength	203 MPa	29500 psi	ASTM D695
	@Thickness 12.7 mm	@Thickness 0.500 in	
Shear Strength	72.4 MPa	10500 psi	ASTM D732
	@Thickness 15.7 mm	@Thickness 0.620 in	
	0.374 J/cm	0.700 ft-lb/in	

Impact, Unnotched Mechanical Properties	Metric @ Thickness 12.7 mm	English @ Thickness 0.500 in	CW, Cond E-48/50; ASTM D256 Comments
	0.400 J/cm	0.750 ft-lb/in	LW, Cond E-48/50; ASTM D256
	@Thickness 12.7 mm	@Thickness 0.500 in	

Thermal Properties	Metric	English	Comments
CTE, linear	19.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Thickness 1.57 mm, Temperature 20.0 $\text{Å}^\circ\text{C}$	10.6 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Thickness 0.0620 in, Temperature 68.0 $\text{Å}^\circ\text{F}$	x-axis; IPC-TM 650-2.4.24
CTE, linear, Transverse to Flow	15.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Thickness 1.57 mm, Temperature 20.0 $\text{Å}^\circ\text{C}$	8.33 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Thickness 0.0620 in, Temperature 68.0 $\text{Å}^\circ\text{F}$	x-axis; IPC-TM 650-2.4.24
Maximum Service Temperature, Air	130 $\text{Å}^\circ\text{C}$	266 $\text{Å}^\circ\text{F}$	
Flammability, UL94	HB @Thickness 1.57 mm	HB @Thickness 0.0620 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	6.05 @Thickness 1.57 mm	6.05 @Thickness 0.0620 in	Permittivity, Cond D-24/23; ASTM D150
Dielectric Strength	27.6 kV/mm @Thickness 1.57 mm	700 kV/in @Thickness 0.0620 in	Cond A; ASTM D229 S.T.
Dielectric Breakdown	50000 V @Thickness 1.57 mm	50000 V @Thickness 0.0620 in	Cond A; ASTM D229 S/S
Dissipation Factor	0.060 @Thickness 1.57 mm	0.060 @Thickness 0.0620 in	Cond D-24/23; ASTM D150
Arc Resistance	90 sec @Thickness 3.17 mm	90 sec @Thickness 0.125 in	ASTM D495
Comparative Tracking Index	180 V @Thickness 3.17 mm	180 V @Thickness 0.125 in	ASTM D3638

Descriptive Properties	Value	Comments
Bond Strength	1100 lb	0.5", ASTM D229
Color	Natural, Black, Chocolate	

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