

Industrial Laminates/Norplex NP320E Cotton Fabric

Category : Polymer , Thermoset

Material Notes:

Description: Similar to NP320 with improved moisture resistance. Suitable for electrical applications in moderate humidity conditions. Thickness Tested: 0.062", 0.125", and 0.500"

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industrial-LaminatesNorplex-NP320E-Cotton-Fabric.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 - 1.40 g/cc	1.30 - 1.40 g/cc	ASTM D792
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Moisture Absorption at Equilibrium	1.9 %	1.9 %	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	62.1 MPa	9000 psi	CW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	89.6 MPa	13000 psi	LW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Modulus of Elasticity	8.27 GPa	1200 ksi	CW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	11.0 GPa	1600 ksi	LW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Flexural Strength	110 MPa	16000 psi	CW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	152 MPa	22000 psi	LW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Compressive Strength	248 MPa	36000 psi	ASTM D695
	@Thickness 12.7 mm	@Thickness 0.500 in	
Shear Strength	93.1 MPa	13500 psi	ASTM D732
	@Thickness 15.7 mm	@Thickness 0.620 in	

Mechanical Properties	Metric J/cm	English lb/in	Comments
Izod Impact, Unnotched	@Thickness 12.7 mm	@Thickness 0.500 in	CW, Cond E-48/50; ASTM D256
	0.721 J/cm	1.35 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	18.0 $\mu m/m-^{\circ}C$	10.0 $\mu in/in-^{\circ}F$	x-axis; IPC-TM 650-2.4.24
	@Thickness 1.57 mm, Temperature 20.0 $^{\circ}C$	@Thickness 0.0620 in, Temperature 68.0 $^{\circ}F$	
CTE, linear, Transverse to Flow	19.0 $\mu m/m-^{\circ}C$	10.6 $\mu in/in-^{\circ}F$	x-axis; IPC-TM 650-2.4.24
	@Thickness 1.57 mm, Temperature 20.0 $^{\circ}C$	@Thickness 0.0620 in, Temperature 68.0 $^{\circ}F$	
Maximum Service Temperature, Air	125 $^{\circ}C$	257 $^{\circ}F$	
Flammability, UL94	HB	HB	
	@Thickness 1.57 mm	@Thickness 0.0620 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	5.5	5.5	Permittivity, Cond D-24/23; ASTM D150
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Strength	19.7 kV/mm	500 kV/in	Cond D-48/50; ASTM D229 S.T.
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	24.6 kV/mm	625 kV/in	Cond A; ASTM D229 S.T.
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Breakdown	4000 V	4000 V	Cond D-48/50; ASTM D229 S/S
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	50000 V	50000 V	Cond A; ASTM D229 S/S
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dissipation Factor	0.065	0.065	Cond D-24/23; ASTM D150
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Arc Resistance	15 sec	15 sec	ASTM D495
	@Thickness 3.17 mm	@Thickness 0.125 in	
Comparative Tracking Index	170 V	170 V	ASTM D3638
	@Thickness 3.17 mm	@Thickness 0.125 in	

Electrical Properties	Metric	English	Comments
Descriptive Properties		Value	Comments
Bond Strength		1900 lb	0.5", ASTM D229
Color		Natural	

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