

Industrial Laminates/Norplex NP180 Synthetic Fabric (discontinued **)

Category : Polymer , Thermoset , Aramid

Material Notes:

Description: aramid fabric material with a high performance epoxy resin matrix. Excellent electrical and mechanical properties at elevated temperatures and in adverse environments. Thickness Tested: 0.062", 0.125", and 0.500"

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industrial-LaminatesNorplex-NP180-Synthetic-Fabric-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.40 g/cc	1.40 g/cc	
Moisture Absorption at Equilibrium	0.31 % @Thickness 1.57 mm	0.31 % @Thickness 0.0620 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	80 - 100 @Thickness 1.57 mm	80 - 100 @Thickness 0.0620 in	
Tensile Strength, Yield	400 MPa @Thickness 3.17 mm	58000 psi @Thickness 0.125 in	CW
	427 MPa @Thickness 3.17 mm	62000 psi @Thickness 0.125 in	LW
Flexural Strength	386 MPa @Thickness 1.57 mm	56000 psi @Thickness 0.0620 in	CW
	386 MPa @Thickness 1.57 mm	56000 psi @Thickness 0.0620 in	LW
Compressive Strength	545 MPa @Thickness 12.7 mm	79000 psi @Thickness 0.500 in	Flatwise
Izod Impact, Unnotched	4.27 J/cm @Thickness 12.7 mm	8.00 ft-lb/in @Thickness 0.500 in	CW, E-48/50
	5.82 J/cm @Thickness 12.7 mm	10.9 ft-lb/in @Thickness 0.500 in	LW, E-48/50

Thermal Properties	Metric	English	Comments
	36.3 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	20.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	

CTE linear Thermal Properties	Metric @Thickness 1.57 mm, Temperature 40.0 - 105 °C	English @Thickness 0.0620 in, Temperature 104 - 221 °F	x-axis Comments
	262 µm/m-°C	146 µin/in-°F	
	@Thickness 1.57 mm, Temperature 105 - 155 °C	@Thickness 0.0620 in, Temperature 221 - 311 °F	x-axis
Maximum Service Temperature, Air	180 °C	356 °F	Maximum Operating Temperature
Glass Transition Temp, Tg	145 °C	293 °F	Tg
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.91	3.91	Permittivity, Cond D-24/23
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Strength	19.7 kV/mm	500 kV/in	D-48/50
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	25.6 kV/mm	650 kV/in	Condition - A
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dielectric Breakdown	47000 V	47000 V	Condition A
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	54000 V	54000 V	D-48/50
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Dissipation Factor	0.0275	0.0275	Cond D-24/23
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Arc Resistance	121 sec	121 sec	ASTM D495
	@Thickness 3.17 mm	@Thickness 0.125 in	

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