

Industrial Laminates/Norplex NP555 Carbon Fiber (discontinued **)

Category : Polymer , Thermoset , Carbon Fiber/Thermoset Composite , Phenolic

Material Notes:

Description: NP555 is composed of carbon fiber fabric and a phenolic resin system. It has excellent moisture resistance and physical properties. This material was designed to replace asbestos vane material for large, high performance compressors. Thickness Tested: 0.062", 0.125" and 0.500"

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industrial-LaminatesNorplex-NP555-Carbon-Fiber-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.50 - 1.60 g/cc	1.50 - 1.60 g/cc	ASTM D792
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Moisture Absorption at Equilibrium	0.10 %	0.10 %	ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	95 - 115	95 - 115	ASTM D785
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Tensile Strength, Yield	379 MPa	55000 psi	CW; ASTM D638
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	552 MPa	80000 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	
	8.96 GPa	1300 ksi	LW; ASTM D229
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Flexural Strength	323 MPa	46800 psi	CW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
	381 MPa	55200 psi	LW; ASTM D790
	@Thickness 1.57 mm	@Thickness 0.0620 in	
Izod Impact, Unnotched	19.8 J/cm	37.0 ft-lb/in	CW, Cond E-48/50; ASTM D256
	@Thickness 12.7 mm	@Thickness 0.500 in	
	21.4 J/cm	40.0 ft-lb/in	

Mechanical Properties	Metric @ Thickness 12.7 mm	English @ Thickness 0.500 in	L.W. Cond E-48/50; ASTM D256 Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	6.00 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Thickness 1.57 mm, Temperature 20.0 $^{\circ}\text{C}$	3.33 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Thickness 0.0620 in, Temperature 68.0 $^{\circ}\text{F}$	x-axis; IPC-TM 650-2.4.24
CTE, linear, Transverse to Flow	11.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Thickness 1.57 mm, Temperature 20.0 $^{\circ}\text{C}$	6.11 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Thickness 0.0620 in, Temperature 68.0 $^{\circ}\text{F}$	x-axis; IPC-TM 650-2.4.24
Maximum Service Temperature, Air	230 $^{\circ}\text{C}$	446 $^{\circ}\text{F}$	
Flammability, UL94	HB @Thickness 1.57 mm	HB @Thickness 0.0620 in	

Descriptive Properties	Value	Comments
Bond Strength	600 lb	0.5", ASTM D229
Color	Black	

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