

## Industrial Laminates/Norplex NP347 Cotton Fabric

Category : Polymer , Thermoset , Phenolic

### Material Notes:

Description: Bleached canvas with high temperature phenolic resin with molybdenum disulfide lubricant. Low moisture absorption.

Capable of 150°C continuous operation. Thickness Tested: 0.062", 0.125" & 0.500".

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Industrial-LaminatesNorplex-NP347-Cotton-Fabric.php](http://www.lookpolymers.com/polymer_Industrial-LaminatesNorplex-NP347-Cotton-Fabric.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 | 1.6 %              | 1.6 %                | 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 | 48.3 MPa           | 7000 psi             | CW; ASTM D638 |
|                         | @Thickness 1.57 mm | @Thickness 0.0620 in |               |
|                         | 82.7 MPa           | 12000 psi            | LW; ASTM D638 |
|                         | @Thickness 1.57 mm | @Thickness 0.0620 in |               |
| Modulus of Elasticity   | 6.89 GPa           | 1000 ksi             | CW; ASTM D229 |
|                         | @Thickness 1.57 mm | @Thickness 0.0620 in |               |
|                         | 10.3 GPa           | 1500 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 |               |
|                         | 145 MPa            | 21000 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             | English             | Comments                    |
|------------------------|--------------------|---------------------|-----------------------------|
| Izod Impact, Unnotched | @Thickness 12.7 mm | @Thickness 0.500 in | CW, Cond E-48/50; ASTM D256 |
|                        | 1.28 J/cm          | 2.40 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                      | 14.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$        | 7.78 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$        | 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  | 16.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$        | 8.89 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$        | 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 | 150 $\text{Å}^\circ\text{C}$                                  | 302 $\text{Å}^\circ\text{F}$                                    |                           |
| Flammability, UL94               | HB                                                            | HB                                                              |                           |
|                                  | @Thickness 1.57 mm                                            | @Thickness 0.0620 in                                            |                           |

| Descriptive Properties | Value   | Comments        |
|------------------------|---------|-----------------|
| Bond Strength          | 2200 lb | 0.5", ASTM D229 |
| Color                  | Natural |                 |

## Contact Songhan Plastic Technology Co.,Ltd.

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