



## SCOTCHPLY TYPE 1002

\*\*Unidirectional & Spring Orientation Panels

Based on 0.125 In. (3.175 mm) Thick Panels

Comparison of Mechanical Properties at 75° F (23° C)

<i>Property</i>	<i>Unidirectional Panel</i>	<i>Spring Orientation Panel</i>	<i>ASTM Test Method</i>
Glass Fibers at 0° Angle	100 %	85 %	
At 90° Angle	0 %	*15 %	
Flexure Strength, PSI (MPa)			D-790
At 0° Stress Angle (SA)	167,000 (1151)	135,200 (932)	16/1 Span
At 90° Stress Angle (SA)	11,000 (76)	54,600 (376)	Depth Ratio
Flexure Modulus, PSI x 10 <sup>6</sup> (KPa)			
At 0° Stress Angle (SA)	6.00 (0.41)	4.10 (0.28)	
At 90° Stress Angle (SA)	1.70 (0.11)	2.36 (0.16)	
Tensile Strength, PSI (MPa)			D-638
At 0° Stress Angle (SA)	140,000 (965)	116,000 (800)	Type II necked to 0.150 inch
At 90° Stress Angle (SA)	2,900 (20)	20,450 (141)	Type I Straight Sides
Tensile Modulus, PSI x 10 <sup>6</sup> (KPa)			
At 0° Stress Angle (SA)	5.70 (0.39)	4.78 (0.33)	
At 90° Stress Angle (SA)	1.40 (0.10)	1.98 (0.14)	
Compression Strength, Edgewise PSI (MPa)			D-3410
At 0° Stress Angle (SA)	128,000 (883)	105,000 (724)	
At 90° Stress Angle (SA)	28,000 (193)	45,700 (315)	
Compression Modulus, PSI x 10 <sup>6</sup> (KPa)			
At 0° Stress Angle (SA)		4.95 (0.34)	
At 90° Stress Angle (SA)		1.96 (0.14)	

\* 10 -16% depending on panel thickness. PSI x 0.00689 = (MPa) megapascal.  
 106 PSI x 0.0689 = (KPa) Kilopascal.

\*\* Panel lamination – 1 ply at 0°, 5 to 8% at 90°, core of 85 to 90% at 0°, 5 to 8% at 90°, 1 ply at 0°

*Values are based on typical Test Methods and Conditions and published for Reference purposes only*