

# Aslan 400 Carbon Fiber Reinforced Polymer (CFRP) Laminates Product Data Sheet

## Physical / Mechanical Properties – Tensile, Modulus & Strain

Dimensions				Nominal Area		Guaranteed Tensile Strength		Ultimate Tensile Load		Tensile Modulus of Elasticity		Ultimate Strain
Width -in	Width - mm	Thickness - in	Thickness - mm	mm <sup>2</sup>	in <sup>2</sup>	MPa	ksi	kN	kips	GPa	psi 10 <sup>6</sup>	%
2	50	0.055	1.4	70	0.1102	2400	350	168	38.57	131	19	1.87%
4	100	0.055	1.4	140	0.2204	2400	350	336	77.14	131	19	1.87%

Hughes Brothers reserves the right to make improvements in the product and/or process which may result in benefits or changes to some physical-mechanical characteristics. The data contained herein is considered representative of current production and is believed to be reliable and to represent the best available characterization of the product as of July 2011. Tensile tests per ASTM D3039.

**Design Tensile & Modulus Properties** ..... per ASTM D3039. The area used in calculating the tensile strength is the nominal cross sectional area. The “Guaranteed Tensile Strength”,  $f_{tu}^*$  is as defined by ACI 440.1R as the mean tensile strength of a given production lot, minus three times the standard deviation or  $f_{tu}^* = f_{u,ave} - 3\sigma$ . The Design or “Guaranteed Modulus of Elasticity” is as defined by ACI 440.1R as the mean modulus of a production lot or  $E_f = E_{f,ave}$ .

All material properties based on the “Gross Laminate Area” method using actual production lot tests per ASTM D3039.

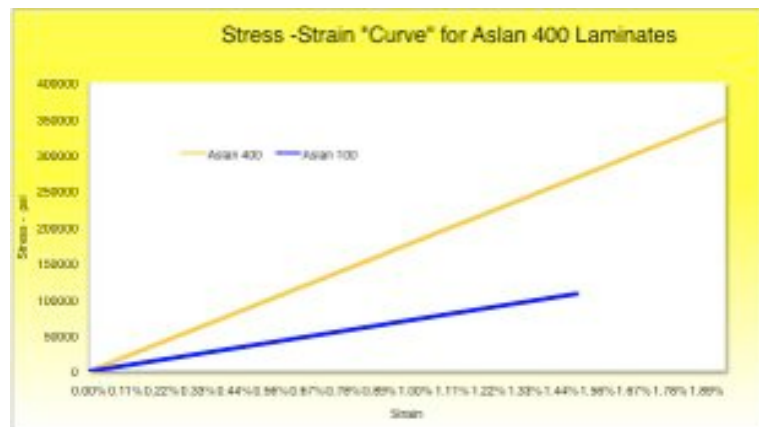
**Transition Temperature of Resin -  $T_g$ .....** > 230°F (110°C) per DSC method

### Material Certs

Material test certs are available for any production lot of Aslan 400 Laminate.

### Density

Size Designation		Unit Weight / length	
Size	mm	kg / m	lbs / ft
2"	50	0.1637	0.11
4"	100	0.2976	0.20



### Aslan 400 “System” ~ Approved Adhesives

The following high strength structural adhesives are recommended for use.

- Pilgrim EM 5-2 Gel
- DeNeef Enforce CFL Gel
- SikaDur 30