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A Division of Pacific Composites Pty Ltd ABN 005 952 698

## Polyester Resin (Series 500 / 525) Vinyl-Ester Resin (Series 625)

Tables below are typical coupon properties ( $W_f = 50\%$  [ $V_f = 32\%$ ] with 70 gsm mat) of structural shapes as per the referenced ASTM procedures. Exel Composites should be consulted for recommended design details for beams and compression members.

MECHANICAL PROPERTY	ASTM TEST	UNITS	SERIES 500 / 525	SERIES 625
Tensile Stress (L)	D638	MPa	207	207
Tensile Stress (C)	D638	MPa	48.3	48.3
Tensile Modulus (L)	D638	GPa	17.2	17.9
Tensile Modulus (C)	D638	GPa	5.52	5.52
Compressive Stress (L)	D695	MPa	207	207
Compressive Stress (C)	D695	MPa	103	110
Compressive Modulus (L)	D695	GPa	17.2	17.9
Compressive Modulus (C)	D695	GPa	6.89	6.89
Flexural Stress (L)	D790	MPa	207	207
Flexural Stress (C)	D790	MPa	68.9	68.9
Flexural Modulus (L)	D790	GPa	11.0	11.0
Flexural Modulus (C)	D790	GPa	5.52	5.52
Modulus of Elasticity, E	Full Section	GPa	17.9	19.3
Modulus of Elasticity, E* *W & I Shapes > 100mm	Full Section	GPa	17.2	17.2
Parallel Compressive Shear Stress (L)	D3846	MPa	20.7	20.7
Shear Modulus (L)	-	GPa	2.93	2.93
Short Beam Shear (L)	D2344	MPa	31.0	31.0
Bearing Stress (L)	D953	MPa	207	207
Poisson's Ratio (L)	D3039	-	0.330	0.330
Notched Izod Impact (L)	D256	J/mm	1.33	1.33
Notched Izod Impact (C)	D256	J/mm	0.214	0.214
<b>PHYSICAL PROP-</b>				
Barcol Hardness	D2583	-	45	45
24 hr Water Absorption	D570	% max. by wt	0.60	0.60
Density	D792	$10^{-3}g/mm^3$	1.7-1.9	1.7-1.9
Co-efficient of Thermal Expansion (L)	D696	$10^{-6}mm/mm/C^{\circ}$	8.0	8.0
Thermal Conductivity	C177	$W-m/m^2/C^{\circ}$	83.1	83.1
<b>ELECTRICAL PROP-</b>				
Dielectric Strength (L)	D149	KV/mm	1.38	1.38
Dielectric Strength (P)	D149	Volt/mil	200	200
Dielectric Constant (P)	D150	@60Hz	5.6	5.2
Arc Resistance (L)	D495	Seconds	120	120
<b>FLAMMABILITY</b>				
Underwriters Laboratory	UL94	VO		
Flammability	ASTM D635	Self Exting.		
Tunnel Test	ASTM E84	25 Max.		
NBS Smoke Chamber	ASTM E662	650-700 (Typ.)		
Thermal Index	(generic)	130°C		

(L)-Lengthwise, (C)-Crosswise, (P)-Perpendicular to laminate face