

# MATERIAL PROPERTIES

## Pultex<sup>®</sup> Fiber Reinforced Polymer Flat Sheets

1500 Series - Thermoset Polyester – Olive Green

1525 Series - Thermoset Polyester Class 1 FR – Slate Gray (Dark Gray)

1625 Series - Thermoset Vinyl Ester Class 1 FR – Beige

The following data was derived from ASTM coupon and full section testing. The results are average values based on random sampling and testing of production lots. Composite materials are not homogeneous; and therefore, the location of the coupon extraction can cause variances in the coupon test results. Creative Pultrusions publishes an average value of random samples from production lots.

Property (coupon values)	ASTM Test	Units	1500/1525 Series	1625 Series
<b>Mechanical</b>				
Flexural Strength, Flatwise (LW)	D790	psi	35,000	35,000
Flexural Strength, Flatwise (CW)	D790	psi	15,000	15,000
Flexural Modulus, Flatwise (LW)	D790	10 <sup>6</sup> psi	2.0	2.0
Flexural Modulus, Flatwise (CW)	D790	10 <sup>6</sup> psi	1.1	1.1
Tensile Strength (LW)	D638	psi	20,000	20,000
Tensile Strength (CW)	D638	psi	10,000	10,000
Tensile Modulus (LW)	D638	10 <sup>6</sup> psi	1.8	1.8
Tensile Modulus (CW)	D638	10 <sup>6</sup> psi	1.0	1.0
Compressive Strength, Edgewise (LW)	D695	psi	24,000	24,000
Compressive Strength, Edgewise (CW)	D695	psi	16,000	16,000
Compressive Modulus, Edgewise (LW)	D695	10 <sup>6</sup> psi	1.8	1.8
Compressive Modulus, Edgewise (CW)	D695	10 <sup>6</sup> psi	1.0	1.0
Notched Izod Impact (LW)	D256	ft-lbs/in	20	20
Notched Izod Impact (CW)	D256	ft-lbs/in	5	5
Bearing Strength (LW)	D953	psi	32,000	32,000
Bearing Strength (CW)	D953	psi	32,000	32,000
Poisson's Ratio (LW)	D3039	in/in	0.32	0.32
Poisson's Ratio (CW)	D3039	in/in	0.25	0.25
<b>Physical</b>				
Barcol Hardness <sup>1</sup>	D2583		40	40
Water Absorption	D570	% Max	0.6	0.6
Density	D792	lbs/in <sup>3</sup>	0.060-0.070	0.060-0.070
Specific Gravity	D792		1.66-1.93	1.66-1.93
Coefficient of Thermal Expansion (LW)	D696	10 <sup>-6</sup> in/in/°F	8.0	8.0
<b>Electrical</b>				
Arc Resistance (LW)	D495	seconds	120	120
Dielectric Strength (LW)	D149	KV/in	40	40
Dielectric Strength (PF)	D149	volts/mil	200	200
Dielectric Constant (PF)	D150	@60Hz	5.2	5.2

<sup>1</sup> Pultex<sup>®</sup> uses a synthetic surface veil that reduces the Barcol Hardness, but does not reflect lack of cure.

Additional Properties located on back



### CREATIVE PULTRUSIONS, INC.

214 Industrial Lane, Alum Bank, PA 15521  
 814.839.4186 · Fax: 814.839.4276 · Toll free 888.CPI.PULL  
 Email: crpul@pultrude.com · www.creativepultrusions.com

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PFS011-0399r6.50  
 Revision Date: 07.02.13

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## Pultex<sup>®</sup> Fiber Reinforced Polymer Flat Sheets (cont'd)

Property	ASTM Test	Value	Value
Flammability Classification	UL94	<b>1525</b> (VO)	<b>1625</b> (VO)
Tunnel Test	ASTM E-84	25 Max	25 Max
Flammability Extinguishing	ASTM D635	Self extinguishing	Self extinguishing
NBS Smoke Chamber	ASTM E662	650	650

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