

Material Properties of PermaStruct® Structural FRP Profiles



PERMASTRUCT®

Coupon Properties

Material Properties	Units	Value	Test Method
Tensile Strength, LW	MPa	206.8	ASTM D-638
Tensile Strength, CW	MPa	48.2	ASTM D-638
Tensile Modulus, LW	GPa	21.5	ASTM D-638
Tensile Modulus, CW	GPa	6	ASTM D-638
Compressive Strength, LW	MPa	206.8	ASTM D-695
Compressive Strength, CW	MPa	103.4	ASTM D-695
Compressive Modulus, LW	GPa	19.5	ASTM D-695
Compressive Modulus, CW	GPa	6	ASTM D-695
Flexural Strength, LW	MPa	206.8	ASTM D-790
Flexural Strength, CW	MPa	68.9	ASTM D-790
Flexural Modulus, LW	GPa	21	ASTM D-790
Flexural Modulus, CW	GPa	6	ASTM D-790
In-plane Shear Modulus, LW	GPa	3.5	ASTM D-7078
Short Beam Shear Strength	MPa	31	ASTM D-2344
Barcol Hardness		45	ASTM D-2583
Water Absorption	% Max by wt.	0.5	ASTM D-570
Density	g/cc	1.72-1.94	ASTM D-792
Glass Transition Temperature	°C	80	ASTM D-7029
Flammability Classification		V-0	UL-94
Flammability Extinguishing		< 25	ASTM D-635
Tunnel Test		FSI < 25	E-84

LW - Lengthwise

CW - Crosswise