

SuperLoc™ Series 1610

Part Number SS820



Available in Polyester or Vinyl Ester

Wale & Retaining Wall System (US Patent #6,893,191 B2/May 17, 2005)

Physical Properties

Physical Properties	Imperial Value	Units	Metric Value	Units
Section Modulus	18.40	in ³ /ft	989.24	cm ³ /m
Moment of Inertia	101.43	in ⁴ /ft	13851.12	cm ⁴ /m
Typical Thickness	0.30	in	7.62	mm
Depth of Sheet	10.00	in	254.00	mm
Width of Sheet	24.00	in	609.60	mm
Weight (single pile)	5.47	lbs/ft ²	26.71	kg/m ²
Angle of the web	20	°	20	°
Cross Sectional Area of Sheet	13.47	in ²	86.90	cm ²
Standard Color	Graphite Gray			

Mechanical Properties

Mechanical Properties	Test Method	ASTM D7290 Characteristic Values				Units
		Polyester Resin		Vinylester Resin		
		Imperial	Metric	Imperial	Metric	
Tensile Modulus (LW)	ASTM D638	3.74	25.79	3.91	26.96	Msi / GPa
Tensile Modulus (CW)	ASTM D638	1.84	12.69	1.85	12.76	Msi / GPa
Compression Modulus (LW)	ASTM D6641	3.25	22.41	3.67	25.30	Msi / GPa
Compression Modulus (CW)	ASTM D6641	1.37	9.45	1.75	12.07	Msi / GPa
Tensile Strength (LW)	ASTM D638	58.82	405.55	70.88	488.70	ksi / MPa
Tensile Strength (CW)	ASTM D638	12.43	85.70	16.50	113.76	ksi / MPa
Compression Strength (LW)	ASTM D6641	49.62	342.12	49.74	342.95	ksi / MPa
Compression Strength (CW)	ASTM D6641	14.47	99.77	19.70	135.83	ksi / MPa
Inplane Shear Strength	ASTM D5379	8.70	59.98	12.51	86.25	ksi / MPa
Inplane Shear Modulus	ASTM D5379	0.50	3.45	0.50	3.45	Msi / GPa
Short Beam Shear Strength	ASTM D2344	1.48	10.20	4.33	29.85	ksi / MPa

Moment Capacity Polyester ASD*	47,053 lb-ft/ft. of wall	209.3 kN-m/meter of wall
Moment Capacity Vinyl Ester ASD*	54,677 lb-ft/ft. of wall	243.2 kN-m/meter of wall
Moment Capacity Polyester LRFD ¹	13,551 lb-ft/ft. of wall	60.3 kN-m/meter of wall
Moment Capacity Vinyl Ester LRFD ¹	16,622 lb-ft/ft. of wall	73.9 kN-m/meter of wall
Shear Strength Polyester ASD*	39,300 lbs per ft. of wall	573.5 kN/meter of wall
Shear Strength Vinyl Ester ASD*	47,250 lbs per ft. of wall	689.6 kN/meter of wall
Shear Strength Polyester LRFD ²	11,320 lbs per ft. of wall	165.2 kN/meter of wall
Shear Strength Vinyl Ester LRFD ²	14,370 lbs per ft. of wall	209.7 kN/meter of wall
Characteristic Value ASTM D7290 Full Section Modulus of Elasticity	3.25 Msi (Polyester) 3.67 Msi (Vinyl Ester)	22.41 GPa (Polyester) 25.30 GPa (Vinyl Ester)
Average Full Section Modulus of Elasticity ³	4.25 Msi (Polyester) 4.39 Msi (Vinyl Ester)	29.34 GPa (Polyester) 30.27 GPa (Vinyl Ester)
Web Buckling Capacity from Wale Force based on ASTM D2790 Testing (based on 8" wale section)	10,600 lbs/ft of wall	155 kN/m of wall

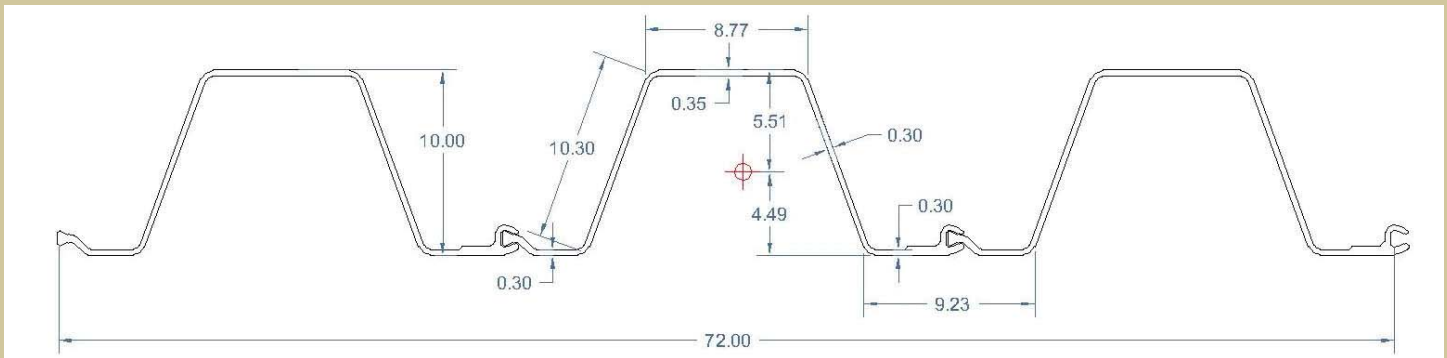
*Ultimate Capacity based on ASTM 7290 Characteristic Values

¹LRFD Factored for long term water exposure; Time effect factor λ of .4 applied; ϕ factor of .80 applied.

² LRFD Factored for long term water exposure; Time effect factor λ of .4 applied; ϕ factor of .80 applied.

³ Average based on 30 data points; lessor of the flange or web modulus.

Note: All Capacities have been developed based on the equations and design methodologies described in the Pre-Standard Load & Resistance Factor Design (LRFD) of Pultruded Fiber Reinforced Polymer (FRP) Structures.



FOR MORE DETAILS ON THE SUPERLOC™ SHEET PILE SYSTEM AND SUPERWALE™ CONTACT:

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