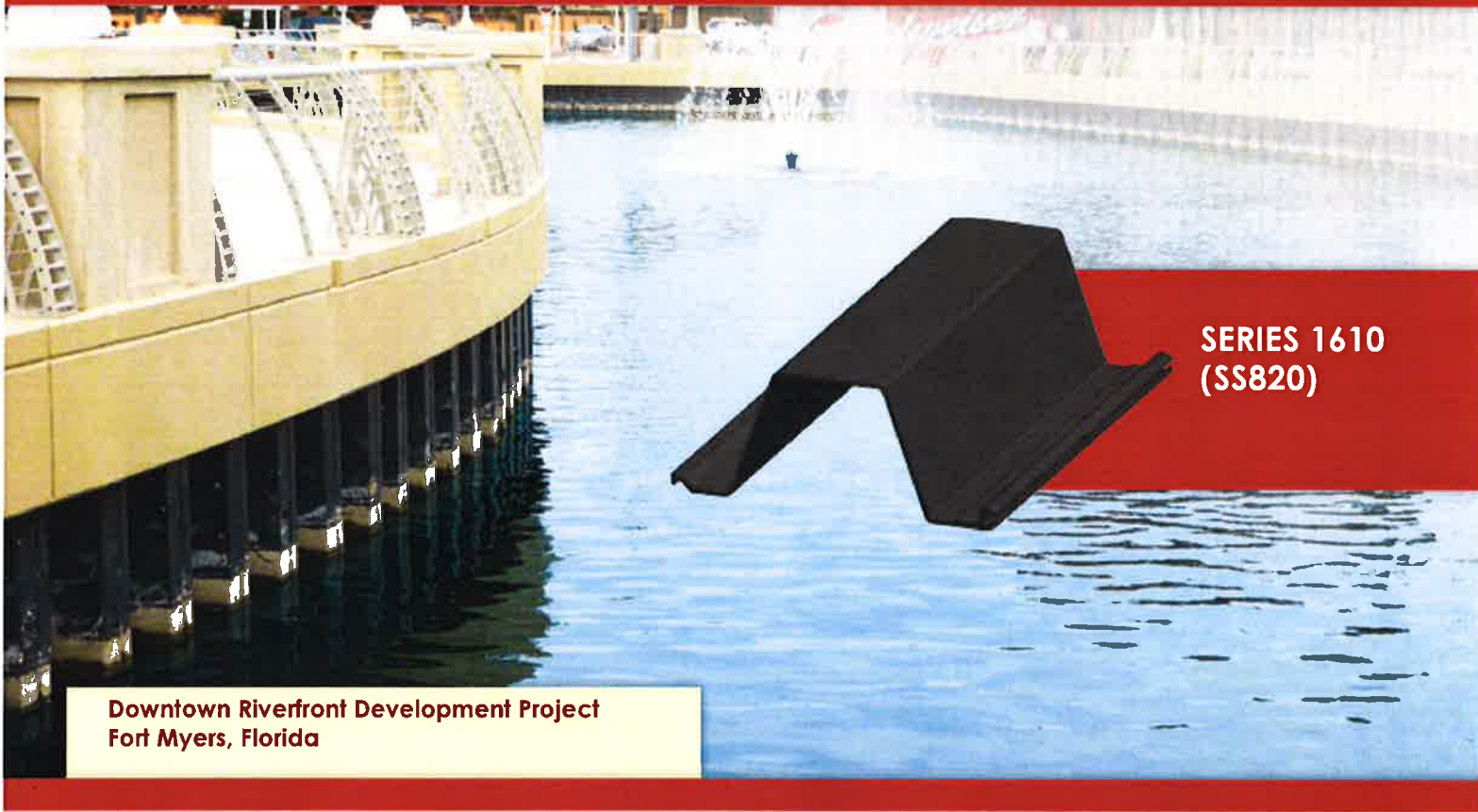


SUPERLOC® Sheet Piles Series 1610 (SS820)

Physical & Mechanical Properties



**Downtown Riverfront Development Project
Fort Myers, Florida**

**SERIES 1610
(SS820)**

Part drawings and physical property sheets can be viewed at <http://www.creativepultrusions.com>.

Series 1610 (SS820) 24" (609.6mm) W x 10" (254mm) H 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			



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Series 1610 (SS820) 24" (609.6mm) W x 10" (254mm) H Mechanical Properties	Test Method	ASTM D7290-06 Characteristic Values				Units
		Polyester Resin		Vinyl Ester 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

Series 1610 (SS820) 24" (609.6mm) W x 10" (254mm) H Mechanical Properties		
Moment Capacity	Imperial	Metric
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	Imperial	Metric
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	11,319 lbs per ft. of wall	165.2 kN/meter of wall
Shear Strength Vinyl Ester LRFD ²	14,365 lbs per ft. of wall	209.6 kN/meter of wall
Full Section Modulus of Elasticity	Imperial	Metric
Average Full Section Modulus of Elasticity	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 D7290-06 Testing (based on 8" wale section)	10,600 lbs/ft of wall	155 kN/m of wall

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

*Ultimate Capacity based on ASTM D7290-06 Characteristic Values.

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

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

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