



# SuperPile

## Fiberglass Pultruded Composite Marine Pilings

### Engineering Specifications

The three profiles are pultruded fiberglass composite with a hybridized polyurethane resin system with an E-glass reinforcement package. The resin contains superior UV inhibitors, in addition, the piles are shrouded with a polyester surfacing veil that provides 10 mils of superior UV protection against the sun's harmful rays. The extremely durable, light weight, high strength piles are the strongest, most cost-effective pultruded fiberglass piles in the marketplace.



**12" x 1/2" wall  
(305mm x 12.7mm)**



**16" x 1/2" wall  
(406mm x 12.7mm)**

### Mechanical and Physical Properties

	12" (305mm)	16" (406mm)
<b>Mechanical Properties</b>		
Flexural strength (full section) psi (Mpa)	76,000 (524)	76,000 (524)
Axial Compression Strength psi (Mpa)	76,000 (524)	76,000 (524)
Modulus of Elasticity psi (Gpa)	5.2E6 (35.9)	5.2E6 (35.9)
Allowable Moment Kip-ft (kN·m)	159 (216)	290 (393)
Ultimate Hole Bearing Strength Lengthwise psi (Mpa)		
5/8" dia. Bolt	25,000 (172)	25,000 (172)
3/4" dia. Bolt	23,000 (159)	23,000 (159)
<i>Note: Allowable Bending Moment FS=2</i>		
<b>Physical Properties</b>		
Moment of Inertia in <sup>4</sup> (mm <sup>4</sup> )	299 (1.24E8)	732 (3.04E8)
Section Modulus in <sup>3</sup> (mm <sup>3</sup> )	49.8 (8.16E6)	91.5 (1.50E6)
Radius of Gyration in (mm)	4.07 (103.4)	5.48 (139.2)
Weight lbs/ft (N/m)	15.6 (227.7)	21.0 (306.5)
Coefficient of Thermal Expansion Lengthwise	5.0 <sup>-6</sup> in/in/°F	5.0 <sup>-6</sup> in/in/°F
Water Absorption	<.60%	<.60%
Fiber Volume Fraction	≥ 50%	≥ 50%
Cross Sectional Area in <sup>2</sup> (mm <sup>2</sup> )	18.1 (11,700)	24.3 (15,700)
Surface Area ft <sup>2</sup> (m <sup>2</sup> /m)	3.1 (0.96)	4.2 (1.28)

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