

Engineering Data – Pearson Composite Piles

Materials Properties	Piling Diameter			
	8"	10"	12"	14"
Reinforcement (grams/square meter)	4000	5700	8100	8100
A quasi-isotropic three dimensional proprietary fabric utilizing e-glass grade filaments Exceptional damage tolerance with no crack propigation				
Outer Layer (area sq ft / lineal ft)	2.09	2.62	3.10	3.67
Polyethylene terephthalate polypropylene hybrid thermoplastic extrusion, chemically bonded to the laminate at elevated temperature, u.v. stable, will not leach (no leachates), very high chemical resistance, will not affect marine growth, no enviromental impact (benign)				
Resin Matrix				
An epoxy / vinylester, with high elongation, low styrene monomer, excellent hydrolitic stability and high heat deflection temperature, will not leach, inert, high chemical resistance, insoluble in any common hydrocarbons, mild acidic or alkaline solutions				
Mechanical Properties	Piling Diameter			
	8"	10"	12"	14"
Axial Tensile Strength - psi	27,000	29,000	65,000	65,000
Axial Tensile Modulus - (MOE) - psi	2,400,000	2,700,000	4,300,000	4,300,000
Axial Flexural Strength - psi	25,000	27,000	64,000	64,000
Axial Compressive Streghth - psi	30,000	40,000	55,000	55,000
Transverse Tensile Strength - psi	18,000	21,000	25,000	25,000
Effective Bending Stiffness - psi	1.118E+08	2.960E+08	1.014E+09	1.633E+09
Young's Modulus	2,400,000	2,700,000	4,300,000	4,300,000
Poisson's Ratio	0.31	0.31	0.30	0.30
Allowable Bending Moment - kips-ft	18	34	113	156
Allowable Axial Load - kips short column	107	214	281	517
Moment of Inertia - in 4	47	110	236	380
Section Modulus - in 3	11.75	22.00	39.33	54.29
Barcol Hardness	>50	>50	>50	>50
Glass to Resin Ration - by weight	50:50	55:45	60:40	60:40
Wall Thickness - inches (Average)	0.25	0.25	0.375	0.375
Weight - lbs/ft	4.5	7.4	10.7	12.5
Thermal Expansion - in/in/°F	<.000014	<.000012	<.000006	<.000006
Water Absorption - %	<.25	<.25	<.25	<.25

For more information contact:

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