



Product Guide Specification



A. Marshall Composite Technologies, LLC, 2873 22nd St. NE, Salem, OR 97302.
 Phone (503)726-0526. Web Site <http://www.marshallcomposite.com>.

F. Dimensions: Nominal Diameter and Sectional Area:

US Size	Nominal Diameter, inches	Area, in ²	Weight, lb/ft	Soft Metric Size	Nominal Diameter, mm	Area, mm ²	Weight, Kg/m
#3	0.375	0.110	0.10	#10	9.5	71	0.046
#4	0.500	0.196	0.17	#13	12.7	126	0.077
#5	0.625	0.307	0.28	#16	15.9	198	0.127
#6	0.750	0.442	0.41	#19	19.0	285	0.186

G. Tensile Properties:

Bar Size Designation		Tensile Modulus of Elasticity		Ultimate Tensile Strength		Guaranteed Design Tensile Strength		Allowable Tensile Stress (Working Stress Limit)		Ultimate Strain in Tension	Poisson's Ratio
		E_t		F_u		f_{tu}		$f_{t,a}$		ϵ_{fu}	
mm	in	Gpa	Msi	MPa	Ksi	MPa	Ksi	MPa	Ksi	%	
#10	#3	42	6	840	121	780	113	195	28	2.00	0.27
#13	#4	42	6	800	116	725	105	181	26	1.90	0.27
#16	#5	40	5.8	780	113	655	95	164	24	1.95	0.27
#19	#6	40	5.8	720	104	630	91	158	23	1.80	0.27

I. Coefficient of Thermal Expansion (C.T.E.):

1. Longitudinal Direction: 8×10^{-6} per degree C (4.5×10^{-6} per degree F).
2. Transverse Direction: 32×10^{-6} per degree C (18×10^{-6} per degree F).