

## Technical Data

# Mateenbar™ 46

### Mateenbar 46 (ASTM D7957, ACI 440.6)

	Units	#2 (6mm/0.23in)	#3 (10mm/0.39in)	#4 (13mm/0.51in)	#5 (16mm/0.62in)	#6 (19mm/0.74in)	#7 (22mm/0.86in)	#8 (25mm/0.98in)	#10 (32mm/1.25in)
Guaranteed tensile strength	kN	27	59	96	130	182	241	297	437
	kip	6.1	13.2	21.6	29.1	40.9	54.1	66.8	98.2
Tensile modulus	GPa	46							
	ksi	6670							
Guaranteed transverse shear capacity	MPa	150							
	ksi	23.2							
Primary Materials	Epoxy Backboned Vinylester and Corrosion Resistant E-CR Glass								
Weight	g/m	87	144	315	415	589	780	1030	1680
	lb/ft	0.058	0.096	0.211	0.278	0.395	0.524	0.692	1.128
Nominal cross-sectional area	mm <sup>2</sup>	32	71	129	199	284	387	510	819
	in <sup>2</sup>	0.049	0.11	0.20	0.31	0.44	0.60	0.79	1.27
Outer diameter (including ribs)	mm	6.0	10.0	14.0	16.0	19.0	22.0	25.0	31.5
	in	0.250	0.375	0.500	0.625	0.750	0.875	1.000	1.270

Please contact our team for information on the material properties, shape availability and dimensional limitations of bent bars.

### Direct comparisons: Steel and mateenbar

Material Properties	Units	Mateenbar™	Stainless Steel (ASTM A955)	Steel (ASTM A615)
Tensile strength	MPa	800 - 1100	420	420
	ksi	116 - 159	60	60
Tensile modulus	GPa	46 - 60	200	200
	KSI	6675 - 8700	29000	29000
Bond strength	MPa	10	10	10
	PSI	1450	145	1450
Thermal conductivity	W/ (m·°C)	< 1 <sup>(1)</sup>	16	54
	BTU/(hr·ft·°F)	< 0.6 <sup>(1)</sup>	10	32
Electrical resistivity	Ω·m	> 200 x 10 <sup>10</sup>	1 x 10 <sup>-4</sup>	1.5 x 10
	Ω·in	> 8 x 10 <sup>13</sup>	4 x 10 <sup>-5</sup>	6 x 10
Unit weight	kg/m <sup>3</sup>	2100	7800 - 8000	7850
	lb/ft <sup>3</sup>	130	485 - 500	490

(1) Approximate value