

## Technical Data

# Mateenbar™ 46 GFRP Rebar

### Mateenbar™ 46 (ASTM D7957, ACI 440.6, CSA-S807 Grade I)

	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 force	kN	27	59.2	97	130	182	241	297	437
	kip	6.1	13.3	21.8	29.1	40.9	54.1	66.8	98.2
Elastic Modulus	GPa	46.8							
	ksi	6670							
Guaranteed transverse shear capacity	MPa	150							
	ksi	21.8							
Weight	g/m	97	170	315	415	590	780	1030	1680
	lb/ft	0.07	0.114	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	8.2	10.3	14.0	16.0	19.0	21.8	25.0	31.4
	in	0.323	0.406	0.551	0.630	0.750	0.860	0.985	1.240
Primary Materials	Epoxy Backboned Vinylester and Corrosion Resistant E-CR Glass								

The data herein applies to straight bars only. For data on Mateenbar™ rebar bends, please refer to the Mateenbar™ rebar bends data sheet.

For other sizes refer to the Mateenbar™ 60 Technical Data Sheet.

## Code-Approved and Proven Performance

### MATERIAL STANDARDS

Mateenbar™ 46 complies with ASTM D7957 and CSA-S807 Grade I material standards.

### RESIDENTIAL CONCRETE

Mateenbar™ 46 can be used in residential concrete, including footings and foundation walls, as prescribed in ICC-EER 5548, or as designed using ACI 332 and ACI 440 design methodology.

### COMMERCIAL CONCRETE

Mateenbar™ 46 can be used in commercial concrete design using concrete code ACI 440.11-22, ICC-ESR 5548 and AASHTO LRFD Bridge Design Guide Specifications for GFRP-Reinforced Concrete.

### MASONRY

Mateenbar™ 46 can be used with TMS 402/602-22 Appendix D as reinforcing for masonry walls.

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