



# MST-BAR<sup>®</sup> High-Mod<sup>™</sup>

High Modulus Glass Fiber Reinforced Polymer (GFRP) Rebar

## **Higher Strength = Cost Saving**

Over 2x stronger tensile strength than grade 60 steel rebar allows for less bar with same performance

### **Corrosion-Proof Reinforcement**

Zero rust, zero spalling, eliminates costly rehabilitation and maintenance

### 200+ Years Service Life

Engineered to extend the service life of your reinforced concrete for centuries

### **Quick & Simple Installation**

Up to 50% labor savings compared to installing traditional steel rebar

### **Transportation Savings**

25% the weight of steel rebar. One truck of MST-BAR® replaces four truckloads of steel

### **High Performance in All Climates**

Stronger reinforcement in freeze-thaw regions & guaranteed longevity in coastal regions

#### Save On Concrete

No corrosion inhibitor, use chloride-based accelerants, reduced footing volumes

# No Waterproofing

Eliminates need for costly waterproofing agents and epoxy coating necessitated by rust-prone steel rebar

# MST-BAR BEND™ Technology

Fastest turnaround time for factory fabricated bent bars. Our proprietary corrugated sleeve achieves any bend possible

### **Nonconductive & Nonferrous**

Ideal for projects with electro-magnetic sensitivity

#### **High Chemical Resistance**

High alkaline resistance. Impervious to de-icing salts and other harsh chemical attacks

### **Environmental Sustainability**

Up to 70% less embodied carbon than recycled black steel rebar

### **High Fatigue Resistance**

20x higher resistance under cyclical loading compared to traditional steel rebar



BAR SIZE DESIGNATION	#2	#3	#4	#5	#6
NOMINAL DIAMETER	0.25 in (6mm)	0.375 in (10mm)	0.5 in (13mm)	0.625 in (16mm)	0.75 in (20mm)
NOMINAL AREA	0.05 in² (32 mm²)	0.11 in² (71 mm²)	0.20 in² (129 mm²)	0.31 in² (199 mm²)	0.44 in <sup>2</sup> (284 mm <sup>2</sup> )
WEIGHT	0.18 lb/ft	0.33 lb/ft	0.52 lb/ft	0.74 lb/ft	1.04 lb/ft
MINIMUM TENSILE FORCE	7.42 kips (33 kN)	16.0 kips (71.2 kN)	30.4 kips (135 kN)	45.0 kips (200 kN)	65.0 kips (289 kN)
BENT BARS AVAILABLE	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
BAR SIZE DESIGNATION	#7	#8	#9	#IO	#II

BAR SIZE DESIGNATION	#7	#8	#9	#IO	#II
NOMINAL DIAMETER	0.875 in	1 in	1.128 in	1.250 in	1.50 in
	(22mm)	(25mm)	(29mm)	(32mm)	(36mm)
NOMINAL AREA	0.60 in²	0.79 in²	1.00 in²	1.27 in²	1.66 in²
	(387 mm²)	(510 mm²)	(645 mm²)	(819 mm²)	(1071 mm²)
NOMINALWEIGHT	1.34 lb/ft	1.82 lb/ft	2.08 lb/ft	2.56 lb/ft	3.20 lb/ft
MINIMUMTENSILE FORCE	87.68 kips	114.0 kips	145.0 kips	184.0 kips	226.0 kips
	(390 kN)	(507 kN)	(645 kN)	(818 kN)	(1005 kN)
BENT BARS AVAILABLE	<b>~</b>	<b>~</b>	<b>✓</b>	<b>✓</b>	<b>~</b>

GUARANTEED TENSILE	145 ksi				
STRENGTH	(1000 MPa)				
ELASTIC MODULUS	8702 ksi	GUARANTEED BOND	3000 psi		
(YOUNG'S MODULUS)	(60 GPa)	STRENGTH	(21 MPa)		
TRANSVERSE SHEAR	31.9 ksi	GUARANTEED BEND STRENGTH (Radius of >4x Bar Diameter)	87 ksi		
STRENGTH	(220 MPa)		(600 MPa)		

MST-BAR meets the criteria for all of (but not limited to) the following Design Codes:

ACI 440.1R ACI 440.4R ACI440.5 AASHTO LRFD ACI 440.11 ASTM D8505 ASTM D7957

# APPLICATIONS:

Seawalls, Water and Wastewater, Bridges, Commercial Construction, and Tunnels (stray current)... AND MORE

