

10M GRADE 1 FIBERGLASS REBAR FOR FLATWORK

10M GRADE 1 GFRP is the best in class GFRP (Glass Fiber Reinforced Polymer) rebar from MST-BAR. Engineered for concrete flatwork, 10M GRADE 1 GFRP is manufactured with long-lasting Vinyl Ester Resin and corrosion-proof Glass to reinforce your concrete with a superior grade, code approved reinforcement.



75% LIGHTER THAN STEEL

75% lighter than traditional steel rebar. Load on your truck's ladder rack, no Class-ACDL required.

4X STRONGER THAN STEEL

Over 4X stronger than Grade 40 rebar.

QUICK & SIMPLE INSTALLATION

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

SUPERIOR CRACK

Control 80% less crack initiation compared to traditional steel rebar.

NO WATERPROOFING

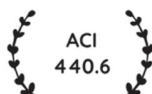
Eliminates need for costly waterproofing agents and epoxy coating necessitated by rustprone steel rebar.

PHYSICAL & MECHANICAL PROPERTIES

NOMINAL BAR DIAMETER	0.375 in (10 mm) Diameter / 20 ft (6 m)
NOMINAL CROSS-SECTIONAL AREA	0.11in ² (71 mm ²)
BAR COMPOSITION	Vinyl Ester Resin & ECR Glass Fiber
BAR PROFILE	Integral Rib Design (No Sand-Coating Required)
GUARANTEED TENSILE STRENGTH	145 ksi (1000 MPa)
ELASTIC MODULUS	6380 ksi (45 GPa)
TRANSVERSE SHEAR STRENGTH	23 ksi (160 MPa)
GUARANTEED PULL-OUT CAPACITY	2900 psi (20 MPa)

HANDLING & INSTALLATION

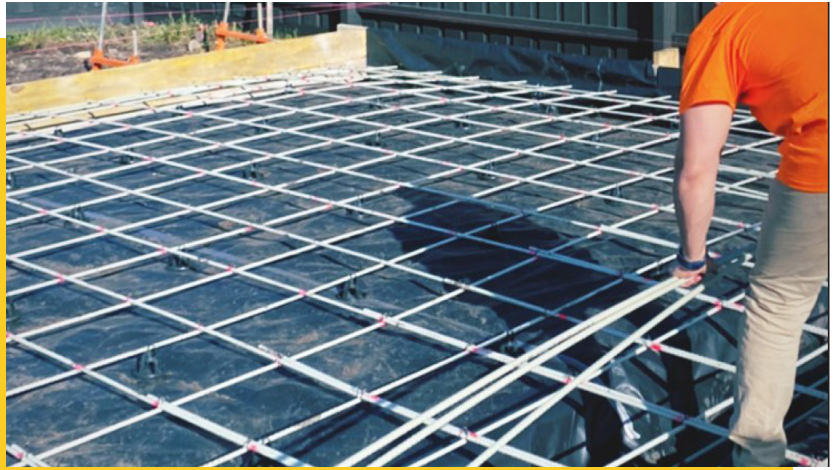
- Working with 10M Grade 1 GFRP is quick and simple with our best practice guidelines.
- Always wear gloves when handling 10M Grade 1 GFRP to protect against fiberglass splinters. Direct contact to skin can cause irritation.
- Use a diamond blade when field-cutting 10M Grade 1 GFRP. Do not shear the bars. If lap-splicing is necessary, use contact lap splices. Lap length should be no less than 15 inches.
- Tie and chair 10M Grade 1 GFRP as you would steel rebar. Tie wire, rebar clips, and plastic zipties are acceptable methods of securing the bar.
- Beware of settlement of loading when using 10M Grade 1 GFRP with high slump concrete or when vibrating



MST-BAR SLAB ON GRADE DESIGN FOR SHRINKAGE AND SLIGHT LOAD BEARING APPLICATION.

In this design the following assumptions have been used:

- Soil to have a good compaction
- Bars to be placed properly
- Control joint to be cut properly
- Expansion joint to be considered properly
- Spacing between bars to be accurate



DESIGN AID FOR SLAB ON GRADE WITH GFRP SUBSTITUTING STEEL REINFORCEMENT OR W.W.F. ONLY USE FOR MST-BAR • ONLY ON SLAB OF GRADE APPLICATION

SLAB THICKNESS	FUNCTION AND LOAD	TEMPERATURE ZONE	GFRP REQUIRED IN EACH DIRECTION
100 mm (4 Inches)	• Residential driveway • 5 Ton pickup truck • Live load = 100 PSF	Subzero	Mid-strip: 10M Grade 1 GFRP @300 Edge-strip: 10M Grade 1 GFRP @400
150 mm (6 Inches)	• Parking garage • 5 Ton pickup truck • Public walkway and platforms with light maintenance vehicle • Live load = 100 PSF	Subzero	Mid-strip: 10M Grade 1 GFRP @300 Edge-strip: 10M Grade 1 GFRP @400
150 mm (6 Inches)	• Live load = 250 PSF • Commercial trucks	Subzero	Mid-strip: 10M Grade 1 GFRP @200 Edge-strip: 10M Grade 1 GFRP @400 • Plus 2 Bar @400 Top along all exposed joints
200 mm (8 Inches)	• Live load = 250 PSF • Commercial trucks	Subzero	MST- Bar #3 @300 • Plus 3 bar @300 Top along all exposed joints

NOTES:

1. Sawcut control joints at 4m to 5m spacing maximum, depth of sawcut shall be 25% of slab thickness.
2. If you wish to use MST-BAR 10M(3/8") bars you can increase the spacing accordingly based on tensile capacity of the MST-BAR, capacity between the two is 26%, therefore spacing can be increased by 26%.
3. Expansion joints shall be at maximum spacing of 15 meters(50ft.).
4. Mid-strip is 50% of width of panel between joints.
5. Edge-strip is 25% of width of panel along all joints.
6. All 10M Grade 1 GFRP rebars are placed at mid-depth of slab unless otherwise noted
7. Cover to additional top rebars shall be 30 to 40mm minimum



AVAILABLE THROUGH:



**G2 BUILDING
PRODUCTS Inc.**

DEALER NETWORK

WWW.G2BUILDINGPRODUCTS.COM