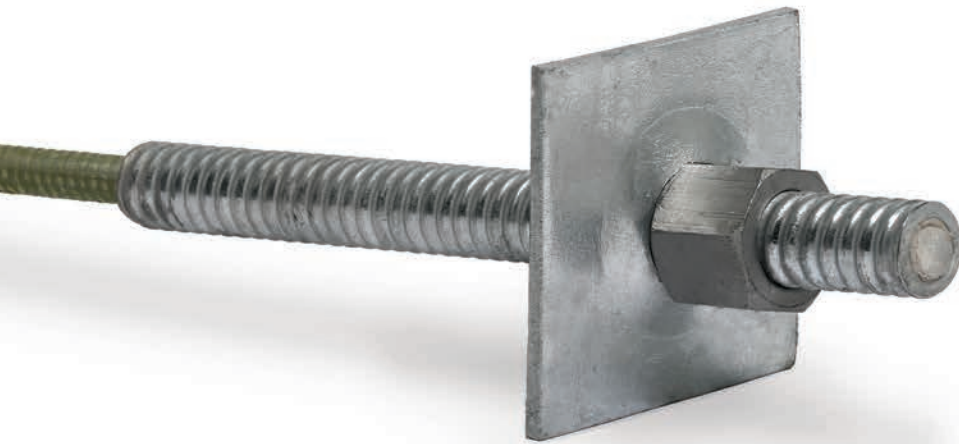


MST **ULTRA**
ANCHORS
GFRP ROCK BOLT



MST ULTRA ANCHORS

GFRP ROCK BOLT

Stay protected without the extra weight using MST Ultra Anchor solid fiberglass anchor bolts for shoring, mining, tunneling and soil stabilization. By replacing steel with glass fiber reinforced polymer (GFRP), the MST Ultra Anchor makes handling anchor bolts easier and more productive. Not only are our MST Ultra Anchor rods 75% percent lighter than steel, they are also 3 times stronger. Made with High Modulus (60GPa), the rod is ribbed for maximum pull out strength which is also greater than steel. Fully certified by ASTM, CSA and ICC safety codes, MST Ultra Anchors are made in Canada and available worldwide.

Contact MST Rebar Inc. for more information on how MST Ultra Anchors can make your project easier for your work crew with faster installation and greater protection.



Light Weight

75% lighter than steel rods



Stronger

3X stronger than steel rods



Non-Corrosive

Exposure to salt water, coastal winds or road salt with no effect



Green Solution

The manufacturing process for MST GFRP creates a smaller carbon footprint than steel



Compliance and Certifications

BS EN 1997-1

BS EN 1537

ACI 440-4R-04

BS 7861-1

ACI 440-3R-12



Residential



Shoring / Soil Stabilization



Mining



Tunnels



ACME Threaded Steel Collar

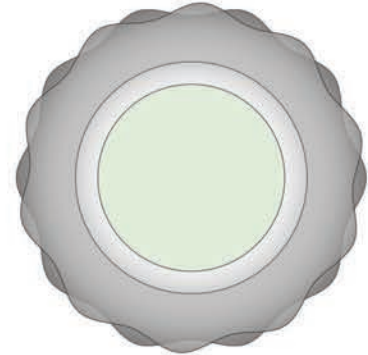
MST Ultra Anchors are capped with a steel collar with a thick acme style thread that prevents the risk of shearing.

Ultra adhesion between the ribbed MST fiberglass bar and the steel collar is provided using a high strength bonding agent ensuring a strong hold for the lifetime of the product.

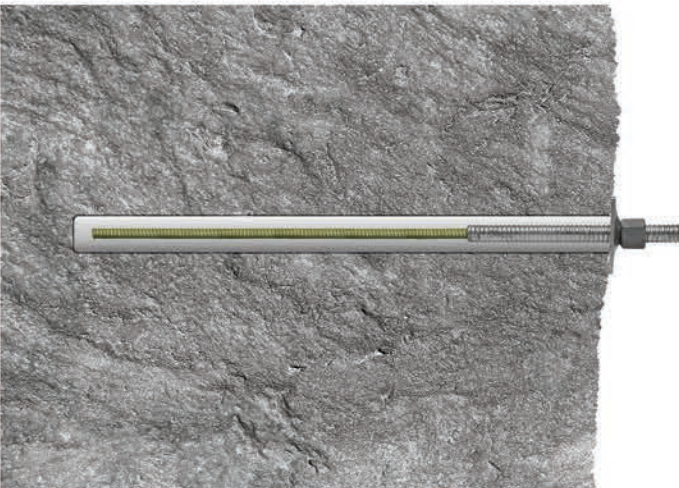
Sizing



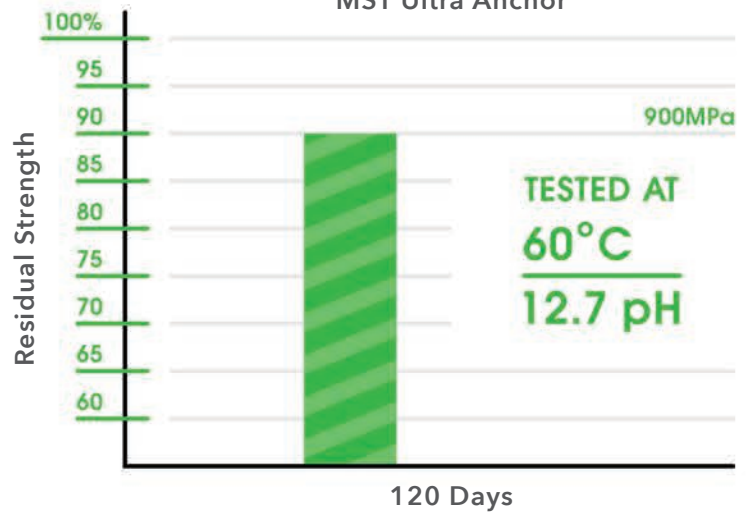
20 mm
(Actual Size)



25 mm
(Actual Size)



Alkali Resistance Testing of
MST Ultra Anchor



Alkali Resistance

GFRP offers the best material for shoring and stabilization in extreme environments where corrosive elements are present. Unlike steel that reacts and degrades when exposed to high alkali pH levels, MST Ultra Anchors remain intact with nearly no change in tensile strength. Tests show MST Ultra Anchor fiberglass rods maintained 90% residual tensile strength after being exposed to 12.7 pH levels at 60° Celsius for 120 days. The performance of MST fiberglass bar in these accelerated aging tests show it is a viable product for permanent application of anchor bolts.

Technical Information

SOLID BAR - METRIC

PHYSICAL PROPERTIES				MECHANICAL PROPERTIES TEMPORARY				MECHANICAL PROPERTIES PERMANENT			
Rib to Rib Dia.	Nominal Dia.	Nominal CSA	Pitch	Temporary	Ultimate Tensile Load	Ultimate Tensile Strength	Elasticity	Permanent	Ultimate Tensile Load	Ultimate Tensile Strength	Elasticity
mm	mm	mm ²	mm	Resin/Glass	(kN)	(MPa)	(GPa)	Resin/Glass	(kN)	(MPa)	(GPa)
23	20	300	10	PE/ECR	300	1000	52.7	VE/ECR	300	1000	60
27	25	507	10	PE/ECR	500	1000		VE/ECR	500	1000	

Each bearing plate is rated for 250kN ultimate capacity. To achieve desirable capacity you may double the plates as needed.

SOLID BAR - IMPERIAL

PHYSICAL PROPERTIES				MECHANICAL PROPERTIES TEMPORARY				MECHANICAL PROPERTIES PERMANENT			
Rib to Rib Dia.	Nominal Dia.	Nominal CSA	Pitch	Temporary	Ultimate Tensile Load	Ultimate Tensile Strength	Elasticity	Permanent	Ultimate Tensile Load	Ultimate Tensile Strength	Elasticity
in	in	in ²	in	Resin/Glass	(Lbf)	(psi)	(psi)	Resin/Glass	(Lbf)	(psi)	(psi)
.905"	#6	0.465	.393"	PE/ECR	67,450	145038	7643488	VE/ECR	67,450	145038	8702264
1.062"	#8	0.775	.393"	PE/ECR	135,000	145038		VE/ECR	135,000	145038	



MST Rebar Inc.
 200A Hanlan Road,
 Toronto, ON, Canada L4L 3R7
 Phone: 416-740-0377
 Toll Free: 1-855-740-0377