FRP-Fibre Reinforced Polymere

It is our goal to be a trusted resource for companies, and people in particular, to solve their needs in terms of Geotechnical Systems and Concrete Forming and Shoring. We empower our suppliers to make the best product possible targeted to the markets we sell into.

FRP, Fiber Reinforced Polymer, Products

FRP materials are composites made from a polymer matrix reinforced with fibers, usually glass (GFRP), carbon (CFRP), or aramid (AFRP). The fibers provide strength and stiffness, while the polymer matrix binds them together, transferring loads and protecting the fibers.

Applications of FRP

Concrete Construction	Mining and Tunneling	Geotechnical
• *Water treatment plants* • *Bridge decks* • *Coastal construction,* • *MRI Rooms and hospitals* • *Airports* • *Foundations* • *Slabs*	• *Anchors for roofs and side walls*	• *Soil nails* • *Micropiles* • *Rock and soil anchors*

About FCS Can FRP Products

FCS Can offers FRP, commonly referred to as Fibre Glass (GFRP), products for various applications. Products include FRP Re-bar, FRP Anchor Bolts, FRP Hollow bar as well as FRP Mats and FRP special shapes.

- FCS FRP Can products are tested in Canada, and have ICC-ES ESR and EER certification for bar sizes from 10 mm to 19 mm
- FCS Can FRP products are manufactured in China or the USA
- FCS Can FRP Supplier is a Canadian company

Key features of FRP bars are

- *High Strength to Weight Ratio*
- *Corrosion Resistance*
- *Durability and Longevity*
- *Flexibility in Design*
- *Thermal and Electrical Insulation*
- *Sustainability*
- *Rapid Installation*

Comparison between FRP and Steel bars

Bar Type	Tensile Strength MPa	Modulus of Elasticity GPa	Bond Strength MPa	Density kg/m^3
SFT-Bar (ASTM D7957)	850 - 1250	46 - 70	15	1,200-2,100
Stainless Steel (ASTM A955)	560	200	10	7,850-7,900
Steel (ASTM 615)	560	200	10	7,900

SFT-Bar® G60 Grade III

Resin type: Vinylester

SFT-Bar G60 Grade III

Bar Size [mm] / imp	Nominal Cross Section mm^2 / in^2	Typical Tensile Strength Mpa / ksi	Typical Ultimate Load kN / kips	Min. Modulus of Elasticity MPa / ksi	Transvers Shear Strength Mpa / ksi	Ultimate Strain εFu [%]	Bond Strength Mpa / ksi	Transition Temp [C]
6	32	-	-	-				
#2	0.05	-	-	-				
10	71	1273	90	72,000				
#3	0.11	184.6334	20.31	10,443				
13	129	1442	186	70,000				
#4	0.20	209.1448	41.83	10,153				
16	199	1226	244	71,000	>= 186	>= 1.5	>=10	>= 100
#5	0.31	177.8166	55.12	10,298	>= 26		>=1.5	
20	284	1281	364	68,000				
#6	0.44	185.7937	81.75	9,863				
22	387	1216	471	70,000				
#7	0.60	176.3662	105.82	10,153				
25	510	1208	616	68,000				
#8	0.79	175.2059	138.41	9,863				

(1) Ultimate load calculated based on tensile strength and nominal cross section
(2) Minimum specified tensile strength to be provided by manufacturer; value to be determined from qualification tests

G60 SFT-Bar® are Concrete Reinforcing Bars that can be used in most Concrete applications (such reinforcing bars can be considered for most primary or secondary structural applications) as defined by the CSA S807 & ASTM D7957/D7957M-22 (2022) standards.

SFT-Bar® Poly & G40 Grade I

Resin type: G40 Vinylester
Poly: Polyester

SFT-Bar Poly & G40 Grade I

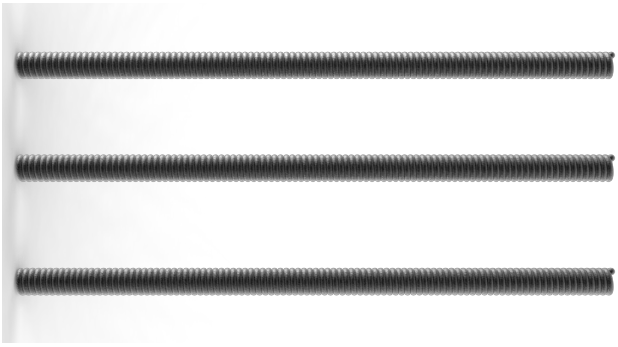
Bar Size [mm] / imp	Nominal Cross Section mm^2 / in^2	Typical Tensile Strength Mpa / ksi	Typical Ultimate Load kN / kips	Min. Modulus of Elasticity MPa / ksi	Transvers Shear Strength Mpa / ksi	Ultimate Strain εFu [%]	Bond Strength Mpa / ksi	Transition Temp [C]
6 / #2	32 / 0.05	962 / 139.5266	31 / 6.84	52,000 / 7,542				
10 / #3	71 / 0.11	905 / 131.2594	64 / 14.44	50,000 / 7,252				
13 / #4	129 / 0.20	856 / 124.1525	110 / 24.83	49,000 / 7,107				
16 / #5	199 / 0.31	845 / 122.5571	168 / 37.99	51,000 / 7,397	>= 173 / >= 25	>= 1.5	>=10 / >=1.5	>= 80
20 / #6	284 / 0.44	820 / 118.9312	233 / 52.33	53,000 / 7,687				
22 / #7	387 / 0.60	825 / 119.6564	319 / 71.79	50,000 / 7,252				
25 / #8	510 / 0.79	806 / 116.9006	411 / 92.35	51,000 / 7,397				

(1) Ultimate load calculated based on tensile strength and nominal cross section

Polyester and G40 SFT-Bar® are Concrete Reinforcing Bars that are meant to be used exclusively in non-structural Concrete Building applications (such reinforcing bars should not be considered for any primary or secondary structural applications) as defined by the CSA S807 & ASTM D7957/D7957M-22 (2022) standards.

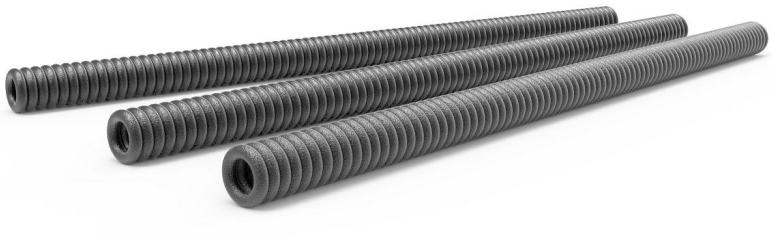
FRP Straight Rebar

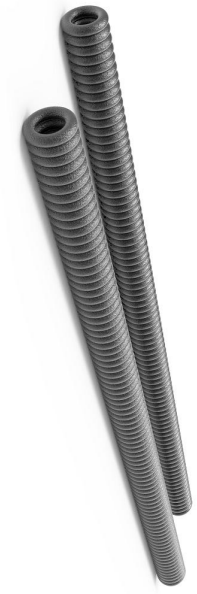
Materials: GFRP/BFRP
Diameter: 4mm-40mm
Length: Customized



FRP Hollow Rebar

Materials: GFRP/BFRP
Diameter: 14mm-40mm
Length: Customized





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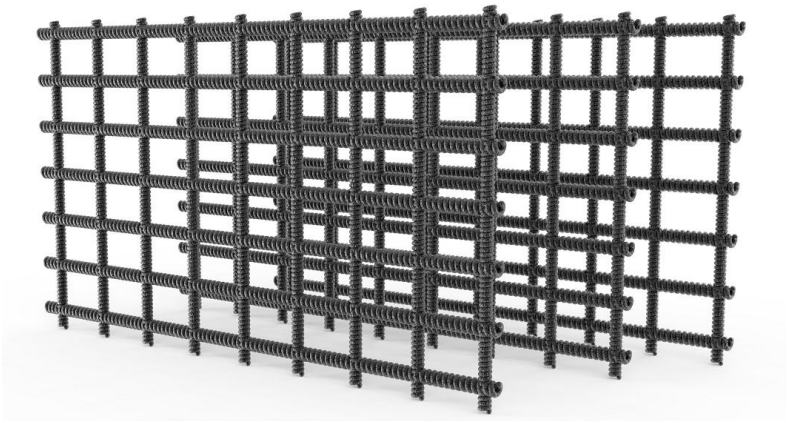
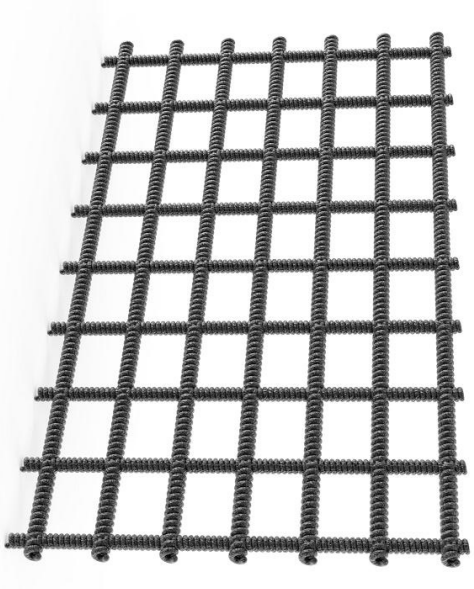
FRP Tie Bolt

Materials: GFRP/BFRP
Diameter: 15mm-40mm
Length: Customized

FRP Grid

Materials: GFRP/BFRP
Diameter: 6mm-20mm
Length & Width: Customized





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