SARASVATI
COMPOSITE LLP

GLASS FIBER REINFORCED REBAR

GFRP REPLACING STEEL REINFORCEMENT IN CONSTRUCTION

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Glass-fiber-reinforced polymer (GFRP) Rebar is a rather new product which has gained popularity in the construction industry over the years.

ABOUT US

SARASVATI
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We are leaders in application work related to composite materials. We take turnkey projects on Industrial and architectural applications. We are known for our strong technological capability, scalability and adaptability that are required to meet the constantly changing prerequisites of our clients.

Leveraging our industry expertise, stringent standards and driven workforce, we deliver unmatched services & best quality products. We are provider of innovative, cost-effective, and high-quality products through continued technological innovation and competent strategies.

CURIOUS

We challenge the status quo for greater impact and innovation We listen and learn from one another's different skill sets and experiences We relentlessly pursue solutions that exceed customer expectations.

COLLABORATIVE

We work together in an open, transparent and respectful way We foster highly connected teams across the global enterprise We partner with our customers and other stakeholders to drive the best outcome.

COMMITTED

We are accountable to deliver financial and operational results that outperform the market We empower our people to make decisions and act like owners We remain resilient to achieve our goals and best serve our purpose.

WHY US?

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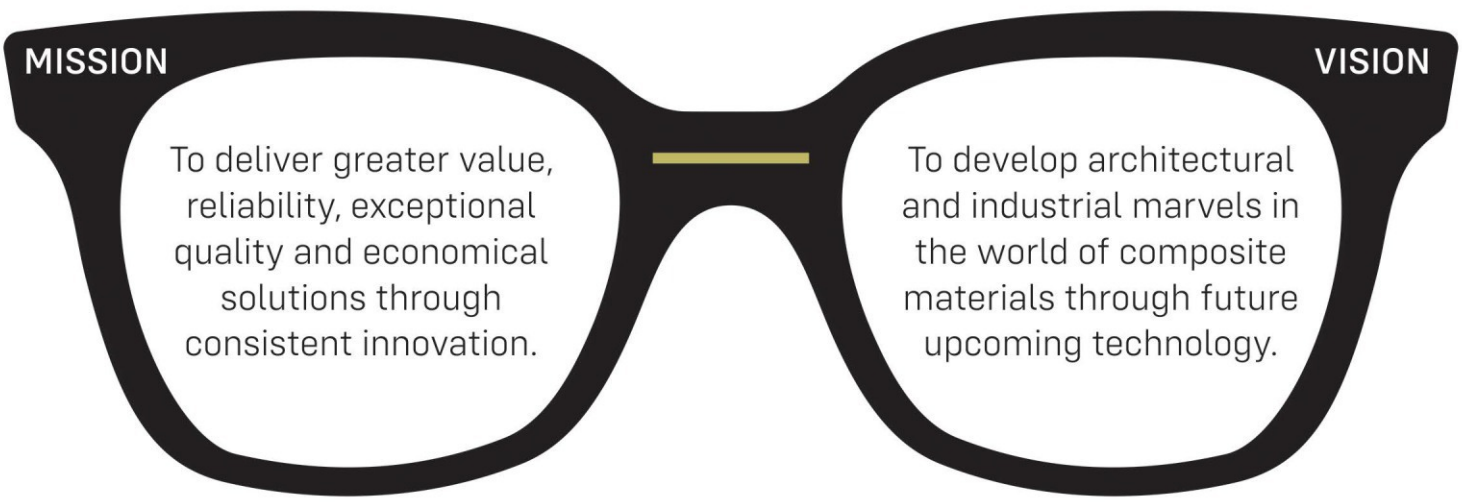
- 500+ Corporate Clients
- 5+ Years of Experience
- Composite Industry
- Best Quality Products
- Reliable & Secure Services



WE DEAL IN WITH

GRC	GFRP Roofing Solutions	GFRP Rebars
Prefab Structures	GFRP Pultruded Profiles	Glass Fiber Mesh & Fabrics

GLASS FIBER REINFORCED REBAR

GFRP INTRODUCTION

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GFRP stands for Glass Reinforced Polymer, GFRP rebar refers to a type of rebar made of glass fibers and resins. This material is used as an alternative to traditional rebar reinforcement in construction projects due to its several advantages such as reduced weight, increased corrosion resistance, and increased dimensional stability.

GFRP REBAR Composite Rebar is used in aquatic concrete structures such as transportation infrastructure, rail LRT, runways, IT and research facilities, mining and tunneling, buildings, retaining walls, dams, power stations, etc. Glass fiber reinforcement is highly resistant to corrosion and can significantly extend the life of concrete structures. Steel is used in structures such as buildings, tunnels, and waterfront concrete.

Climate and chloride exposure create significant corrosion problems. Governments, designers, and building owners face enormous costs to repair dangerous failures.

GFRP ADVANTAGES

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STRONGER

GFRP rebar is 1/4 lighter than steel and twice as strong as steel. More durable and cheaper than steel. Glass fiber rebar has high tensile strength, more than twice as strong as conventional steel of the same diameter. This allows consumers to replace steel diameters with smaller diameter bars in some cases without sacrificing performance.

2x THE LIFE

GFRP components contain high-quality, corrosion-resistant vinyl ester resins that extend the life of concrete structures.

- Can be made with custom lengths, bends, and shapes.
- Durability is a big factor when deciding between composite rebar and rebar. If the rebar is 100% corrosion free and has more than double the lifespan of steel rebar, this is a winner and a top choice.

4x LIGHTER

- Transparent to electric fields and radio frequencies.
- Low thermal conductivity.
- This bar has a much higher lateral coefficient of thermal expansion than steel.
- Fiberglass rebar has a density of only 1.9 tons/cubic meter, so our rebar is about four times lighter than conventional rebar. This means that handling, transportation, and overall experience in the field are greatly simplified.

EASY INSTALLATION

GFRP rebar is easier to cut and bend than steel, making it easier to install. This can help to reduce the installation time and cost of construction projects.

GFRP ADVANTAGES

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BETTER DIMENSIONAL STABILITY

Unlike steel, which can expand and contract with changes in temperature, GFRP rebar maintains its dimensions even in extreme temperatures, making it suitable for use in areas with large temperature swings.

Overall, GFRP rebar provides a high-performance, low-maintenance reinforcement solution that can help to improve the durability, sustainability, and efficiency of construction projects.

FIELDS OF APPLICATION

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GFRP rebar is commonly used in applications where traditional reinforcement is not suitable, such as in harsh environments or areas where there is a risk of corrosion. The material is also often used in high-stress applications, as it has a high tensile strength and is able to withstand high levels of stress and strain.

TRANSPORTATION

TUNNELS

RESIDENTIAL CONSTRUCTION

FIELDS OF APPLICATION

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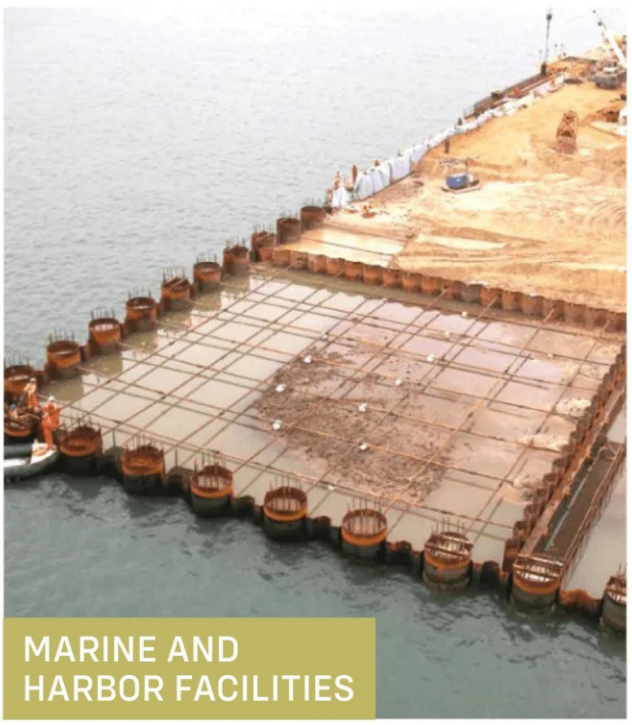
AGRICULTURAL STRUCTURE

CIVIL ENGINEERING WORK



MARINE AND HARBOR FACILITIES

INDUSTRIAL PROJECTS

GFRP TECHNICAL INFORMATION

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COMPARISON CHART

PROPERTY	STEEL	GFRP
Material	500	1000+
Tensile Strength (Mpa)/N/mm^2	120	170
Shear Strength	14*	12.5
Bond Strength (Mpa)/N/mm^2	500	450
Compression (Mpa)/N/mm^2	160-200	65
Elongation (%)	25	4
Durability	Terms prescribed in building code	Not less than 80 years
Density (Ton/m^3)	7.8	1.9
Corrosion Resistance	Appearance of rust products	1.9
Ecologically Compatibility	Friendly Material	Does not emit harmful and toxic substance
Electrical Conductivity	Electrically Conductive	Dielectric

STEEL TMT BAR

WEIGHT (12 Mtr. Bar)	DIAMETER
2.75 kg	Ø 6
4.74 kg	Ø 8
7.40 kg	Ø 10
10.65 kg	Ø 12
14.25 kg	Ø 14
18.93 kg	Ø 16
24.00 kg	Ø 18
35.76 kg	Ø 20
46.22 kg	Ø 22
58.02 kg	Ø 25
75.79 kg	Ø 32

GFRP BAR

WEIGHT (12 Mtr. Bar)	DIAMETER
0.46 kg	Ø 4.5
0.57 kg	Ø 6
0.94 kg	Ø 7
1.23 kg	Ø 8
1.65 kg	Ø 10
2.48 kg	Ø 12
3.24 kg	Ø 14
4.87 kg	Ø 16
6.28 kg	Ø 18
8.08 kg	Ø 20
9.80 kg	Ø 22

GFRP REBARS PACKING DATA

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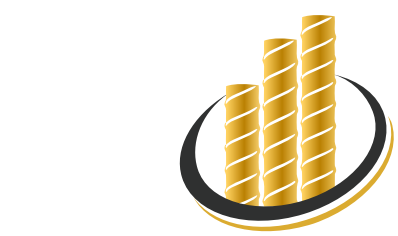
DIAMETER	TYPE OF PACKING	LENGTH OF BAR	QTY. OF REBARS IN A PACK	METERS IN A COIL
3	Straight bar/coil	12 Meters	50	12/50/100 Mtrs.
3.5	Straight bar/coil	12 Meters	50	12/50/100 Mtrs.
4.5	Straight bar/coil	12 Meters	50	12/50/100 Mtrs.
06	Straight bar/coil	12 Meters	50	12/50/100 Mtrs.
07	Straight bar/coil	12 Meters	25	12/50 Mtrs.
08	Straight bar/coil	12 Meters	25	12/50 Mtrs.
10	Straight bar/coil	12 Meters	15	12/50 Mtrs.
12	Straight bar/coil	12 Meters	15	12/50 Mtrs.
14	Straight bar	12 Meters	5	-
16	Straight bar	12 Meters	5	-
18	Straight bar	12 Meters	5	-
20	Straight bar	12 Meters	5	-
22	Straight bar	12 Meters	5	-
25	Straight bar	12 Meters	5	-

GFRP Rebars are packed in coils. We also transport straight GFRP Bars. When pack in coils, it makes it very easy to transport the material as well as handle the material which helps save costs. Our customized lengths are packed in coils also. We also send straight GFRP Bars which are shaped in “U” when loading in a Eicher truck.

In one coil we pack approximately 5-6 GFRP Rebars (12 meters each) depending on different sizes and lengths. The standard size in diameter of one coil is approximately 4 ft. Coils save in transportation cost and labor cost.

The standard length of a typical GFRP Rebar is 12 meters. We also make customized length of GFRP Rebars too but not for all diameters. We can make a customized length of GFRP Bars, mainly of diameters (3mm), (3.5mm), (4.5mm), (6mm), (7mm), (8mm), (10mm), and (12mm).

By making customized length lengths we cut cost of overlapping and wastage of material on sites.



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