



GLASS FIBRE REINFORCED POLYMER (GFRP) REBARS

Building the Future with
Composite Technology



Infrastructure | Marine structures | Industrial projects

ABOUT US

FIOX Global Composites is specialized in advanced Fiber Reinforced Polymer (FRP) reinforcement solutions for modern construction, infrastructure, industrial and specialized engineering applications.

Our FRP products are designed as a durable alternative to conventional reinforcement, especially in environments where corrosion, moisture, chemicals, electrical conductivity and long-term maintenance are critical concerns.

With high strength, low weight, corrosion resistance and non-conductive properties, FRP reinforcement offers dependable performance across demanding applications. By combining quality raw materials, controlled manufacturing processes and engineering-focused development, FIOX delivers consistent & reliable solutions designed for long service life.

Our focus is on supporting the evolving needs of the global construction industry with innovative composite materials that enable durable, efficient and future-ready infrastructure.

VISION

To become a globally trusted leader in advanced composite solutions, transforming the way industries build with materials that are stronger, lighter, longer-lasting and sustainable.

MISSION

To deliver innovative, high-quality composite products that provide superior performance, durability, and value to our customers — while continuously advancing technology, manufacturing excellence and sustainable solutions.

WHY CHOOSE FIOX

At FIOX Global Composites, our values guide the way we develop products, serve customers and build long-term relationships.

- Quality
- Innovation
- Integrity
- Customer Focus
- Durability
- Engineering Excellence
- Sustainability
- Reliability



What are GFRP Rebars?

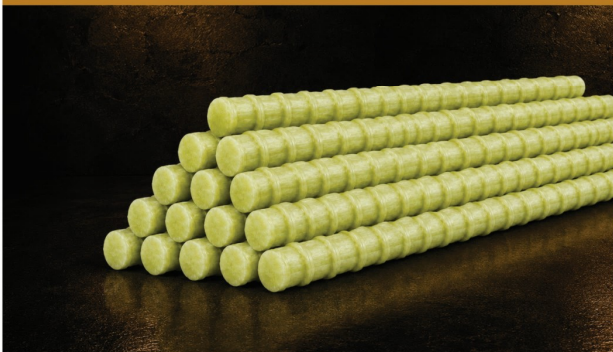
As the construction industry evolves, the demand for stronger, lighter and more durable reinforcement solutions continues to grow. Glass Fiber Reinforced Polymer (GFRP) Rebars provide a modern alternative to conventional steel, offering high strength, low weight, corrosion resistance and long-term durability.

Manufactured from high-strength glass fibers bonded with durable thermoset resin, GFRP Rebars are completely corrosion-resistant, non-conductive and non-magnetic. These properties make them ideal for coastal, marine, chemical, electrical and other demanding environments.

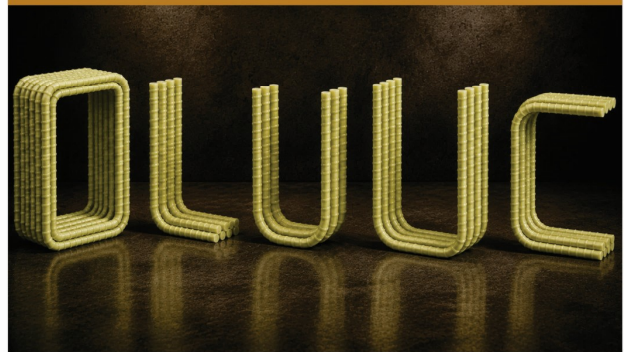
Unlike steel reinforcement, GFRP does not corrode, helping prevent corrosion-related cracking and concrete deterioration while reducing maintenance requirements and extending structural service life.

At FIOX Global Composites, we are committed to delivering high-quality GFRP reinforcement solutions for safer, smarter and more resilient infrastructure.

FIOX GFRP REBARS



FIOX GFRP BENT ELEMENTS



Features

- Corrosion Resistant
- Water Resistant
- High Tensile Strength
- Lightweight
- Reduced Concrete Cover*
- Low Thermal Conductivity
- Radio-Frequency Transparent
- Easy to Transport
- Potential Life-Cycle Savings
- Long-Term Durability
- Low Maintenance
- Non-Conductive
- Non-Magnetic
- Easy Handling & Cutting
- Dielectric
- Long Service Life
- Fast Installation
- Chemical Resistant

*Subject to structural design and applicable codes.

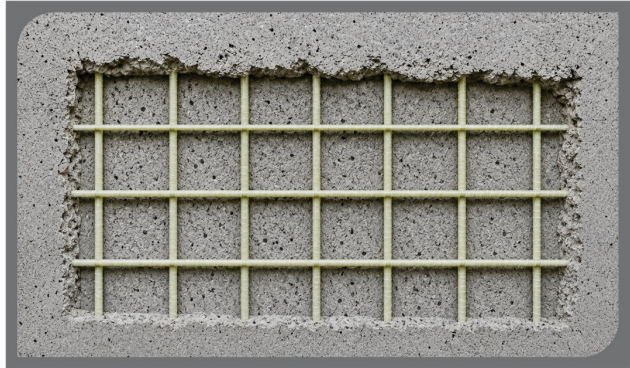
We Help Solve Corrosion Problem

Steel rusts. Concrete cracks. Structures weaken — slowly, silently, from the inside out.

At FIOX Global Composites, we solve corrosion at the source with GFRP rebar that never corrodes. Lighter than steel, it offers long-term durability with low maintenance.

No rust. No compromise. Just stronger, smarter infrastructure.

FIOX Global Composites — helping solve corrosion problems.



Advantages of using Gfrp Rebar:

- Excellent Corrosion Resistance
- Long Service Life
- Potential Life-Cycle Cost Savings
- High Tensile Strength
- Electrically Non-Conductive
- Non-Magnetic
- Good Fatigue Performance
- Radio-Frequency Transparent
- Low Maintenance
- Easy Handling & Fast Installation
- Lower Transportation & Handling Effort

Market Applications:

- RCC Roads & Pavements
- Parking Areas
- Chemical Plants & Industrial Flooring
- RCC Drains
- Water & Wastewater Treatment Plants
- Coastal & Marine RCC Structures
- Highway Construction
- Bridge Deck Slabs
- Underground RCC Tanks
- Swimming Pools
- Radio-Frequency Sensitive Areas
- MRI Facilities
- Tunnel Boring Machine (TBM) Applications
- Metro Rail Soft-Eye Openings

Tmt Bars Vs Gfrp Rebars

Why Gfrp Is The Smarter Choice For Modern Construction

KEY PARAMETERS	GFRP REBARS	METAL REBARS
Corrosion Resistance	Corrosion-resistant, even in aggressive environments.	Susceptible to corrosion in humid, coastal and aggressive environments.
Weight	Approximately 4× lighter than steel.	Heavy, increasing transport and handling effort.
Durability	Long-lasting with minimal degradation.	Durable, but may deteriorate due to corrosion.
Thermal & Electrical Conductivity	Electrically non-conductive with low thermal conductivity.	Electrically and thermally conductive.
Magnetic Properties	Non-magnetic; suitable for MRI & sensitive facilities.	Magnetic; unsuitable for sensitive applications.
Tensile Strength	High tensile strength with low density.	High strength, but lower strength-to-weight ratio.
Maintenance	Low maintenance in corrosion-prone applications.	May require corrosion protection and repairs.
Lifespan	Extended service life in harsh & corrosive environments.	Service life may be reduced in corrosive environments.
Cost Over Time	Higher initial cost; potential life-cycle savings.	Lower initial cost; maintenance may increase lifecycle cost.

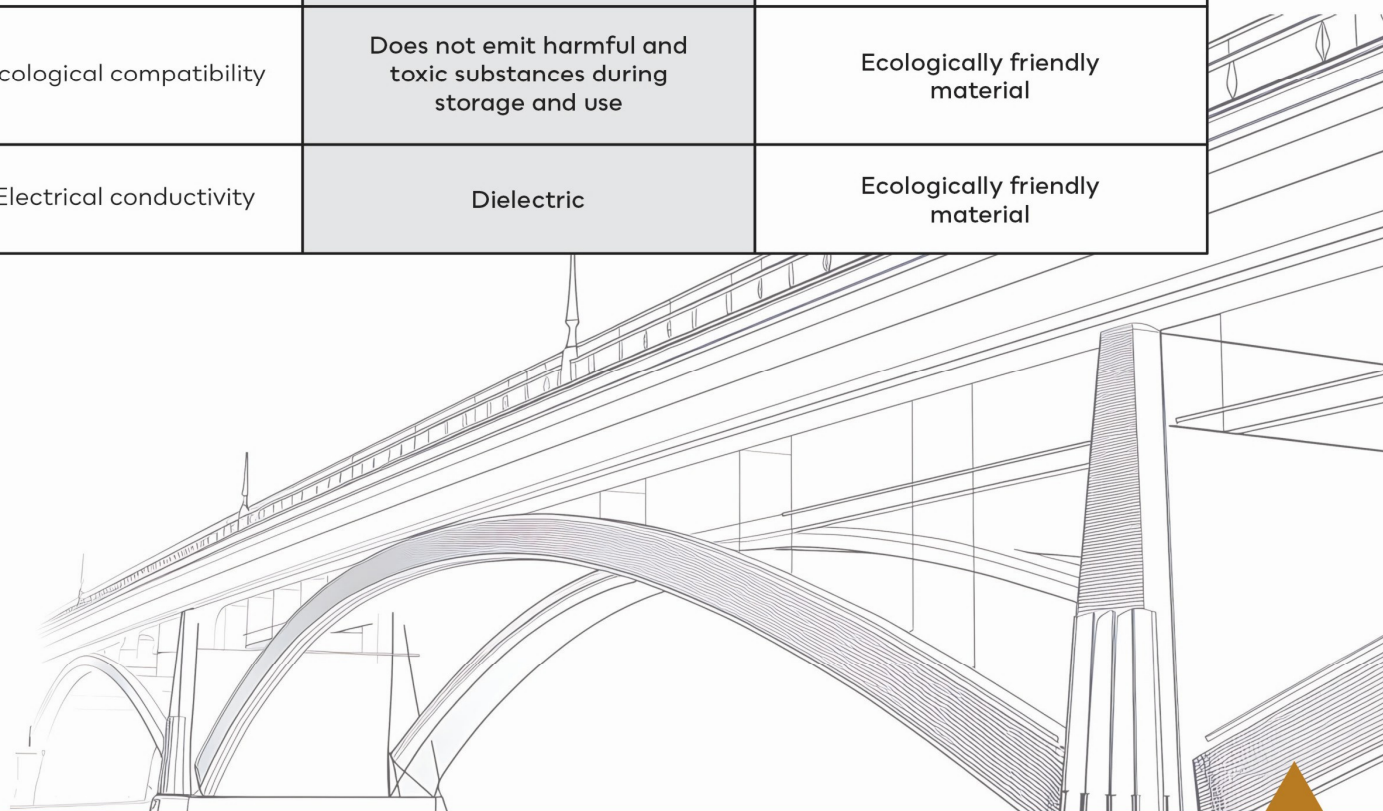
Weight List

GFRP REBARS		METAL REBARS	
Diameter (mm)	Weight (kg/meter)	Diameter (mm)	Weight (kg/meter)
6	0.065	6	0.222
8	0.116	8	0.395
10	0.175	10	0.617
12	0.250	12	0.888
16	0.450	16	1.580
20	0.685	20	2.470
25	1.070	25	3.850
32	1.700	32	6.310

Mechanical Properties Of Fiox Gfrp Rebars

When Compared To Metal Rebars

KEY PARAMETERS	FIOX GFRP REBARS	METAL REBARS
Tensile strength (mpa or n/mm ²)	1000+	500-600
Shear strength	≥150	120
Bond strength (mpa or n/mm)	≥11	14*
Compression (mpa or n/mm)	450	500
Modulus of elasticity (gpa)	≥50	160-200
Elongation (%)	≥1.5	20
Durability	80 years +	Terms are prescribed in special building codes
Density (ton/m ³)	1.9	7.8
Corrosion resistance to aggressive environment	Stainless material preserving properties even in alkaline concrete environment	Appearance of rust
Ecological compatibility	Does not emit harmful and toxic substances during storage and use	Ecologically friendly material
Electrical conductivity	Dielectric	Ecologically friendly material



Gfrp Application Areas



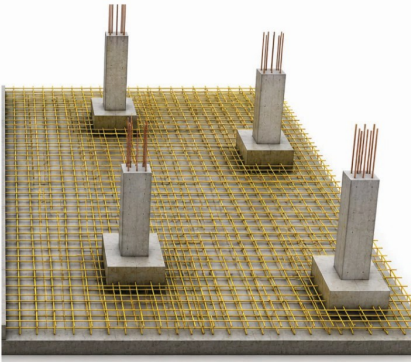
Drainage Structures



Concrete Pavements



RCC Roadways



Friction Slabs



Industrial Flooring



Highway Crash Barrier



**Reinforced
Concrete Slab**



**Chemical &
Process Plants**



**MRI & Medical
Facilities**



Green House Farming



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