



# STRONGER THAN STEEL SMARTER THAN EVER



GFRP Rebars



## The Smarter Alternative to Steel.

EkoBar™ GFRP is ZippMat's cutting-edge, eco-conscious substitute for traditional steel. Engineered for the future of construction.

## Features



80+ years  
lifespan



20-35%  
lower cost



~40% lower  
lifetime emissions



2x Tensile  
strength



Non-conductive to  
heat and electricity



Theft  
proof



4x lighter



Easy and fast  
Installation

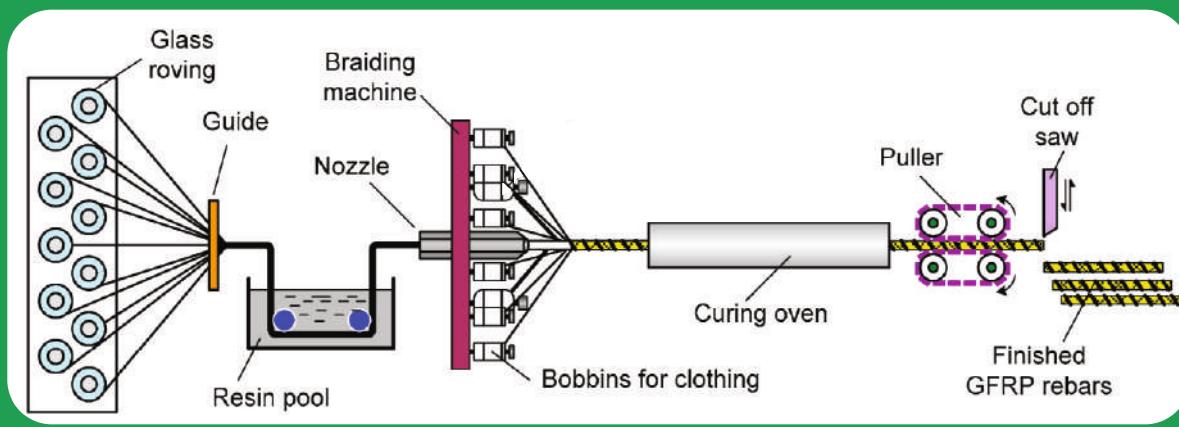


Non-magnetic  
(transparent to  
electrical fields)

# What is GFRP?

GFRP (Glass Fiber Reinforced Polymer) rebar is a non-metallic construction material used to reinforce concrete structures. It's made by combining high-strength glass fibers with a polymer resin matrix. This results in a rebar that's lightweight, strong and highly resistant to corrosion, making it a promising alternative to traditional steel TMT.

EkoBar GFRP rebars are manufactured through a process called pultrusion where glass fibers are pulled through a resin bath and then through a heated die to form the desired shape.



## Characteristics

### Steel VS EkoBar GFRP

Property	Steel TMT Rebars	EkoBar GFRP Rebars
Density (Kg/m <sup>3</sup> )	7.8	1.9
Tensile Strength (Mpa)	Up to 650	1000+
Shear Strength (Mpa)	120	170
Bond Strength (Mpa)	14	12.5
Compression (Mpa)	500	450
Modulus of Elasticity (Gpa)	160-200	65
Elongation (%)	25	4
Weight (Kg)	100%	25%
Corrosion Resistance	Low	High
Alkaline Resistance	Low	High
Service Life	40-50 years	80+years



## Lighter than steel - 75% lower weight

Diameter (mm)	Steel TMT Rebars (kg/meter)	EkoBar GFRP Rebars (kg/meter)
6	0.222	0.054
7	0.302	0.073
8	0.395	0.095
10	0.617	0.149
12	0.889	0.215
14	1.210	0.292
16	1.580	0.382
18	2.000	0.483
20	2.469	0.597
22	2.988	0.722
25	3.858	0.932

## Economical than steel

Example cost comparison (per running meter basis)

Parameter	Steel Rebar	GFRP Rebar
Material Cost	₹ X	20-30% lower
Labor & Installation	₹ X	20-30% lower
Maintenance over 10 years	₹ X	Nil
Transport cost	₹ X	75% lower

Actual savings range between **20% to 35%** depending on project size and environment.

# Why EkoBar GFRP Stands Above the Rest



## Superior Raw Materials

Crafted using high-grade E-glass fibers and resins, EkoBar GFRP ensures enhanced durability and consistent performance in demanding conditions.



## Exceptional Tensile Strength

With a tensile strength of  $\geq 1000$  MPa, EkoBar outperforms typical GFRP products (700–1000 MPa range), making it ideal for high-load applications.



## Certified and Compliant

Manufactured under strict quality standards — ISO 9001 certified, ASTM D7957 compliant, and BIS approved — EkoBar provides reliability you can trust.



## Cost-Effective, Value-Driven

Priced 20-35% lower than TMT bars, EkoBar offers real savings without compromising quality. Our after-sales technical team includes in-house engineers and consultants for expert support throughout your project.



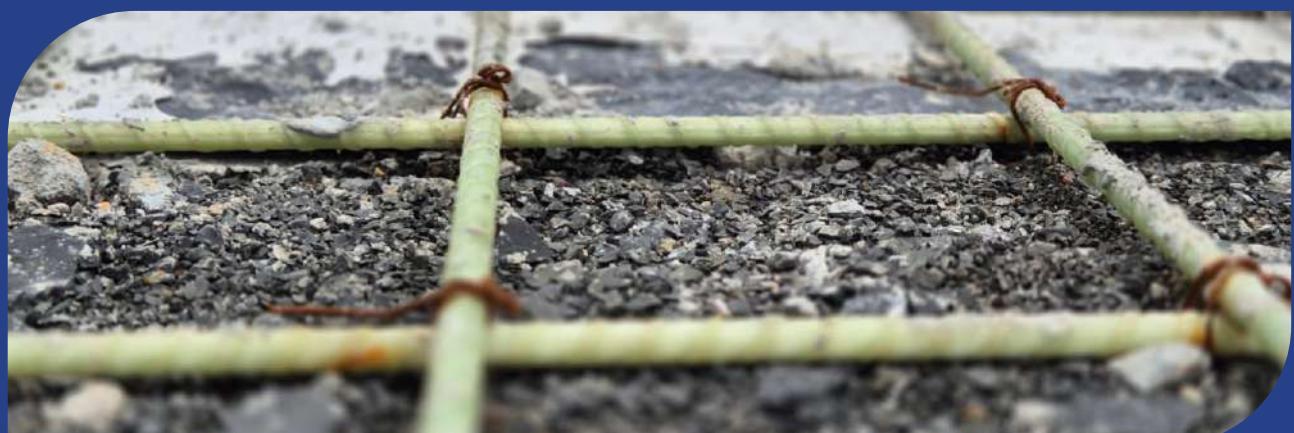
## Custom Sizes & Finishes

Available in diameters from 3mm to 50mm and precision-cut to meet your exact project specifications — flexibility that fits your project needs.



## Proven Track Record

EkoBar GFRP is trusted and deployed in major infrastructure projects, including those under NHAI (National Highways Authority of India), showcasing its credibility and performance at scale.



## Suitable for...



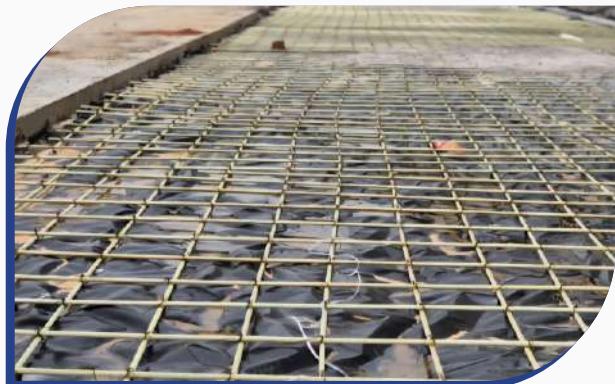
Warehouse Project



Precast



Crash Barriers



Concrete Road



Retaining Wall



Drain



Sewage / Water Treatment Plants



Swimming Pool



Pavements



MRI rooms

## About ZippMat

Founded in 2021, ZippMat was born out of a bold vision: to eliminate delays, inefficiencies, and high costs in supply chains - while delivering innovative, eco-conscious products made from repurposed materials.

What began as a small team has grown into a dynamic group of 50+ professionals, all driven by a shared mission:

Faster deliveries. Smarter systems. Lower costs.  
Greener alternatives.



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