Aeroplex Composite

Reinforcing the Future with Composites.

Aeroplex Composites

About Us

- **Aeroplex Composite Company has been Leading Suppliers equipment for GFRP rebar, fiberglass mesh, bent frame elements since 2024.**

- **Aeroplex Composite is a trusted supplier of GFRP (Glass Fiber Reinforced Polymer) rebars and mesh, providing advanced, corrosion-resistant reinforcement solutions for modern construction. We specialize in delivering high-quality, durable, and lightweight GFRP materials that ensure long-lasting performance in harsh environments such as coastal, industrial, and infrastructure projects. With a commitment to reliability, consistency, and client satisfaction,**

- **We are supplying premium composite products that replace traditional steel with smarter, stronger, and maintenance-free alternatives — helping builders and developers achieve sustainable and future-ready structures.**

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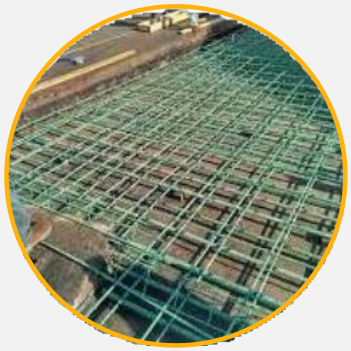
Where to USE?

Highway Construction

Bridge Decks



Approchable Slab

Hospital MRI Area

Tunnling and Temperory Reinforcment

RCC Floring Road

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Where to USE?

Coloumn

Barriar Wall

Underground Water Tank

Swimming Pool

West Water Treatment Plant

Dams or Sea Walls

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Where to USE?

Foundation

Industrial Flooring

Concrete Slab

Drainage Pipe

Parking

Precast

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What We Do?

We are leading Supplier of

GFRP Rebar
GFRP Mesh
Bent Elements

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GFRP Rebar

GFRP (Glass Fiber Reinforced Polymer) Rebars are advanced composite reinforcement materials designed to replace traditional steel reinforcement in concrete structures. Made from high-strength glass fibers embedded in a polymer resin matrix, GFRP rebars provide superior performance, durability, and corrosion resistance - especially in harsh and aggressive environments.

GFRP rebars contribute to sustainable construction:

- **Reduced carbon footprint (no rusting = longer structure life)**
- **Lower material usage due to strength-to-weight ratio**

GFRP Rebar Technical Comparison & Specifications

Material Comparison: Steel vs GFRP

Property	Steel	GFRP
Tensile Strength (MPa)	500-700	1000+
Shear Strength (MPa)	120	170
Bond Strength (MPa)	14	12.5
Compression Strength (MPa)	500	450
Modulus of Elasticity (GPa)	160-200	65
Elongation (%)	25	4
Durability	Defined in special building codes	Not less than 80 years
Density (ton/m³)	7.8	1.9
Corrosion Resistance	Rusts in aggressive environments	Stainless and non-corrosive
Ecological Compatibility	Environmentally friendly	Non-toxic, safe for environment
Electrical Conductivity	Conductive	Non-Conductive

Weight Comparison: Metal Rebar vs GFRP Rebar

Metal Rebar Diameter (mm)	Weight (per 1meter bar)	GFRP Rebar Diameter (mm)	Weight (per 1meter bar)
6	0.229 kg	6	0.064 kg
8	0.395 kg	8	0.111 kg
10	0.617 kg	10	0.153 kg
12	0.888 kg	12	0.242 kg
14	1.210 kg	14	0.328 kg
16	1.578 kg	16	0.433 kg
18	2.000 kg	18	0.535 kg
20	2.980 kg	20	0.679 kg
22	3.852 kg	22	0.825 kg

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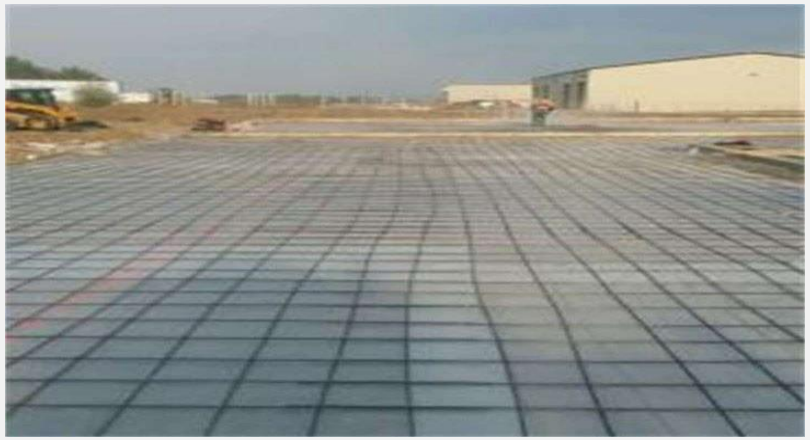
GFRP Mesh

In modern construction, GFRP mesh (Glass Fiber Reinforced Polymer mesh) represents an innovative and versatile solution. Its combination of corrosion resistance, lightweight design, and robust strength not only improves concrete quality but also streamlines construction processes, reduces maintenance costs, and extends the lifespan of buildings.

GFRP Mesh Application and Uses



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Bent Eliments

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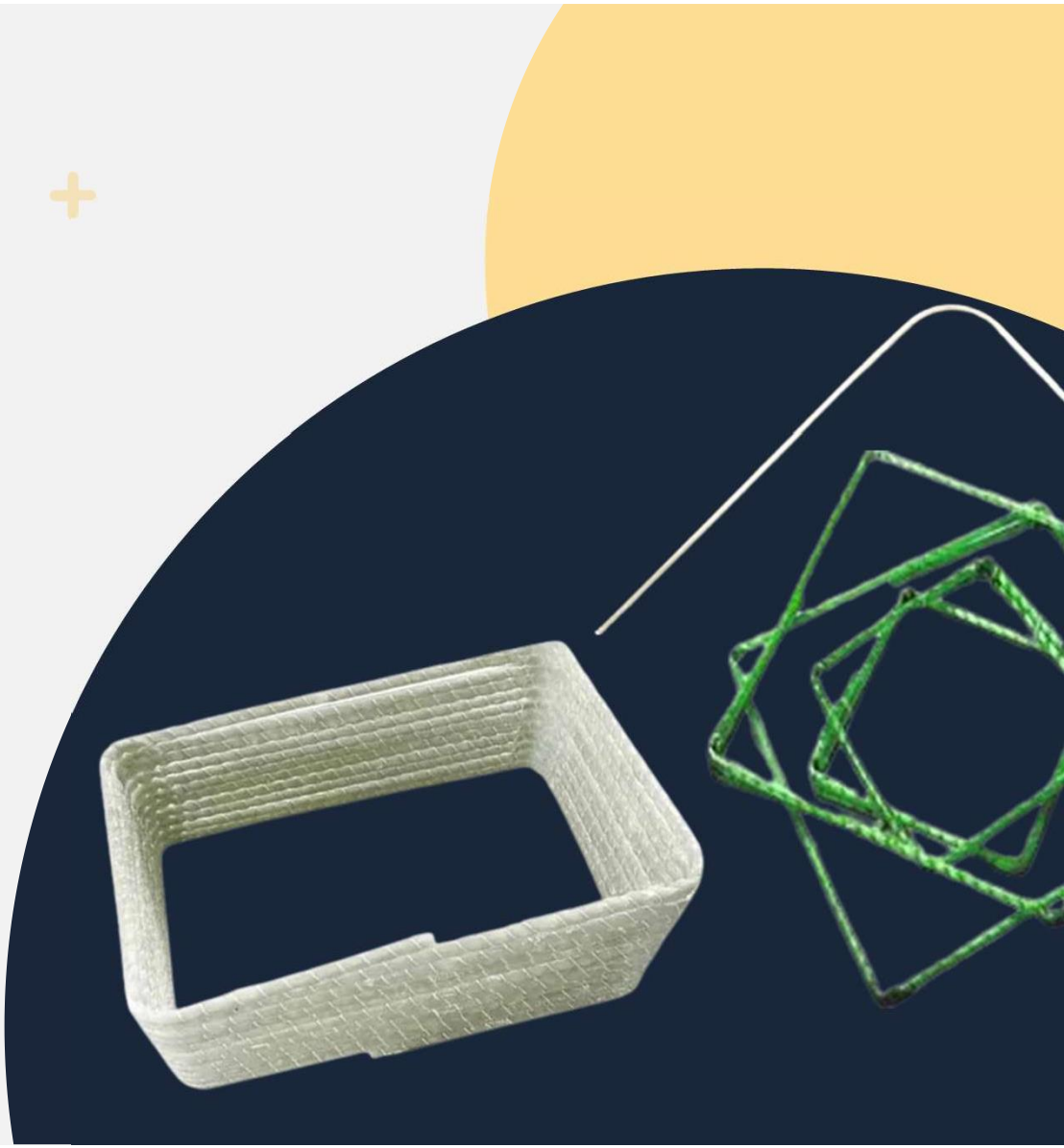

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Benefit

- **Excellent corrosion resistance. GFRP effectively resists corrosion and so can last much longer than standard rebar. Composite rebar minimizes maintenance needs.**
- **Highly Chemical Resistant. GFRP resistant to chemical acids, salt ions, and the inherent alkaline bases of concrete that cause premature deterioration.**
- **Lightweight, 9 times lighter than steel, making it easier to transport and install.**
- **High Strength. Despite its lightweight properties, GFRP offers impressive strength-to-weight load-bearing performance.**

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Advantage Field

- Marine and harbor facilities, shoreline reinforcement
- Reinforcement of concrete structures and mixed reinforced concrete structures.
- Industrial construction, special purpose objects
- Construction of agricultural structures
- Residential and civil construction Road construction

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