



TDS – TECHNICAL DATA SHEET

GFRP-TECH MATERIAL LIST

TESTING MARGIN FOR START DATUM – GFRP Tech 01

Product List GF-Rebar Standard Specificaiton: Starting ≥ 50 GPa + (E – Modules)

Type/Product No:	Nominal Diameter:	Nominal area (mm ²)	Ultimate Tensile Load (kN)
GF 001 – Y6	6mm	30	35
GF 001 – Y8	8mm	50	55
GF 001 – Y10	10mm	70	75
GF 001 – Y12	12mm	125	123
GF 001 – Y16	16mm	200	255
GF 001 – Y20	20mm	290	260
GF 001 – Y22	22mm	390	335
GF 001 – Y25	25mm	505	430
GF 001 – Y32	30mm	795	630

Shear Strength (MPa) ≥ 250 (MPa)

Type/Product No:	Nominal Diameter:	Guaranteed Tensile Strength (MPa)	Weight (g/m)
		Estimated	Estimated
GF 001 – Y6	6mm	1500	66
GF 001 – Y8	8mm	1500	105
GF 001 – Y10	10mm	1500	150
GF 001 – Y12	12mm	1500	266
GF 001 – Y16	16mm	1500	417
GF 001 – Y20	20mm	1000	605
GF 001 – Y22	22mm	1000	813
GF 001 – Y25	25mm	1000	1348
GF 001 – Y32	30mm	1000	1665



GFRP Tech Comparison between Steel Rebar vs GF-Bars

<u>Structure</u>	<u>Deformed</u>	<u>GFRP – Bar</u>
Density (g/cm ³)	450 to 500	1500 (Starting)
Modulus of Elasticity (GPa)	>200	>50 – 150
Thermal conductivity (W/mK)	46.00	0.30
Adhesion Strength	10 – 14	15 +
Corrosion Resistant	Vulnerable to chloride	Not Corrosive to chloride
Magnetism	Positive	Negative
Electrical conductivity	High	Non
Bending	Possible	Specialized Bends (Factory Not Site)
Welding	Yes	No

Standard Colour for GFRP rebar

Custom Colour Chart / Client Specific



Y6	Plain (Epoxy)	Various Colour pallet provided
Y8	Grey	
Y10	Light Blue	
Y12	Medium Blue	
Y16	Dark Blue	
Y20	Lime Blue	
Y22	Baby Blue	
Y25	Charcoal Black	
Y32	Grey Black	



Standard Colour GFRP Mesh

Custom Colour Chart / Client Specific



Mesh Products:

GF Ref .100	grade 1	150x150 Grid	Specialized	4mm	Green + Black Thread
GF Ref .100	grade 2	200x200 Grid	Standard	4mm	
GF Ref .193	grade 1	150x150 Grid	Specialized	5mm	Red + Blue Thread
GF Ref .193	grade 2	200x200 Grid	Standard	5mm	
GF Ref .245	grade 1	150x150 Grid	Specialized	7mm	Yellow + Blue Thread
GF Ref .245	grade 2	200x200 Grid	Standard	7mm	
GF Ref .395	grade 1	150x150 Grid	Specialized	8mm	Black + White Thread
GF Ref .395	grade 2	200x200 Grid	Standard	8mm	

Custom Mesh Designed & Manufactured on Order

Design Specific – Includes Colour Chart

GFRP enviramesh specification chart

Due to testing and ASTM standards GFRP rebar is 2-2.5 times stronger at break, GFRP rebar with a smaller diameter can substitute steel bars:

GFRP enviramesh	Steel wire mesh Properties	Steel wire mesh	GFRP enviramesh
2 mm	3 mm ultimate tensile strength	550-570 MPa	800-1300 MPa
3 mm	5 mm width	0,38 – 1 m	0,38 – 1,2 m
4 mm	6 mm bar breaking strength	400-720 kgf	600-950 kgf
Thermal conductivity ratio		56 W/(m0°C)	0.35 W/(m0°C)
Linear expansion ration		13-15 ax-5//°C	9-12 ax-5//°C
Square unit weight		2220 kg/m3	360 kg/m3
Electrical conductivity		highly conductive	non-conductive

Resistance to aggressive environment

Steel Mesh
Corrosible and low resistant

VS

GFRP enviramesh
Corrosion and acid resistant



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