Resilient

FRP Composite

Infrastructure

Materials

GBar® by COMPKING is a non-corrosive, non-metallic high performance FRP (Fiber Reinfored Polymer) made with Glass (GFRP) or Basalt (BFRP) fiber in an epoxy resin matrix.

Twice as strong as Grade 60 steel and exceeds the ASTM minimum range for Modulus of Elasticity to effectively establish a new benchmark of performance.

- **Meets or exceeds all requirements of new ACI 440.11-22 Code!**
- Corrosion-Proof, the best solution for reinforcing concrete structures in corrosive enviroments
- **Available in most commonly used #3, #4, #5, #6 & #8 sizes.**
- Best FRP bar to replace traditional steel reinforements with the highest tensile strengths and only ¼ the weight.
- Can be assembled into cages and mats, either in the shop or in the field. Lighter and easier to place means higher productivity.
- Standard bar bends can also be provided. Easy to cut & no sparks!
- 100-year minimum lifecycle

Why use GBar® by COMPKING composite reinforcement in your projects:

- Perfect choice for areas needing radio-frequency, magnetic or electrical interference free zones that standard ferrous products cannot provide.
- Extended project Lifecyles mean less maintenance versus "corrosion-resistant" steels.
- Allows the General Contractor and Engineers to control project costs by eliminating costly last minute change orders as all bar bends are made precisely in the local factory with fast turnaround.
- Eliminates spalling caused by traditional ferrous materials expanding due to corrosion.
- Use conventional concrete instead of special mixes with expensive corrosion inhibiting admixtures.
- Lower cost for maintenance can result in 45% to 60% savings over the long term.
- Corrosion-Free FRP bars have been used in hundreds of bridge decks and proven over 25+ years of service.

GBar® by COMPKING is a corrosion-free bar which aids in designing a structure with a much longer service life than traditional steel reinforced structures.

- 1/4 the weight of steel which makes it less expensive to transport, easier to handle in the field, and is faster to install.

- Does not get hot in the sun like steel, so safer to handle and crews can often hand-carry cages from staging area to forms. Experience shows at least 30% increase in productivity.

GBar® by COMPKING Performance Properties per ASTM D7957

Bar Size Designation	Unit of measure	#3 /10 mm	#4 /13 mm	#5 / 16 mm	#6 / 19 mm	#8 / 25mm
Cross Sectional Area (per ASTM D7205, Section 11.2.5.1)	in2	0.13	0.24	0.36	0.48	0.87
	mm2	84	155	232	310	561
Guaranteed Ultimate Tensile Force (per ASTM D7205)	kips	16.13	29.23	39.92	46.54	105.01
	kN	71.75	130.02	177.57	207.02	467.11
Mean Tensile Modulus of Elasticity (per ASTM D7205)	ksi	10,873	10,331	10,304	9,772	10,297
	Gpa	74.97	71.23	71.05	67.38	71.00
Guaranteed Transverse Shear Strength (per ASTM D7617)	ksi	27.80	20.74	26.40	25.53	25.67
	Mpa	191	143	182	176	177

Other Properties

Glass Transition Temperature per ASTM E1356	213℉ ~ 255℉ (101℃ ~ 124℃)
Alkalai Resistance per ASTM D7705 Procedure A	82% to 94%
Degree of Cure per ASTM D2160	99.41% to 100%
Moisture Absorption to Saturation per ASTM D570 Section 7.4 - 8 weeks	0.42% to 0.89%

GBar® by COMPKING is designed to reinforce concrete structures all applications but not limited to,

Transportation
Marine
Buildings
Slab on grade (SOG)

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