

## PHYSICAL & MECHANICAL PROPERTIES

Nominal diameter			Nominal cross sectional area		Unit weight/length		Guaranteed ultimate tensile force		Guaranteed ultimate tensile strength		Ultimate tensile strain	Mean tensile modulus of elasticity	
Bar size	in	mm	in <sup>2</sup>	mm <sup>2</sup>	lb/ft	kg/m	kip	kN	ksi	MPa	%	Msi	GPa
#2	0.250	6	0.05	32	0.05	0.07	6.76	30.08	138.0	951	2.03	6.80	46.88
#3	0.375	10	0.11	71	0.11	0.16	15.07	67.03	137.0	945	2.01	6.80	46.88
#4	0.500	13	0.20	129	0.18	0.27	26.90	119.66	134.5	927	1.98	6.80	46.88
#5	0.625	16	0.31	199	0.32	0.47	40.30	179.26	130.0	896	1.91	6.80	46.88
Mean transverse shear strength		Bond strength		Fiber mass content		Moisture absorption in 24H at 50°C (122°F)		Moisture absorption to saturation at 50°C (122°F)		Mean glass transition temperature (DSC)			
ksi	MPa	psi	MPa	%		%		%		°F	°C		
≥19	≥131	≥1 100	≥7.6	≥70		≤0.25		<1.0		≥212	≥100		

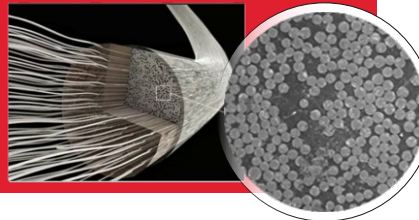
## PACKAGING

Bar size	Weight per 20-foot bar (lb)	No. of bars per master bundle	Weight per master bundle (lb)	No. of bars in a full truck load (FTL)	Weight per FTL (lb/ton)
#2	0.94	500	470	46 000	43 240/21
#3	2.14	500	1 070	20 000	42 800/20
#4	3.64	500	1 820	12 000	43 680/22
#5	6.25	250	1 563	7 250	45 327/22

## WHAT IS FIBERGLASS (GFRP)?

**GFRP - GLASS FIBER REINFORCED POLYMER.**

Glass fibers provide high strength, while the polymer transfers the load from filament to filament, and protects the fibers from chemical attack.



## HANDLING & INSTALLATION

Whether or not your projects include the use and placement of reinforcement, it is highly recommended to follow best practices in all phases of the project, from planning to construction and maintenance, for optimal performance.

For the most part, handling and installation of Binevir Fiberglass Rebar is the same as for steel bars, with some deviations.

- Fiberglass rebar can be tied using same tying methods and materials as for steel rebar and based on contractor preference.
- In Concrete applications requiring chairing, ensure that chairs are spaced to allow adequate concrete cover.
- Field-cut fiberglass bars using a fine-blade saw, grinder, and carborundum or diamond blade. If properly cut, it is not necessary to seal the ends of fiberglass bars. DO NOT shear fiberglass bars, as that may compromise structural integrity of the bar.



# FIBERGLASS REBAR

2x stronger  
than steel



7x lighter  
than steel



Lower  
cost



Easier to haul



Rust proof



Binevir Fiberglass Rebar is a non-metallic and durable concrete reinforcement bar used for structural and non-structural applications to significantly elevate the tensile strength of concrete. It is produced in a proprietary manufacturing process from a blend of premium fiberglass roving and resin matrix. Its sand-coated surface enhances concrete bonding and greatly reduces fiberglass splintering.

Binevir Fiberglass Rebar stands as a testament to our commitment to delivering highest quality and performance construction materials. Meticulously manufactured using premium components and innovative custom manufacturing processes, this rebar offers unparalleled performance and reliability.

The patented coarse sand-coated layer on the surface of our rebar ensures superior bonding with concrete and assures structural integrity of your construction project. It also helps in greatly reducing and even eliminating hands damage from glass splintering during product handling.

Binevir Fiberglass Rebar not only meets but exceeds construction industry standards. It is significantly lighter than steel, which notably reduces logistics cost and construction duration of a project. Our products empower your construction projects with high-quality, high-reliability long-lasting reinforcement solutions, providing you with peace of mind and confidence in your construction endeavors.

## CODE COMPLIANCE

### ASTM D7957

- Binevir Fiberglass Rebar by Binevir meets physical and mechanical requirements of ASTM D7957 material standard.
- Production lot certificates are provided upon request and purchase.

### ACI 332 & ACI 440

- Binevir Fiberglass Rebar by Binevir can be used in residential concrete, including footings and foundation walls, as prescribed in ACI 332 using ACI 440 design methodology.

### ICC-ES AC454

- Meets or exceeds ICC-ES AC 454 acceptance criteria, including bond strength, tensile strength, and tensile modulus of elasticity.

### TMS 402/602

- Binevir Fiberglass Rebar by Binevir can be used with TMS 402/602-22 Appendix D as reinforcing for masonry walls.

### Proven Crack Mitigation in Concrete Flatwork

Independent testing has proven that #3 Fiberglass Rebar mitigates shrinkage cracks as effectively as #4 steel in poured slabs and can increase the long-term service life of flatwork due to the non-corrosive properties of fiberglass rebar.\*

\*Restrained Shrinkage Testing at University of Brescia, Italy, 2020.

## Areas of application:

- **Residential**
  - Driveways
  - Sidewalks
  - Pool Decks
  - Basement floors and walls
  - Footings
  - Masonry
  - ICF construction
- **Commercial & Industrial**
  - Parking slabs
  - Warehouse floors
  - Agricultural slabs
  - Loading docks
  - Architectural precast
  - Truck aprons
  - Pour back slabs

**BINEVIR**  
COMPOSITES

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