



# Composite Fiberglass (GFRP) Rebar-Durabar™

# SLIM Datasheet

Dextra is a leader of the composite industry for the past 25 years, manufacturing high quality FRP solutions supplied on large infrastructure projects. The company excels in offering comprehensive solutions to its customer, with expertise in designing concrete structures reinforced with GFRP rebars. All Durabar™ GFRP rebars are produced in Dextra ISO-9001 and ISO-14001 certified factory, following the company stringent quality assurance policy.

## Durabar™ Compared to Steel



- Stronger & Lighter than steel**
- 2x the tensile strength of steel
  - 1/4 weight of a steel bar of same diameter



- Non-corrosive, non-conductive**
- Material doesn't corrode and offer high resistance to chlorides and alkali.
  - Particularly suitable for environments exposed to water, salt, & humidity.
  - Non-conductive. It's the perfect reinforcement solution for high voltage currents and magnetic fields.



- Design optimization**
- Bond strength of 10 MPa, allowing shorter lapping length.
  - Can substitute steel bar of larger diameter – or increase the rebar spacing.
  - Further saving on the concrete cover = less volume of concrete.



- Simplified Installation**
- Delivered in straight bars up to 11.8m or in coils of 50m.
  - Labor required for installation reduced by 2x to 3x.

## Why choose Durabar™



Stronger & lighter than steel, with 6x to 8x times less material needed than conventional steel rebars.



Material is safe & easy to handle, requiring much less labor for installation, generating both time & money saving.



Durable material, allowing to design for a longer lifetime of the structure. As no maintenance nor repair work is needed, Durabar™ generates savings during the whole project life.



Sustainable material, with significantly less energy required & CO2 emission, both at production stage and for its transportation & installation.

### ACI (American Concrete Institute) Design & Testing Guide

- ACI 440.1R-15 Guide for the Design and Construction of Structural Concrete Reinforced with Fiber-Reinforced Polymer (FRP) Bars
- ACI 440.3R-12 Guide Test Methods For Fiber Reinforced Polymer (FR) Composites For Reinforcing Or Strengthening Concrete And Masonry Structures
- ACI 440.5R-08 Specification for Construction with Fiber-Reinforced Polymer Reinforcing Bars

### Application for Durabar™-DIY & SLIM

Slab on grade	Architectural Precast	Driveways	ICF Construction
Decorative Concrete	Residential Foundations	Sidewalks	Warehouse Floors
Agricultural Projects	Pour Back Slabs	Pool Decks	Flatwork
Basement Floors	Swimming Pools	Agricultural Slabs	
Parking Slabs	Industrial Slabs	Paving Projects	

### Physical & Mechanical Properties

Reference	Bar Dia.	Nominal Cross Sectional Area	Ultimate Tensile		Ultimate Tensile Strain	MOE	Weight
	mm		mm <sup>2</sup>	KN			
Durabar-SLIM	6	32	29	910	2.02	45	0.08
	8	45	41	910	2.02	45	0.11
	10	71	59	830	1.84	45	0.16
	13	127	96	760	1.69	45	0.27

### Packaging

Reference	Bar Dia.	Straight bar			
		Unit Length	Quantity	Unit Length	Quantity
	mm	mm/Piece	Pieces /20' FCL	mm/Piece	Pieces /40' FCL
Durabar-SLIM	6	5,800	43,100	11,800	21,200
	8	5,800	31,400	11,800	15,500
	10	5,800	21,600	11,800	10,600
	13	5,800	12,800	11,800	6,300

\* Unit Bar length can be customized upon specific request, max length for 20 ft container load =5800mm, max length for 40 ft container load =11,800mm.  
\* Packing in coil also available for Dia.6, 8, 10 & 13mm.

### Handling & Placement

- \* Be careful when cutting the Fiberglass rebar & please make sure to put on gloves for hand protection
- \* Place chairs at spaces to ensure adequate concrete cover; Tie materials can be steel wire or connection accessories
- \* Please make sure to follow your project request to match with suitable FRP rebar for optimal performance.