



BLACK BAR™

GFRP Dowel Bars

Load-transfer devices for concrete slabs and pavements



- 100% Corrosion-Resistant
- High tensile strength
- Lightweight

BlackBar GFRP Dowel Bar

Technical Data Sheet

Product Reference	Bar Size (mm)	Nominal Diameter (mm)	Nominal Cross Sectional Area (mm ²)	Unit Weight (kg/m)	Water Absorption @ 24h at 50°C	Transverse Shear Strength (MPa)	Apparent Horizontal Shear Strength (MPa)
BB DBR-12	12	12.0	113	0.25	0.05%	160.0	50.0
BB DBR-16	16	15.9	198	0.44	0.05%	160.0	50.0
BB DBR-19	19	19.0	285	0.62	0.05%	160.0	50.0
BB DBR-25	25	25.4	507	1.10	0.05%	160.0	50.0
BB DBR-32	32	31.7	792	1.73	0.05%	160.0	50.0
BB DBR-38	38	38.1	1140	2.50	0.05%	160.0	50.0
Dowel Bar Profile	Smooth Rod						
Primary Materials	Epoxy and ECR-glass fiber						

Property Limits and Test Methods

Item #	Property	BlackBar Spec.	Test Method	ASTM D8444-24 Limit
1	Fiber Content by weight	≥ 80%	ASTM D2584	≥ 70%
2	Glass Transition Temperature	≥ 110°C	ASTM E1356	≥ 100°C
3	Degree of Cure	≥ 95%	ASTM E2160	≥ 95%
4	Out Diameter	Refer to Drawing	ASTM D7205	ASTM D8444 Table 3
5	Bond strength	≤ 0.73MPa for Dia.25mm	ASTM D7913	≤ 0.73MPa
		≤ 0.58MPa for Dia.32mm		≤ 0.58MPa
		≤ 0.49MPa for Dia.38mm		≤ 0.49MPa
6	Water Absorption to Saturation at 50°C	≤ 0.20%	ASTM D570	≤ 1.00%
* 7	Alkali Resistance - 90 days at 60°C	≥ 80%	ASTM D7705 Procedure A	≥ 80%
8	Longitudinal wicking	No continuous void	ASTM D5117	No requirement

* Apparent Horizontal Shear Strength Retention

