



Basalt Fiber COMPOSITE REBAR

APPLICATION

Seismic observation stations, harbour wharf protection works and buildings, subway stations, bridges, non-magnetic or electromagnetic concrete buildings; Prestressed concrete highway, anti-corrosion chemical industry, floor slab, chemical storage tank, underground engineering; Magnetic resonance imaging facility foundation; communication building, electronic equipment factory building; Concrete slabs for guide rails of nuclear fusion buildings and maglev railways; Telecom transmission tower, TV station bracket, optical fiber and cable strengthening core.

FORMING PROCESS

Basalt fiber roving as the main raw material, combined with epoxy resin(ER), vinyl resin(VR), unsaturated polyester(UPE) and other resins and fillers, curing agents, substrates, through thermoforming die, the basalt fiber bar is extruded under a certain tension with impregnated untwisted roving bundle.

PRODUCT

e.g. BFCR 10-A-ER
BFCR xxx-yy-zz



SPECIFICATIONS AND PERFORMANCE

diameter (mm)	weight/meter (g/m)	density (g/cm ³)	Tensile strength (MPa)	Tensile modulus of elasticity (GPa)	Elongational break (%)	Thermal expansion coefficient × 10 ⁻⁶ /°C		Alkali resistance (%)	Magnetic susceptibility (1 × 10 ⁻⁵ °C GSM)
						Longitudinal	Horizontal		
4	26	1.9~2.1	≥900	≥40	≥1.8	9~12	21~22	≥85	≤5 × 10 ⁷
6	53								
8	94								
10	164								
12	220								
14	306								
16	410								
18	510								
20	630								
22	760								
24	905								
25	982								
28	1230								
30	1413								

PRODUCT ADVANTAGE

The tensile strength is high, which is more than 3 times that of ordinary steel bars of the same specification. Excellent corrosion resistance (unmatched by any other fiber product). The density of fiber composite bars is only 2.0g/cm³, 1/4 of that of ordinary steel bars. The thermal expansion coefficient of fiber composite bars is similar to that of concrete, and there is no large thermal stress between them. Standard bends and other shapes can be prefabricated. Environmental protection: for every ton of basalt fiber composite bars used, the carbon emissions of 5.24tce of standard coal can be saved.