Win-Win Cooperation

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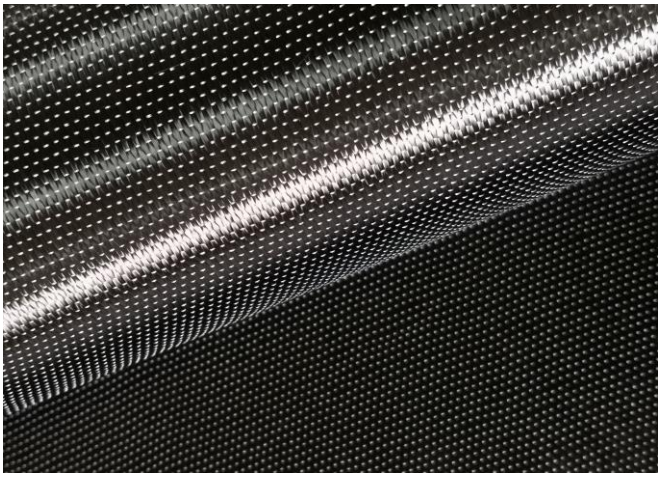
Technical Data Sheet

Code No: **CFU03-160**



Description:

Carbon fiber unidirectional fabric is woven by shuttle loom with carbon fiber filament yarn. Because of the excellent reinforce effect, it is widely used in industry for building reinforcements like beam, slab construction, pillar, wall, podium

Advantages:

--- Low density with high tensile strength and high modulus
--- Extra high temperature resistance under non-oxidizing environment
--- Excellent electrical and thermal conductivity
--- Good fatigue resistance, abrasion resistance and corrosion resistance
--- Good electromagnetic shielding and X-ray permeability
--- Insoluble and non-swelling in the organic solvent, acid, alkali

Applications:

Structural strengthening of reinforced concrete, masonry, brickwork and timber elements or structures, to increase flexural and shear loading capacity for:

--- Improved seismic performance of masonry walls
--- Replacing missing steel reinforcement
--- Increasing the strength and ductility of columns
--- Increasing the loading capacity of structural elements
--- Enabling changes in use / alterations and refurbishment
--- Correcting structural design and / or construction defects
--- Increasing resistance to seismic movement
--- Improving service life and durability

--- Structural upgrading to comply with current standards

Storage:

Storage Conditions / Shelf Life: 24 months from date of production if stored properly in undamaged original sealed packaging in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight.

Technical data:

Fabric Construction	Fiber orientation: 0° (unidirectional)
Warp	black carbon fiber (99% of total areal weight).
Weft	white thermoplastic heat-set fiber (1% of total areal weight)
Unit weight	160 +/- 5g/ m^2
Thickness	0.137mm
Thread count (warp)	8+/-0.25 per cm
Linear density	3 K
Tensile strength	⩾2000MPa
Tensile modulus of elasticity	⩾2.0 x 10^5MPa
Elongation	⩾1.2%
Roll length	100m
Fabric width	100mm up to 1000mm

Dry Fiber Properties

Physical Properties	Unit	Characteristic value	Result	Test standard
Linear density	g/km	192~204	197	GB/T 3362-2005
Density	g/cm3	1.78~1.82	1.79	GB/T 3362-2005
Tensile strength	MPa	≥4000	4252	GB/T 3362-2005
Coefficient of Variation	%	≤6.0	6.0	GB/T 3362-2005
Tensile modulus	GPa	230~250	230	GB/T 3362-2005
Elongation at break	%	≥1.5	1.8	GB/T 3362-2005
Sizing	%	0.6~0.8	0.7	GB/T 26752-2011