

HM-30

Carbon Fiber Fabric for structural strengthening

Description HM-30 is a high strength, unidirectional carbon fiber fabric. Material is laminated using HM-180C3P epoxy to form a carbon fiber reinforced polymer(CFRP) used to strengthen structural concrete elements.

Where to Use

Load Increase

- Increased live loads
- Increased traffic volumes on bridges
- Installation of heavy machinery in industrial building
- Vibrating structures
- Changes of building utilization

Seismic Strengthening

- Column wrapping
- Masonry walls

Damage to Structural Parts

- Aging of construction materials
- Vehicle impact
- Fire
- Blast impact

Change in Structural Parts

- Removing of wall or columns
- Removal of slab section for openings

Design or Construction Defects

- Insufficient reinforcements
- Insufficient structural depth

Advantages

- Approved by GB50367-2013/GB50728-2011/GB50550-2010
 - Used for shear , confinement or flexural assembly
 - Flexible, can be wrapped around complex geometries
 - High Strength
 - Light Weight
 - Non-corrosive
 - Alkali Resistant
 - Low aesthetic impact
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HORSE CONSTRUCTION

Typical Data

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|-------------------------|---------------------------------------|
| Storage Conditions | Store dry at 40°-95°F (4°-35C°) |
| Shelf Life | 10 years |
| Color | Black |
| Primary Fiber Direction | 0° (unidirectional) |
| Areal Weight | 8.76 oz./sq.yd.(300g/m ²) |

Typical Fiber Properties

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|------------------------------------|-------------------------------------|
| Dry Fiber Typical Properties | |
| Standard Value Of Tensile Strength | 7.1 x 10 ⁵ psi(4900MPa) |
| Tensile Elastic Modulus | 34 x 10 ⁵ psi(234500MPa) |
| Elongation | 1.7% |

| | |
|------------------------------------|-------------------------------------|
| Laminate Fiber Typical Properties | |
| Standard Value Of Tensile Strength | 5.51 x 10 ⁵ psi(3800MPa) |
| Tensile Elastic Modulus | 34 x 10 ⁵ psi(234500MPa) |
| Elongation | 1.7% |
| With Concrete | Concrete Damaged: ≥2.5MPa |
| Density | 0.065lbs.in ³ (1.8g/cc) |
| Nominal Fiber Thickness | 0.0065in.(0.167mm) |

