HORSE CONSTRUCTION

HM-GFRP
Unidirectional Glass Fiber Fabric For Strengthening

HM UD GALSS FIBER FABRIC

Description

HM-GFRP is a high strength, high modulus unidirectional glass fiber fabric. It is laminated with epoxy resin adhesive to form a glass fiber reinforced polymer lamination (GFRP) used in structural strengthening.

Application Range

Load Increase

- Increased live loads in warehouses
- Increased traffic volumes on bridges
- Vibrating structures
- Changes of building utilization

Seismic Reinforcement

- Concrete column wrapping, beam strengthening, wall strengthening, slab strengthening
- Masonry walls reinforcement

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
- High strength, high toughness, high modulus
- Soft and flexible, light self weight, easy to install
- Long shelf life and aging resistance
- High temperature resistance
- Acid, alkali & salt resistance
- Can be used for shear strengthening, confinement strengthening, flexural strengthening
- Alkali Resistant

Horse Advantage

High Grade Yarn

- High grade raw material, excellent quality and stable performance

World Leading Production Line

- No damage to the yarn during the weaving process.
- Germany imported intelligent production line, point to point active weft insertion
- Ecellent flatness enable epoxy easy to penetrate.

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Basic Information

Model	HM-GFRP
Appreance	fabric
Width	1270mm
Length	100m (300gsm) , 50m (400&600gsm) , 33m (900gsm)
Shelf Life	10 years
Storage Conditions	Store in dry conditions at 40°F to 95°F (4°C to 35°C) 0°
Braiding	(Unidirectional)

Typical Fiber Properties

Stand Value of Tensile Strength	1640 MPa
Tensile Elastic Modulus	72000 MPa
Elongation	1.80%
Bonding Strength to RC	≥2.5Mpa, concrete cohesion failure
Density	2.5g/cm³

----Technical Data Sheet----

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Construction Process

1. Surface Preparing:

Remove the coating of concrete surface with grinder. Polishing the Surface. If there is angular, grinder it into round.

2. Setting out:

Get the concrete surface clean and keep it dry, then setting out.

3. Apply Primer:

Apply primer adhesive onto the surface of the concrete.

4. Apply Putty/Leveling:

Apply putty for repairing and leveling if needed

5. Fabric Cutting:

Cut glass fiber fabric into sizes as designed.

6. Preparing the impregnation adhesive:

Weight and mixing adhesive according to ratio. Stirring the adhesive until the color is even. Avoid air bubble in this process.

7.Applying Impregnation Adhesive:

Apply impregnation adhesive when primer adhesive is touch dry.

8. Apply glass fiber fabric:

Apply glass fiber fabric onto the concrete surface as designed. Leveling the surface from one end to another.

9. Check Gap or Bubble:

Apply impregnation glass fiber adhesive again. Make sure the adhesive impregnate fully into the fabric. The surface flat and no air bubble. Repeat above process from cutting glass fiber if applying two or more layers

Points for Attention

The construction workers should take protective measures such as wearing masks, gloves, goggles etc.

Pay attention to fire prevention and maintain good ventilation on site.

glass fiber material is conductive, be careful to the electrical equipments around.

For more information, please visit our website at www.horseen.com

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