QuakeWrap® B2610

HYCHEM
Infrastructure

Product Description

QuakeWrap® B2610 is a high-strength, high-modulus, non-corrosive biaxial glass fabric. The 0°/90° E-glass fabric has slightly different strengths in the longitudinal (0°) and transverse (90°) directions. A glass mat is stitched to the back of the original QuakeWrap B2610G fabric to provide water-proofing. QuakeWrap® B2610 is impregnated in the field using QuakeBond™ 300SR saturating resin to form glass fiber reinforced polymer (GFRP) for use in the strengthening, repair, and water-proofing of structural elements and infrastructure.

Uses

- Strengthening of structural elements in buildings, bridges, and other structures due to increased loads
- Seismic retrofit of structural elements such as columns, unreinforced masonry walls, shear walls, and diaphragms
- Repair of large diameter pipes and culverts to achieve strengthening and water-proofing
- Repair of damaged structural components caused by aggressive environments, fire, vehicle impact, aging, etc.
- Changes in structural system: new openings in floors, removal of existing walls, etc.
- Correction of design or construction errors

Advantages

- Glass mat layer provides water-proofing when saturated with QuakeBond™ 300SR
- Strong and lightweight fabric ideal for confined spaces
- Single layer provides strength in two orthogonal directions
- Provides flexure and shear strengthening in single layer application
- Fully compatible and excellent adhesion to QuakeBond™ resins
- Non-corrosive; provides directional barrier
- Can be formed to strengthen and repair complex shapes
- Light weight; does not alter dead load of structure
- Special manufacturing of the fabric reduces potential of fraying

Coverage

35 ft^2 per 1-gallon QuakeBond™ 300SR

Surface Preparation

Surface must be clean and sound; it may be dry or damp but must be free of standing water and frost. Remove dust, laitance, grease, curing compounds, disintegrated materials and other bond inhibiting materials from the surface. Existing uneven surfaces must be filled with an appropriate repair mortar.

Minimum tensile strength of 200 psi (1.4 MPa) with substrate failure is required. Any sharp edges (i.e. fins, form-marks, etc.) must be ground smooth and flush. Sharp edges must be rounded to a minimum diameter of 1 in. (25mm). Contact a QuakeWrap representative for variances in surface preparation.

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Properties of Fabric Laminated with 300SR

	US UNITS	SI UNITS
Aerial Weight Fabric Only	36 oz/yd^2	1020 g/m^2
Ply Thickness	0.080 in.	2.03 mm
Longitudinal (0°) Direction:*		
Tensile Strength	46.8 ksi	332.7 MPa
Tensile Modulus	2,599 ksi	17,919 MPa
Ultimate Elongation	1.8%	1.8%
Breaking Force	1,873 lb/in	328 N/mm
Transverse (90°) Direction:*		
Tensile Strength	34.7 ksi	239.2 MPa
Tensile Modulus	3,682 ksi	25,386 MPa
Ultimate Elongation	0.94%	0.94%
Breaking Force	1,390 lb/in.	243 N/mm

* Results based on testing of QuakeWrap® B26G fabric saturated with QuakeBond™ 300SR. Ply thickness for strength design is 0.04 in.

Application

- Saturate QuakeWrap® B2610G fabric thoroughly with QuakeBond™ saturating resins; for more details refer to the Product Data Sheet for the saturants.
- Before the resin hardens, apply saturated fabric to the substrate surface that has been coated with QuakeBond™ 220UR or other QuakeWrap approved adhesive.
- Using gloved hands, carefully remove any entrapped air bubbles under the fabric; a plastic laminating roller can be used for this purpose. If required, additional layers of saturated fabric can be directly applied on top of previous layers.
- Feather the edges of the fabric with QuakeBond™ 220UR.

Installation of QuakeWrap® fabrics must be performed only by specially trained and approved contractors.

Fabric can be cut to appropriate length using commercial quality heavy-duty scissors. Since dull or worn cutting tools can damage, weaken or fray the fiber, their use should be avoided.

Cleanup

Dispose of waste in accordance with local disposal regulation. Cured materials can only be removed mechanically. See QuakeBond™ 300SR and 220UR SDSs for more information on resin cleanup.

Packaging

- Rolls: 50 in. X 82 yards (1.27 m X 75 m).
- The fabric can be easily cut in the field to various lengths.

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Shelf life and Storage

Shelf life Is unlimited in proper storage conditions. Store in a dry environment at 45°-95°F (7°-35°C).

Limitations

Design calculations must be made and certified by an independent licensed professional engineer.
System is a vapor barrier. Concrete should not be encapsulated in areas of freeze/thaw.

Caution

QuakeWrap® B2610G is non-reactive. However, caution must be used when handling since a fine glass dust may be present on the surface. Gloves must be worn to protect against skin irritation. Caution must also be used when cutting the fabric to protect against airborne glass dust generated by the cutting procedure. Use of an appropriate, properly fitted NIOSH approved respirator is recommended.

First Aid

Appropriate Personal Protective Equipment (PPE) should be worn at all times when handling product.

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