

DESCRIPTION

Qwrap® QW600-H is an advanced material with High Strength carbon fiber and High Translation of fiber properties. Is a unidirectional carbon fiber fabric orientated in 0° direction, laminated with our epoxy resin adhesive QH2 used in structural strengthening from carbon fiber reinforced polymer (CFRP).

APPLICATIONS

Structural strengthening in:

- Columns for confinement.
- Beam Flexural Strengthening.
- Beam Shear Strengthening.
- Improve Structural Condition

ADVANTAGES

- High Strengthening
- Good adhesion even in humid environments.
- Excellent combination of rapid cure and workable pot-life.
- Lowers viscosity for a better lamination.
- Cures very fast even at lower temperatures.
- Excellent water resistance and corrosion protection.

PACKAGING

- Packaging Available:
- Width: 20" and 24" (30cm and 50cm)
- Longe: 55 yards (50m)
- 12" x 12" x 28" boxes

SYSTEM CONSUMPTION RATE

- 1 unit of Q2 Epoxy resin 5gallon (19lts)
- 1 unit of Q2 Epoxy hardener 1.85gallos (7lts)
- Roll of QW600-H of 24"x 55yards (50cm x 50m)

REGULATORY STATUS

Please refer to the material safety data sheet (MSDS). Specific information regarding chemical inventory listing can be obtained from your local sales representative.

Quintum Technical Datasheet
Product: QW600H
Issue Date: 11/2023
Document ID: QW600-H_EN

FABRIC DESIGN – QW600H

PROPERTY	TYPICAL VALUE
Areal Weight	604 g/m2 ± 10 g/m2
Thickness	0.35mm
Fabric length	50m
Fabric width	30cm and 50cm
Fabric Construction	Continuous Carbon Fiber (98%)
Filament	24k

TYPICAL DRY FIBER PROPERTIES (FILAMENT) – QW600H

PROPERTY	TYPICAL VALUE
Tensile Strength	800 ksi (5.5 GPa)
Tensile Modulus	36,300 ksi (250 GPa)
Elongation	2.2%
Density	0.065 lbs/in3(1.82g/cm3)
Weight	17.7oz (600g/m2)

COMPOSITES LAMINATE PROPERTIES – QW600H & EPOXY QH2

PROPERTY	METHOD	TYPICAL VALUE
Ultimate Tensile Strength	D3039	147 ksi (1,013 Mpa)
Tensile Modulus	D3039	10.34 ksi (73Mpa)
Elongation at break	D3039	1.86%
Nominal Laminate Thickness		0.04 in

EPOXY SYSTEM PROPERTIES – QH2

PROPERTY	METHOD	TYPICAL VALUE
Mix viscosity @ 25°C		7,312 cPs
Tensile Strength	D638	10.34 ksi (73Mpa)
Tensile Modulus	D638	449.3 ksi (3,098 MPa)
Elongation	D638	3.5%
Flexural Strength	ISO 178	18.4 ksi (127MPa)
Flexural Modulus	ISO 178	497.2 ksi (3,428 MPa)
Tg	ASTM3418	203°F (95°C)
Use level (phr)		100 : 40

DESIGN

• ASNT TC-IA-1998.- American Society For Nondestructive Testing, Inc. • API 570.- American Petroleum Institute.- Inspection Code Section 8.1.4 –Non Welding Repairs (On Stream). • ASME PCC-2 (Article 4).- The American Society Mechanical Engineers, Repair Standard, Non-Metallic Composite Repair Systems for Pipelines and Pipework: HIGH RISK. • ASME Code Case N-589.- The American Society Mechanical Engineers (Nuclear Plants) Internal Linings. • CFR Parts 192 and 195.- Code of Federal Regulations DOT Final Rule 49 • ACI 440.2R-02 .- American Concrete Institute –, Guide for the Design and Construction of Externally Bonded FRP Systems for Strengthening Concrete Structures. • ISO 9001.- I

STABILITY AND STORAGE

QW600H carbon fiber and QH2 Epoxy system products may absorb moisture and carbon dioxide when left in open containers, which could result in increased viscosity, discoloration, reduction of reactivity, and/or crystallization of the products. These products should be kept tightly sealed in their original containers when not in use, and stored in a cool, dry place.

SAFETY PRECAUTIONS

Please refer to the material safety data sheet (MSDS). Copies of the MSDS can be requested via your local sales representative.

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LIMITATIONS

QW600H and QH2 shall only be applied by trained and experienced professionals.

A specialist structural engineer must be consulted for any structural strengthening design calculation.

CONTACT INFORMATION

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HECHO EN MÉXICO

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