

## CC Quantum P

### CARBON FIBRE EPOXY RESIN PRIMER

#### CHARACTERISTICS

CC Quantum P is a two component solvent-less epoxy penetrating medium viscosity primer. The system has been developed to offer fast injection application and has excellent surface wetting.

CC Quantum P has been specially developed to bond to both dry and damp surfaces.

#### BENEFITS

- Low viscosity
- Excellent adhesion to concrete substrate
- Solvent free – low VOC and non-shrink.
- Low cure temperatures
- Corrosion resistance, humidity and moisture resistance, and chemical corrosion resistance.

#### APPLICATIONS

For use as a concrete primer prior to the application of CC Quantum Fabric, Plates and Rods together with their respective bonding agents CC Quantum A Adhesive and CC Quantum S Saturant.

#### STANDARDS

- ASTM

#### DESCRIPTION

##### Technical Data

|                                   |   |
|-----------------------------------|---|
| Chemical Base                     | Epoxy resin.  |
| Density                           | 1.30 kg/l (at +23°C)                                  |
| Mixing ratio, by weight (A: B)    | 4:1   |
| Service Temperature               | -40°C to +45°C  |
| Substrate & Ambient Temperature   | +5°C min. / +35°C max.                                |
| Pot life (in minutes)             | 80 mins at 10°C<br>50 mins at 25°C<br>35 mins at 35°C |
| Setting time                      | < 3 hrs. at 25°C                                      |
| Full Cure                         | 7 Days  |
| Waiting Time prior to overcoating | 24 hrs at 10°C<br>12 hrs at 25°C<br>6 hrs at 35°C     |
| Viscosity                         | 6000 cps @ 25°C                                       |
| Application                       | 0.5 – 0.7 kg/m <sup>2</sup>                           |

## CC QUANTUM P CARBON FIBRE EPOXY RESIN PRIMER PROPERTIES

### Cure Time 7 days at +23°C

| PROPERTY             | TEST METHOD | TYPICAL VALUE | UNITS |
|----------------------|-------------|---------------|-------|
| Adhesive Strength    | ASTM D4541  | 3.90          | MPa   |
| Tensile Strength     | ASTM D638   | 30.1          | MPa   |
| Tensile Modulus      | ASTM D638   | 4.51          | GPa   |
| Flexural Strength    | ASTM D790   | 43.3          | MPa   |
| Flexural Modulus     | ASTM D790   | 3.53          | GPa   |
| Compression Strength | ASTM D695   | 98            | MPa   |

NOTE: All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

### INSTRUCTIONS

#### Substrate Preparation

Prior to application of any CC Quantum material products it is expected that the substrate be appropriately prepared according to the following:

- Ensure that all surfaces are cleaned, this entails the removal of a surface contaminates such as oils, grease, dust and other contaminates which could affect the bonding of the CC Quantum system.
- Specifically, for Concrete, Mortar and Stone which is still in good working condition, it is recommended to Mechanically abrade the surface with a needle gun, water blast, grit blast or grind. For small areas wire brushing (mechanical) is adequate.
- For degraded substrates, it is recommended to remove the affected area and restore allowing sufficient time to cure before applying CC Quantum System.

Additional information can also be found in the relevant Method Statement document.

#### Mixing

Part A: part B = 4:1 by weight

Thoroughly stir both components Part A (Resin) and Part B (Hardener) separately using a slow running stirrer with a helical paste mixer or by hand if dealing with small quantities until a uniform colour is reached.

#### Priming

- Once the substrate has been adequately prepared a layer of CC Quantum P Primer can be applied.
- Apply a mixed CC Quantum P Primer using a roller or brush.
- Ensure that either the roller or brush is free from foreign objects such as dirt, rocks or dust.
- Ambient temperature should be greater than 5°C prior to application.
- A secondary coat can be applied if initial coat is unsatisfactory.

#### CC Quantum Fabric & Saturant

If using as a primer for the CC Quantum Fabric system apply the CC Quantum S whilst the CC Quantum P is still tacky.

#### CC Quantum Plates & Adhesive

CC Quantum A Plate adhesive should be applied to the CC Quantum P while it is still tacky. Do not allow to become tack free before application of the CC Quantum A.

### SIGNBOARD

The contents shall be clearly marked on the product package:

- a) Manufacturer and address.
- b) Product name, brand and standards.
- c) Date of manufacture and batch number.
- d) Product quantity.
- e) Attention.

### PACKAGING

CC Quantum P comes in in a 5, 10 and 20 kg kits. Other quantities can be supplied upon request.

### TRANSPORT AND STORAGE

Store in dry conditions, storage temperatures should not drop below 5°C or exceed 25 °C, avoid direct sunlight and fire. Handle with care.

### SHELF LIFE

24 months, providing the storage requirement are adhere

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#### Important notice

The data and information provided in this datasheet represent the typical properties that can be obtained from these products when properly processed in a controlled environment. The user should make their own assessment of the suitability of these products for the purpose required by conducting appropriate testing under conditions as close as possible to the proposed manufacturing conditions. Any advice or recommendation is given in good faith and no further duty or responsibility is accepted by the company. All such advice and every sale is subject to Cathay Composite's standard terms and conditions. The company reserves the right to change specifications without notice and customers should satisfy themselves that they are using the current version of the Technical Data Sheet.