Estowrap Resin UW

Resin Under water for strengthening FRP

Description

Estowrap Resin UW , Epoxy resin for saturation and impregnating carbon fiber. **Estowrap Resin UW** is part of the strengthening material system for the creation of the composite strengthening for under water purpose.

Uses

- **Estowrap Resin UW** is high performance epoxy adhesive, which can be used for the effective penetration bonding to concrete, steel material, ceramic, stone.
- Strengthening fibre reinforced plasic composites can be used to increase flexural shear, impact resistance and load capacity.

Advantages

- **Low viscosity** - Good impregnating properties, can well infiltrate the carbon fiber fabrics, good thixotropic properties makes it easy to apply.
- **Adheres to fabric and concrete substrates** – A low fast creation of true composite with the concrete.
- **Anti-corrosion** -Excellent durable performance, corrosion resistance, humidity and moisture resistance, and chemical corrosion resistance.
- **Cures hard** – wide application range

Properties

Volume solids	100%
Mixed density (kg/liter)	1.13 ± 0.03
Mixing ratio, by weight (Part A : Part B), kg	2 : 1
Pot life (min)	70 min
Touch dry time (25C)	1 – 2 hours
Cure Time at (25C)	3 – 7 days

Ultimate elongation (%) ASTM D 638	≥1.6 %
Tensile strength (ASTM D638)	>68 Mpa
Tensile Elastic Modulus (ASTM D638)	3200 Mpa
Elongation at break (ASTM D638)	>5%
Compressive strength (ASTM D695)	>105 Mpa
Flexural strength (ASTM D790)	>200 Mpa

Application

Surface preparation

Remove all grease, oil, dust, residual curing compound, mould release agent or other contaminant that could impair adhesion. Laitance should preferably be removed by light sweep blasting or hydro-jetting. Mechanical wire brushing may be appropriate for small areas.
Spalled concrete should be cut back to sound concrete. Conventional concrete curing compounds should be removed before application.

Mixing

Proportion part kits accurately mixing only what can be used in less than 70 minutes. Thoroughly stir Part A, and add Part B and blend thoroughly using a slow speed (300-600rpm) mixer fitted with a suitable paddle.

Sheet Preparation

Remove the release paper from the FRP sheet and roll it with an impregnation roller in a direction parallel to the fibers in the sheet, apply coat of **Estowrap Resin UW** in some part of the Estowrap sheet.

Application of Estowrap Resin UW

Apply first coat of fully mixed **Estowrap Resin UW** to concrete substrate using roller or brush.
Place the FRP sheet material and roll in the longitudinal direction of the fibres two or three times using a deforming roller and rubber spatula in order to impregnate the resin into the fibres and to deform the resin coat.coverage 0.6 – 0.9 kg/ m2. For joining strips of fibre sheet, a 20 cm overlap length is required in the main direction. Additional resin must be applied at the overlap location on top of the outer layer of fibre sheet to be overlapped. Apply the second coat of **Estowrap Resin UW** ensuring total saturation of the **FRP sheet**.
In cases where more than one layer of fibre sheet is to be applied, the above application method for **Estowrap Resin UW** should be repeated.
Before **Estowrap Resin UW** setting cover the area already apply with plastic sheet and tighten with wire. This is only to help Resin UW and carbon UW fully bonded during curing time.

Packaging

Estowrap Resin UW
Part A : 10 kg Part B : 5 kg

Coverage

Estowrap Resin UW 1.2 – 1.8 kg/m2 / 2 coat

Shelf Life

Estowrap Resin UW when stored correctly and stored in tightly closed original containers the shelf life will be at least 12 months at moderate temperature.

Precaution

For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the ESTOP Material Safety Data Sheet (MSDS) from our office or our website.