

# PS Carbon Fibre Wrap (450gsm)

Woven Carbon fibre fabric for structural strengthening



<b>Description</b>	PS Carbon Fibre wrap is 450gsm unidirectional woven carbon fiber fabric for strengthening.
<b>Uses</b>	Strengthening of reinforced concrete structures for: <ul style="list-style-type: none"><li>▪ Increasing loading capacity of structural elements</li><li>▪ Changes of building utilisation</li><li>▪ Structural design construction defects</li><li>▪ Strength and ductility of columns</li><li>▪ Seismic movement</li><li>▪ Improved serviceability</li><li>▪ Structural upgrading to comply with latest standards</li></ul>
<b>Characteristics / Advantages</b>	<ul style="list-style-type: none"><li>▪ High Mechanical characteristics</li><li>▪ Wide range of application</li><li>▪ Lightweight, system does not create an additional load on construction</li><li>▪ Corrosion resistance</li><li>▪ Minimum labour and time spent on work</li><li>▪ Low transportation cost</li><li>▪ Ability to perform repair without interrupting the operation of buildings or structures</li><li>▪ No additional costs for further operation</li></ul>

## Product Information

<b>Packaging</b>	100m roll with 500mm width
<b>Fibre Construction</b>	Fiber orientation: 0° (unidirectional). Warp: High Strength 24K Fibre, 98% of total areal weight, Orientation 0° Weft: Fusible Glass Fibre, 2% of total areal weight, Orientation 90°
<b>Shelf life &amp; Storage Conditions</b>	24 months from date of production if stored properly in undamaged original sealed packaging in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight.

## Mechanical / Physical Properties

<b>Typical properties</b>	Tensile strength	4900 Mpa
	Tensile Modulus	240 Gpa
	Ultimate Elongation	2.1%
	Dry thickness (ASTM D1777)	0.58 mm
	Fibre density	1.8 Kg/m <sup>3</sup>

## Application Details

<b>Application method</b>	The fabric can be cut with special scissors or razor knife. Never fold the fabric. The fabric to be applied with primer and saturant details given below.
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## System of Application

The system configuration as described must be fully complied with and may not be changed.

Surface Preparation : PS Epoxy putty

Concrete primer – PS Epoxy Primer

Impregnating / laminating resin – PS Saturant

Structural strengthening fabric – Carbon Fibre Wrap 450/900gsm

For detailed resin properties, fabric application details and general information, refer to Product Data Sheet

## Application Procedure

This product may only be used by experienced professionals.  
Minimum radius required for application around corners: > 20 mm.  
Grinding edges or building up with mortars may be necessary.

- In fiber direction, overlapping of the fabric must be at least 100 mm depending on Carbon Fibre type or as specified in the strengthening design.
- For side-by-side application, no overlapping length in the weft direction is required. Overlaps of additional layers must be distributed over the column circumference.
- The strengthening application is inherently structural and great care must be taken when choosing suitably experienced contractors.
- The Carbon fabric is coated to ensure maximum bond and durability with the PS Epoxy Primer impregnating/laminating resins. To maintain system compatibility do not interchange system parts.
- The Carbon fibre must be coated with a cementitious overlay or coatings for aesthetic and/or protective purposes. Selection will be dependent on exposure requirements.

## Consumption

Depending on the roughness of the substrate.

- Surface preparation with Epoxy putty of PS Epoxy Putty as per requirement
- Impregnating of the first layer incl. primer: ~ 4 to 6 m<sup>2</sup>/kg (PS Epoxy Primer).
- Impregnating of the following layers: approximately 0.8 to 1.0 kg/m<sup>2</sup> (PS Saturant).

## Health & Safety Information

For Information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

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During use, avoid inhalation and contact with the skin or eyes. Wear suitable protective clothing - eye protection, gloves and respiratory equipment (particularly in confined spaces).

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

## Legal Notes

The information and in particular the recommendations relating to the application and end use of products are given in good faith based on current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with recommendations. In practice the difference in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information or from any written recommendations or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose reserves the right to change the properties of its products. The Proprietary rights of third Parties must be observed. All orders are accepted subject to our current terms of sale and delivery.

Users must always refer to the most recent issue of the local product Data sheet for the product concerned copies of which will be supplied on request.

## IPSS Industrial Products

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