

# X-Wrap C300

## High strength carbon fiber fabric for structural strengthening

### Product Description

X-Wrap C300 is a carbon fiber uni-directional sheet designed for the strengthening of structural members against tensile, shear and impact forces. The sheet is used in conjunction with a primer and lamination resin. It is black in color.

### Advantages

- Lightweight and easy to apply
- Simple application to square or curved members
- High strength to weight ratio
- Impact and blast resistant
- Can be used in conjunction with X-Wrap Pultruded Plates for combined strengthening and reinforcement

### Uses

As an external reinforcement system for the structural strengthening of:

- Beams
- Columns
- Slabs
- Tunnels
- Circular, curved and complicated details

### Laboratory Test Data

<b>Sheet weight</b>	300g/m <sup>2</sup>
<b>Carbon content</b>	95%
<b>Nett effective thickness</b>	0.166mm
<b>Modulus of elasticity</b>	240GPa
<b>Tensile strength</b>	4000MPa
<b>Elongation at break</b>	2%

### Packaging

300mm wide by 100m rolls.  
Other sizes available.

### Shelf Life

X-Wrap C300 should be stored in dry conditions and protected from direct sunlight; the shelf life under such conditions will be unlimited.

### Installation Guidelines

X-Wrap C300 can only be applied by an NCC X-Calibur Registered Contractor using trained personnel and the correct equipment. NCC X-Calibur does not allow any contractor on to the register unless they satisfy strict selection criteria. For each application NCC X-Calibur will provide a detailed method statement that the Registered Contractor will work to.

### Surface Preparation

The substrate to be treated should be cleaned and prepared by sand blasting, grit blasting, grinding or similar to remove all contamination such as dust, oil, grease, surface coatings etc. and provide a mechanical key. The prepared surface should then be checked for variation in levels using a 300mm straight edge, the maximum permissible deviation being 1 mm over a distance of 300mm in any direction. Any structural element which contains sharp arises must be ground to give a radius of at least 20mm.

Since the main purpose of installing X-Wrap C300 is to upgrade a structural element, the condition of the substrate surface must be established to ensure that it is capable of transferring load to the wrapping sheet. Therefore adhesion tests should be carried on a trial area before commencing with the installation.

### Priming

The prepared substrate should be primed with X-Wrap Primer mixed and applied in accordance with the method statement.

### Lay Up

X-Wrap Lamination Adhesive shall be mixed and applied in accordance with the method statement.

Immediately after applying the X-Wrap Lamination Adhesive X-Wrap C300 sheet should be laid onto the surface and pressed into position using a suitable hand lay-up (washer) roller. Further layers of laminating resin and fibre sheet must be applied in the same way. Always lay the sheet onto wet laminating resin. Care must be taken always to ensure that there is sufficient resin to completely wet-out any subsequent layer of sheet.

Allow to fully cure prior to any application of decorative/protective coating.

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## Cleaning

All tools should be cleaned using a proprietary solvent-based cleaner before the material hardeners. If the resin is allowed to set it can only be removed by mechanical means.

## Health and Safety

**This product is for industrial use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. The MSDS can be obtained via our website [www.ncc.com.eg](http://www.ncc.com.eg)**

## Authorized Technical Specialist

Please note that only NCC X-Calibur Authorized Technical Specialists ('ATs') are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product. Visit [www.ncc.com.eg](http://www.ncc.com.eg) for a full list of NCC X-Calibur ATs.

## Datasheet Validity

NCC X-Calibur makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on [www.ncc.com.eg](http://www.ncc.com.eg) to ensure you have the latest version.

## Warranties

NCC X-Calibur supplies products that comply with the properties shown on the current datasheets. In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price. NCC X-Calibur does not warrant or guarantee the installation of the products as it does not have control of the installation or end use of the products. Any suspected defects must be reported to NCC X-Calibur in writing within five working days of being detected. NCC X-Calibur Construction Chemicals **makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties express or implied.** NCC X-Calibur Construction Chemicals shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.