BUILDING TRUST

PRODUCT DATA SHEET

SikaWrap® FIB 300 CFS

(formerly MBrace FIB 300/50 CFS)

Unidirectional high-strength carbon fibre fabric with an area density of 300 g/m²

DESCRIPTION

SikaWrap® FIB 300 CFS is an unidirectional woven carbon fibre fabric. It is part of the SikaWrap® FIB composite strengthening system. The Product is made of high strength carbon fibres with an area density of 300 g/m².

USES

SikaWrap® FIB 300 CFS may only be used by experienced professionals.

SikaWrap® FIB 300 CFS is used as a reinforcement fabric for externally bonded structural strengthening systems on concrete, masonry and wooden substrates. Externally bonded structural strengthening systems are used for:

- Increasing the flexural and shear loading capacity of elements and structures
- Enhancing the load-carrying capacity or ductility of structural members
- Replacing missing steel reinforcement
- Structural upgrading of weak concrete elements or structures
- Improving impact resistance
- Passive strengthening for seismic event protection

FEATURES

- Improves the service life of a structure
- Manufactured with thermo-welded weft fibres to keep the fabric stable
- Multifunctional fabric for use in many different strengthening applications
- Flexible and accommodating to different surface planes and geometry (such as beams, columns, chimneys, piles, walls, soffits and silos)
- Low density for minimal additional weight

PRODUCT INFORMATION

Construction	Fibre orientation	0° (longitudinal, unidirectional)
	Warp (longitudinal)	Black carbon fibre, 99 %
	Weft (transversal)	White thermoplastic heat-set fibre, 1 %
Fibre type	Selected high strength carbon fibres	
Packaging	Roll width	500 mm
	Roll length	100 m

	Refer to the current price list for available packaging variations.
Shelf life	24 months from date of production
Storage conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Protect the Product from direct sunlight. Always refer to the packaging.
Mass per area	(300 ± 10) g/m²

TECHNICAL INFORMATION

Laminate tensile strength	3600 N/mm² All values refer to the relevant design nominal thickness.	(ASTM D3039)
Modulus of elasticity in tension	230 kN/mm²	(ISO 10618)
Dry fibre elongation at break	2.1 %	
Dry fibre tensile strength	4900 N/mm²	(ISO 10618)
Dry fibre thickness	0.166 mm	
Dry fibre density	1.82 g/cm³	

APPLICATION INFORMATION

Consumption

Primer	0.20 – 0.25 kg/m²
First layer	0.80 – 1.00 kg/m²
Following layers	0.80 – 1.00 kg/m²

SYSTEM INFORMATION

System structure

The system build-up and configuration as described must be fully complied with and may not be changed.
- Concrete substrate adhesive primer: Sikadur® P 3500 ID
- Impregnating or laminating resin: Sikadur® SAT 4500 ID
- Structural strengthening fabric: SikaWrap® FIB 300 CFS

For detailed information on Sikadur® P 3500 ID or Sikadur® SAT 4500 ID, together with the resin and fabric application details, please refer to the individual Product Data Sheets and the relevant Method Statement.

BASIS OF PRODUCT DATA

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

FURTHER DOCUMENTATION

Reference must be made to the following Sika® Method Statement:
- Sika Method Statement SikaWrap® FIB System

Reference must be made to the following Product Data Sheets:
- Sikadur® P 3500 ID
- Sikadur® SAT 4500 ID

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

IMPORTANT
Strictly follow installation procedures
Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.
Tensile adhesion strength of the substrate must be a minimum of 1.0 N/mm² or as specified in the strength-

ening design. If necessary, verify this by applying a test area first.
Refer to the relevant SikaWrap® Method Statement for further information.
Clean and prepare concrete to achieve a laitance-free, contaminant-free, open-textured surface.
Refer to the relevant SikaWrap® Method Statement for further information.

APPLICATION

IMPORTANT
Application by trained personnel
The application of this Product must only be carried out by an applicator that is trained or approved by Sika. The applicator must also be experienced in this type of application.
IMPORTANT
Strictly follow installation procedures
Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.
IMPORTANT
Do not interchange different system components
SikaWrap® fabrics are coated to ensure maximum bond and durability with the Sikadur® adhesives, impregnating and laminating resins. To maintain and ensure full system compatibility, do not interchange different system components.
IMPORTANT
Never fold the fabric
Cut the fabric with special scissors, a razor knife or a box-cutter knife.
Refer to the relevant Method Statement for details on either the impregnating or laminating procedure.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences 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. Sika 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.

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