

# PRODUCT DATA SHEET

## SikaWrap® FX-50 C

### CARBON FIBRE CORD FOR STRUCTURAL STRENGTHENING, CONNECTION AND ANCHORING OF SIKAWRAP® STRENGTHENING SYSTEMS

#### DESCRIPTION

SikaWrap® FX-50 C is a unidirectional structural carbon fibre cord encased in a plastic sleeve.

#### USES

SikaWrap® FX-50 C may only be used by experienced professionals.

- Anchoring SikaWrap® carbon and glass fibre structural fabrics on concrete or masonry
- Connecting SikaWrap® carbon or glass fibre structural fabrics applied on concrete or masonry structures
- Flexible near surface mounted (NSM) strengthening
- Anchored NSM strengthening for cantilevers

#### CHARACTERISTICS / ADVANTAGES

- Corrosion resistant
- Durable carbon fibre properties
- Multifunctional use
- Easy to install

#### PRODUCT INFORMATION

|   |   |               |
|---|---|---------------|
| <b>Construction</b>                               | Unidirectional carbon fibre cord encased in a plastic sleeve  |               |
| <b>Fibre Type</b>                                 | Carbon fibre  |               |
| <b>Packaging</b>                                  | 25 m roll on a plastic reel dispenser<br>Refer to current price list for packaging variations   |               |
| <b>Shelf life</b>                                 | 24 months from date of production   |               |
| <b>Storage conditions</b>                         | The product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to packaging. |               |
| <b>Dry Fibre Density</b>                          | 1,82 g/cm <sup>3</sup>  |               |
| <b>Cross Section</b>                              | ≥ 28 mm <sup>2</sup> (dry carbon fibre content)   |               |
| <b>Mass per Unit Length</b>                       | ≥ 50 g/m (dry carbon fibre content)   |               |
| <b>Dry Fibre Tensile Strength</b>                 | 4000 N/mm <sup>2</sup>  | (ASTM D 4018) |
| <b>Dry Fibre Modulus of Elasticity in Tension</b> | 240 000 N/mm <sup>2</sup>   | (ASTM D 4018) |
| <b>Dry Fibre Elongation at Break</b>              | ≥ 1,6 %   | (ASTM D 4018) |

## TECHNICAL INFORMATION

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|--|--|
| <b>Laminate Nominal Cross Section</b>            | 78 mm <sup>2</sup><br>Impregnated / laminated cord will have a diameter of ~10 mm.   |
| <b>Laminate Tensile Strength</b>                 | ~2000 N/mm <sup>2</sup> (related to fibre cross section)* (EN 2561**)<br>* Impregnating resin: Sikadur®-300, Sikadur®-52 N or Sikadur®-52 LP. Values in longitudinal direction of the fibres<br>** Standard adapted to fit sample shape    |
| <b>Laminate Modulus of Elasticity in Tension</b> | ~230 000 N/mm <sup>2</sup> (related to fibre cross section)* (EN 2561**)<br>* Impregnating resin: Sikadur®-300, Sikadur®-52 N or Sikadur®-52 LP. Values in longitudinal direction of the fibres<br>** Standard adapted to fit sample shape |

## SYSTEMS

|                         |   |  |
|-------------------------|---|--|
| <b>System Structure</b> | Impregnating / laminating resin options | Sikadur®-300<br>Sikadur®-52 N<br>Sikadur®-52 LP              |
|                         | Anchorage resin options                 | Sikadur®-330<br>Sika AnchorFix®-3001<br>Sika AnchorFix®-3030 |
|                         | Structural strengthening fabric         | SikaWrap® carbon or glass fibre fabric                       |

The system structure as described in table must not be changed.  
Refer to the relevant Product Data Sheets and Sika Method Statements.

## APPLICATION INFORMATION

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|--------------------|---|
| <b>Consumption</b> | Anchor resin impregnation: 110–150 g/m<br>SikaWrap® fabrics: Refer to the relevant Product Data Sheet |
|--------------------|---|

## APPLICATION INSTRUCTIONS

### APPLICATION METHOD / TOOLS

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

SikaWrap® FX-50 C can be cut with special scissors. Refer to the relevant Sika Method Statement for the installation of SikaWrap® FX and for the impregnating / laminating procedure of the fabrics.

### FURTHER INFORMATION

- Sika Method Statement: Installation of SikaWrap® FX
- Sika Method Statement: SikaWrap® manual dry application
- Sika Method Statement: SikaWrap® manual wet application
- Sika Method Statement: SikaWrap® machine wet application

### IMPORTANT CONSIDERATIONS

Installation work must only be carried out by Sika® trained contractors experienced in this type of application.

- A specialist structural engineer must be consulted for any structural strengthening design calculation.
- Reference must be made to the notes and limitations

mentioned in the Sika Method Statement: Installation of SikaWrap® FX.

- The SikaWrap® products are coated to ensure maximum bond and durability with the Sikadur® adhesives / impregnating / laminating resins. To maintain and ensure full system compatibility, do not interchange different system components.
- The SikaWrap® system can be over coated with a cementitious overlay or other coatings for aesthetic and / or protective purposes. The over coating system selection is dependent on the exposure and the project specific requirements. For additional protection against UV light exposure, use Sikagard®-550 W Elastic, Sikagard® ElastoColor-675 W or Sikagard®-680 S.

### 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.

### 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 the exact product data and uses.

## ECOLOGY, HEALTH AND SAFETY

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w)

## 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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### PRODUCT DATA SHEET

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