

PRODUCT DATA SHEET

SikaWrap® FX-50 C

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

DESCRIPTION

SikaWrap® FX-50 C is a unidirectional carbon fibre string, encased in a plastic envelope, which is used as near surface mounted strengthening and as fibre connector for the anchorage of SikaWrap® fabrics. Suitable for use in hot and tropical climatic conditions.

USES

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

- Anchoring SikaWrap® carbon and glass fibre fabrics on concrete or masonry
- Connecting SikaWrap® carbon or glass fibre fabrics through concrete or masonry structures
- Flexible near surface mounted strengthening (NSM)

CHARACTERISTICS / ADVANTAGES

- Carbon fibre, corrosion resistant, durable
- Multifunctional use
- Easy to install

PRODUCT INFORMATION

Construction	Unidirectional carbon fibre string encased in a plastic envelope	
Fibre Type	Carbon fibre	
Packaging	25 m roll on a plastic reel dispenser	
Shelf life	24 months from date of production	
Storage conditions	Store in undamaged, original sealed packaging, in dry conditions at temperatures between +5 °C and +35 °C. Protect from direct sunlight.	
Dry Fibre Density	1.82 g/cm ³	
Cross Section	≥ 28 mm ² (based on carbon fibre content)	
Mass per Unit Length	≥ 50 g/m (based on carbon fibre content)	
Dry Fibre Tensile Strength	4 000 N/mm ²	(ASTM D 4018)
Dry Fibre Modulus of Elasticity in Tension	240 kN/mm ²	(ASTM D 4018)
Dry Fibre Elongation at Break	≥ 1.6 %	(ASTM D 4018)

TECHNICAL INFORMATION

Laminate Nominal Cross Section	78 mm ²	
Laminate Tensile Strength	~2 000 N/mm ² (related to fibre cross section)* <small>*Impregnating resin: Sikadur®-300 or Sikadur®-52 LP *Values in longitudinal direction of the fibres ** Standard adapted to fit sample shape</small>	(EN 2561**)
Laminate Modulus of Elasticity in Tension	~230 kN/mm ² (related to fibre cross section)* <small>*Impregnating resin: Sikadur®-300 or Sikadur®-52 LP *Values in longitudinal direction of the fibres ** Standard adapted to fit sample shape</small>	(EN 2561**)

SYSTEMS

System Structure	The system build-up and configuration as described must be fully complied with and may not be changed.	
	Impregnating / laminating resin	Sikadur®-300 or Sikadur®-52 LP
	Anchorage resin	Sikadur®-330 or Sika AnchorFix®-3+
	Structural strengthening fabric	SikaWrap® carbon or glass fibre fabric
The embedded composite will have a diameter of approx. 10 mm For detailed information on Sikadur®-330, Sikadur®-300 or Sikadur®-52 LP and AnchorFix®-3+, together with the resin and fabric application details, please refer to the relevant Product Data Sheets and the Method Statements.		

APPLICATION INFORMATION

Consumption	Anchor impregnation: 110 - 150 g/m SikaWrap® fabrics: Please refer to the relevant Product Data Sheet
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APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Minimum substrate tensile strength: 1.0 N/mm² or as specified in the strengthening design.
Please also refer to the relevant Method Statement for further information.

SUBSTRATE PREPARATION

Concrete must be cleaned and prepared to achieve a laitance and contaminant free, open textured surface.
Please also refer to the relevant Method Statement for further information.

APPLICATION METHOD / TOOLS

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

FURTHER INFORMATION

Method Statements

Installation of SikaWrap® FX
SikaWrap® manual dry application
SikaWrap® manual wet application
SikaWrap® machine wet application

IMPORTANT CONSIDERATIONS

- SikaWrap® FX-50 C shall only be applied by trained and experienced professionals.
- A specialist structural engineer must be consulted for any structural strengthening design calculation.
- Notes and limitations mentioned in the Method Statement installation of SikaWrap® FX must be respected.
- 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 in exposed areas use Sikagard®-550 W Elastic (G), Sikagard® ElastoColor-675 W or Sikagard®-680 SG.
- Please refer to the Method Statement of SikaWrap® manual dry application, SikaWrap® manual wet application or SikaWrap® machine wet application for further information, guidelines and limitations.

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.

SIKA NORTHERN GULF

Bahrain / Qatar / Kuwait
Tel: +973 177 38188
sika.gulf@bh.sika.com
gcc.sika.com

SIKA SOUTHERN GULF

UAE / Oman / SIC
Tel: +971 4 439 8200
info@ae.sika.com
gcc.sika.com

SIKA SAUDI ARABIA

Riyadh / Jeddah / Dammam
Tel: +966 11 217 6532
info@sa.sika.com
gcc.sika.com



ISO 9001: Sika UAE LLC,
Sika Gulf B.S.C. (c),
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Sika Saudi Arabia Co. Ltd
OHSAS: Sika UAE LLC,
Sika Gulf B.S.C. (c)

All products are supplied
under a management
system certified to conform
to the requirements of the
quality, environmental and
occupational health &
safety standards ISO 9001,
ISO 14001 and OHSAS
18001.

Product Data Sheet

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