

SikaWrap® 300 BI-C/30

Heat-set bidirectional carbon fibre fabric for structural strengthening applications

Product Description SikaWrap®-300 BI-C/30 is a carbon fibre fabric with a 0°-90° bidirectional weft for the dry application process.

Uses SikaWrap®-300 BI-C/30 is particularly suited for the consolidation of structural strengthening applications in concrete, masonry and timber subjected to flexural and shear loading stress for:

- Preventing faults caused by seismic activity
- Mitigating the effects of explosions (incidents or terrorism)
- Improving seismic performance of masonry structures
- Improving durability

Advantages SikaWrap®-300 BI-C/30 is a product that is easy to use, having the following properties:

- Multifunctional use in many different structural strengthening applications
- Low density for minimal additional weight
- Cost effective in comparison to traditional techniques

Characteristics Carbon fibre fabric with mid-range 0°-90° bidirectional strength:
warp: 50%
weft: 50%

Product Data

Packaging		Fabric length / roll	Fabric width
	1 roll in cardboard box	≥ 50 m	1260 mm
	1 roll in cardboard box	≥ 50 m	600 mm

Applications For structural reinforcement of concrete, steel, timber and masonry



Storage

Storage Conditions/ Shelf-Life	24 months from date of production if stored properly in original sealed packaging in dry conditions and protected from moisture at temperatures between +5°C and +35°C. Protect from direct sunlight.
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Technical Data

Mechanical / Physical Properties

Weight	300 g/m ² ± 20 g/m ² ; 150 g/m ² per direction of fibre
Tensile Strength of Fibre	4000 MPa (nominal)
Modulus of Elasticity of Fibre	240 GPa (nominal)
Elongation at Break	≥ 1.7% nominal
Design Thickness	0.083 per direction of the fibres (based on total area of carbon fibres)
Density	1.80 g/cm ²
Consumption	Depends on the substrate quality impregnation of first layer: ~0.7 0- 1.2 kg/m ² Sikadur®-330 impregnation of following layers: ~0.8 kg/m ² Sikadur®-330
Substrate Quality	Minimum strength required: 1.0 N/mm ²
Substrate Preparation	Please refer to the Product Data Sheet for the product Sikadur®-330

Application Instructions

Application Method

Surface preparation

When applying on concrete, the surfaces must be cleaned and free of any parts becoming detached.

Any cement skin should be removed. For applications on metal remove any trace of rust, paint, grease etc. sanding to the bare metal, grinding or accurate mechanical cleaning.

Reconstruct any missing part of the surface with Sika MonoTop® cement mortar or epoxy mortar from the Sika range.

Application

Impregnate the substrate treated as in the previous point with the special Sikadur® 330 product applied with a roller or brush; immediately after spreading the epoxide resin apply the carbon fibre fabric, suitably cut with a pair of scissors as required and apply a second layer fresh on fresh of the same resin to embed it properly and uniformly. Never fold the fabric!

Cleaning the tools

The tools used for applying Sikadur® 330 should be cleaned with Thinner C

Notes on Application / Limitations	<p>This product should only be used by experienced professionals.</p> <p>Minimum radius required for application around corners: > 20 mm. it may be necessary to smooth corners or reinforce them with mortar from the Sika MonoTop or Sikadur® line</p> <p>In the direction of the fibres there should be a fabric overlap of at least 100 mm , or as specified in the design.</p> <p>Overlaps of additional layers should be spread around the circumference of the column.</p> <p>SikaWrap®-300 BI-C/30 fabric should be coated to ensure maximum adhesion and durability with Sikadur® impregnation and coating resins.</p> <p>SikaWrap®-300 BI-C/30 fabric should be covered with a cement layer or aesthetic-protective type of coatings. The choice will depend on the degree of exposure.</p> <p>For simple UV protection use Sikagard®-550 W Elastic, or Sikagard®-680S.</p>
Instructions	<p>For the performance of Sikadur® 330 resin, please read the special Product Data Sheet. SikaWrap® 300 BI-C/30 may be covered with cement products and protective paints.</p> <p>To protect from UV radiation use Sikagard® 550 W Elastic or Sikagard® 680 S.</p>
Value Base	<p>All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.</p>
Local Restrictions	<p>Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.</p>
Health and Safety Information	<p>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.</p>
Legal Notes	<p>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.</p>



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