

PRODUCT DATA SHEET

SikaWrap®-100 G

WOVEN GLASS FIBER FABRIC, DESIGNED FOR STRUCTURAL STRENGTHENING APPLICATIONS

DESCRIPTION

SikaWrap®-100 G is an unidirectional woven glass fiber fabric, designed for installation using the wet application process.

USES

SikaWrap®-100 G may only be used by experienced professionals.

Strengthening of reinforced concrete structures, brickwork and timber to increase flexural and shear load capacity. Reasons:

- Prevention of defects caused by seismic action
- Blast mitigation (accidents or terrorism)
- Improved seismic performance of masonry walls
- Electrical environments that ask for non-conductive material
- Strength and ductility of columns
- Improved serviceability
- Structural upgrading to comply with current standards

CHARACTERISTICS / ADVANTAGES

- Manufactured with weft fibers to keep the fabric stable (heat-set process)
- Multifunctional use for every kind of strengthening requirement
- Flexibility of surface geometry (beams, columns, chimneys, piles, walls, silos)
- Approvals available in several countries
- Economical compared to traditional techniques
- Excellent cost performance
- Non conductive

PRODUCT INFORMATION

Fibre Type	E-glass fibers		
Packaging	<u>Description</u> 1 roll	<u>Fabric length / roll</u> 40m	<u>Fabric width</u> 500mm
Shelf Life	24 months from date of production		
Storage Conditions	To stored properly in undamaged original sealed packaging in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight.		
Dry Fibre Density	2.56 g/cm ³		
Dry Fibre Thickness	0.358 mm (based on total glass content)		
Area Density	935 g/m ² + 47 g/m ²		

Dry Fibre Tensile Strength	Tensile strength: 3 400 N/mm ² (measured on virgin filament) 2 300 N/mm ² (measured on roving)
Dry Fibre Modulus of Elasticity in Tension	Tensile E-modulus: 76 000 N/mm ² (nominal)
Dry Fibre Elongation at Break	2.8% (measured on roving)

TECHNICAL INFORMATION

Laminate Nominal Thickness	1.2mm per layer (impregnated with Sikadur®-300)
Laminate Modulus of Elasticity in Tension	22.0 kN/mm ² (based on typical laminate thickness of 1.2mm)
	Note: The above values are typical and indicative only. The achievable laminate properties obtained from tensile test are dependant on the impregnating/laminating resin used and the type of tensile testing procedure. Apply material reduction factors according to the relevant design standard.

SYSTEM INFORMATION

System Structure	The system configuration as described must be fully complied with and may not be changed. Concrete primer: Sikadur®-330 / Sikadur®-300 Impregnating / laminating resin: Sikadur®-300 Structural strengthening fabric: SikaWrap®-100 G For detailed resin properties, fabric application details and general information refer to Sikadur®-300 Product Data Sheet.
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APPLICATION INFORMATION

Consumption	Primer on prepared substrate (depending on the roughness): <ul style="list-style-type: none"> ▪ Smooth surface: ~ 0.5 kg/m² (Sikadur®-300 or Sikadur®-330) ▪ Rough surface: ~ 0.5 - 1.0 kg/m² (Sikadur®-330 or Sikadur®-300 mixed with max. 5% thixotropic agent Sikadur®-513) Impregnation resin for every layer (manually or with saturator): <ul style="list-style-type: none"> ▪ ≥ 0.75 kg/m² (Sikadur®-300)
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APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Specific requirements: minimal substrate tensile strength: 1.0 N/mm² or as specified in the strengthening design.

SUBSTRATE PREPARATION

Refer to Sikadur®-300 Product Data Sheet.

APPLICATION METHOD / TOOLS

The fabric can be cut with special scissors or razor knife. Never fold the fabric.
Refer to Sikadur®-300 Product Data Sheet for impregnating / laminating procedure.

LIMITATIONS

This product may only be used by experienced professionals.

Minimum radius required for application around corners: > 20mm. Grinding edges or building up with Sikadur® mortars may be necessary.

In fiber direction, overlapping of the fabric must be at least 150mm depending on SikaWrap® type or as specified in the strengthening design.

For side-by-side application, no overlapping length in the weft direction is required. Overlaps of additional layers must be distributed over the column circumference.

The strengthening application is inherently structural and great care must be taken when choosing suitably experienced contractors.

The SikaWrap®-100 G fabric is coated to ensure maximum bond and durability with the Sikadur® impregnating / laminating resins. To maintain system compatibility do not interchange system parts.

The SikaWrap®-100 G may be / must be coated with a cementitious overlay or coatings for aesthetic and / or protective purposes. Selection will be dependent on exposure requirements. For basic UV protection use Sikagard®-550 W Elastic, Sikagard® ElastoColor-675 W or Sikagard®-680 S.

BASIS OF PRODUCT DATA

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.

LOCAL RESTRICTIONS

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.

ECOLOGY, HEALTH AND SAFETY

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.

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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