

# Sikadur<sup>®</sup>-300

## Impregnation Resin for Fabric Reinforcement

<b>Description</b>	<b>Solvent free, 2-component impregnation resin on epoxy resin base.</b>
<b>Uses</b>	– Impregnation resin for SikaWrap fabric reinforcement with the wet application system
<b>Advantages</b>	– Easy application by roller – High mechanical properties – Solvent free
<b>Approvals</b>	– ICBO Evaluation Report ER 5558 (USA) – SOCOTEC (France)

### Technical Data

<b>Colour</b>	Comp. A: light-yellow to amber Comp. B: pale yellow to clear liquid	
<b>Mix ratio</b>	A:B = 100:34.5 by weight. Exact mixing ratio to be ensured by using scales	
<b>Application temperature range</b>	Substrate and ambient temperature: + 15°C to + 40°C	
<b>Service temperature range</b>	- 40° C to + 60° C	
<b>Density</b>	1.16 kg/l (A+B mixed)	
<b>Pot life</b>	+15°C:	6 hours
	+23°C:	4 hours
	+40°C:	90 minutes
<b>Open time</b>	+40°C:	60 min.
<b>Viscosity</b>	+23°C:	750 mPas
<b>Tensile strength (DIN 53455)</b>	Curing 7 days, +23°C:	45 N/mm <sup>2</sup>
<b>Flexural modulus (ISO 178)</b>	Curing 7 days, +23°C:	3000 N/mm <sup>2</sup>
<b>Tensile modulus (DIN 53455)</b>	Curing 7 days, +23°C:	3500 N/mm <sup>2</sup>



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<b>Elongation at break (DIN 53455)</b>	Curing 7 days, +23°C:	1.5%
<b>Heat distortion temperature (ASTM D648)</b>	Curing	HDT
	7 days, +15 °C:	+ 43° C
	7 days, +23°C:	+ 49° C
	7 days, +40°C:	+ 60° C
	7 days, +40°C:	+ 66° C
<b>Shelf life</b>	At least 24 months from date of production if stored in unopened original containers at temperatures between + 5°C and 35°C	
<b>Packaging</b>	Comp. A 22.305 kg, Comp. B 7.695 kg	

## Application

<b>Surface preparation</b>	<ul style="list-style-type: none"> <li>– Preparation of the substrate by sandblasting or grinding. Subsequently any dust or loose particles must be removed by means of an industrial vacuum cleaner. The substrate must be clean, free from grease and oil and should be dry.</li> <li>– The surface to be bonded must be level (1 m length max. 15 mm), with steps and form work marks not greater than 0.5 mm. Larger unevenness must be levelled using Sikadur-41 or a mixture of Sikadur-30 and quartz sand Sikadur-501 (mix. ratio 1:1 parts by weight max.).</li> <li>– Inject cracks wider than 0.25 mm with epoxy injection methods.</li> <li>– The adhesive tensile strength of the substrate to be reinforced must be at least 1.0 N/mm<sup>2</sup> (depending on the type of SikaWrap fabric) or as per the project specifications.</li> <li>– Structural corners must be rounded to a minimal radius of 10 mm (depending on the SikaWrap fabric type) or as per the project specifications. This can be achieved using a diamond grinding disk.</li> </ul>
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<b>Mixing</b>	<p>Add the components in the correct proportion using a scale. Pour them into a suitable mixing container and stir correctly using an electric low speed mixer.</p> <p>Potlife starts with the mixing of both components (resin and hardener). At low ambient temperature it will be longer, at elevated temperatures shorter. The higher the quantity of material mixed, the shorter the potlife. To achieve a longer potlife at high temperatures the mixed material may be divided into smaller units or both components may be cooled before mixing.</p>
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<b>SikaWrap Wet Application</b>	<p><b>Primer application (equal for manual and saturator impregnation):</b></p> <ul style="list-style-type: none"> <li>– Rough substrate is primed best with Sikadur-330. Alternatively it can also be primed with SD-300 mixed with max. 5 % thixotropic agent Sikadur-513. Apply it to the prepared substrate using a trowel or brush.</li> <li>– Smooth substrate can be primed with Sikadur-300, using a mohair roller or a brush.</li> <li>– Primer consumption 0.5 to 1.0 kg/m<sup>2</sup>, depending on the roughness of the substrate.</li> </ul>
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### Manual Application:

The binder resin consumption is depending on the fabric type (see SikaWrap fabric Product Data Sheets). The actual resin consumption can roughly be checked by taking the weight of a fabric before and after wetting with Sikadur-300.

- Distribute 2/3 of the expected impregnating resin quantity on a clean PE sheet and then saturate the pre-cut fabric with the resin. Always roll with a mohair roller in the fiber direction. Distribute the remaining 1/3 of the resin on the fabric and roll it in.

Fabric placement:

- The wet fabric must be placed on the primed surface by hand (wearing suitable protective gloves) within the open time of the primer.
- After placement, the fabric is rolled on the primer resin by means of a plastic impregnating roller. The roller must be worked parallel to the fibers and only in the fiber direction. Avoid using the roller back and forth as this could lead to folding.
- The application of additional layers must take place wet on wet. Overlapping sections of the additional layers should be distributed over the column circumference.

Alternative for non-woven fabrics:

- Distribute 2/3 of the expected impregnating resin quantity to the primed substrate. Place the fabric into this layer. Distribute the remaining 1/3 of the resin on the fabric and roll it in as described in 'fabric placement'.

#### Saturator Application:

- Have pre-cut fabric ready or fabric roll attached to the saturator
- Prime the rollers by pouring a bead of epoxy in the center of the rolls and while slowly cranking the rollers.
- Pass the fabric over the top bar, in-between the counter and through the rollers.
- Slowly crank the saturator at an even pace.
- Remove the take-up roller (PVC winding tube).
- Place the fabric as shown in section 'fabric placement'.

For details see saturator instructions.

#### General Application Remarks:

- Application of more than one fabric layer: this must be done within 60 minutes (at 20 °C) after the application of the previous layer.
- If a cementitious coating is following broadcast with quartz sand which will serve as a bonding coat for the coating.
- Surface moisture content of the substrate is max. 4 %.
- Ambient temperature during application must be at least 3 °C above dew point.
- In fiber direction, overlapping of the SikaWrap fabric must be at least 100 mm (depending on the type of SikaWrap fabric type) or as per the project specifications.
- Unidirectional fabrics: when placing several unidirectional SikaWrap fabric webs side by side overlapping is not necessary.
- The impregnation resin must be protected from rain for at least 24 hours after its application.

#### Cleaning

Clean all equipment immediately with Colma Cleaner. Cured Sikadur-300 can only be mechanically removed.

#### Important Information

- Prevent exposure of the reinforcement to direct sunlight. If this is the case apply a light coloured coating e.g. Sikagard-550 W Elastic or Sikagard-Elastocolor W.
- Mixed leftovers of Sikadur-300 may only be left to cure in metal containers and in quantities of max 2 kg.

### Safety Instructions

#### Safety precautions

Before starting work, cover hands and unprotected skin with barrier cream. Wear protective clothing (gloves, glasses). In contact with eyes or mucous membrane, rinse thoroughly with clean, warm water and seek medical help.

#### Ecology

In liquid form Sikadur-300 contaminates water. Do not dispose into water or soil, but according to local regulations

**For detailed information, please ask for relevant safety data sheet.**



Sika Schweiz AG  
 P.O. Box 1300  
 CH-8048 Zürich  
 Phone +41 1 436 40 40    Telefax +41 1 436 45 55  
 E-Mail: ch-export@ch.sika.com



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