

# PRODUCT DATA SHEET

## Sikadur<sup>®</sup>-300

SIKADUR 300 IS A TWO-PART, SOLVENT FREE EPOXY BASED IMPREGNATING RESIN.

### DESCRIPTION

Sikadur<sup>®</sup>-300 is a 2-component, epoxy based impregnating resin.

### USES

Sikadur<sup>®</sup>-300 may only be used by experienced professionals.

Sikadur<sup>®</sup>-300 is used as

- Impregnating resin for SikaWrap<sup>®</sup> fabric reinforcement for the wet application method
- Primer resin for the wet application system

### CHARACTERISTICS / ADVANTAGES

- Easy mix and application by trowel and impregnation roller
- Manufactured for manual or mechanical saturation methods
- Good adhesion to many substrates
- High mechanical properties
- Extra-long pot life

### APPROVALS / STANDARDS

- Road and Bridges Research Institute (Poland): IBDiM No AT/2008-03-336/1.
- Adhesive for structural bonding tested according to EN 1504-4, provided with the CE-mark

### PRODUCT INFORMATION

<b>Chemical Base</b>	Epoxy resin	
<b>Packaging</b>	Component A + B	5 kg set
	Component A:	3.718 kg
	Component B:	1.282 kg pails
	Component A + B	30 kg set
	Component A:	22.305 kg
	Component B:	7.695 kg pails
<b>Colour</b>	Component A: light-yellow to amber liquid Component B: pale yellow to clear liquid Components A + B mixed: light-yellow to clear liquid	
<b>Shelf Life</b>	24 months from date of production	
<b>Storage Conditions</b>	Store in original, unopened, sealed and undamaged packaging in dry conditions. Protect from direct sunlight.	
<b>Density</b>	1.16 kg/l (component A + B mixed) (at +23 °C)	

**Viscosity**

Shear rate: 50 /s

**Temperature**

+15 °C

+23 °C

+40 °C

**Viscosity**

~ 2,000 mPas

~ 700 mPas

~ 200 mPas

**TECHNICAL INFORMATION**

<b>Modulus of Elasticity in Flexure</b>	~ 2,800 N/mm <sup>2</sup> (7 days at +23 °C)	(DIN EN 1465)
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<b>Tensile Strength</b>	~ 45 N/mm <sup>2</sup> (7 days at +23 °C)	(ISO 527)
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<b>Modulus of Elasticity in Tension</b>	~ 3,500 N/mm <sup>2</sup> (7 days at +23 °C)	(ISO 527)
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<b>Elongation at Break</b>	1.5 % (7 days at +23 °C)	(ISO 527)
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<b>Tensile Adhesion Strength</b>	Concrete fracture (> 4 N/mm <sup>2</sup> ) on sandblasted substrate	(EN ISO 4624)
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<b>Coefficient of Thermal Expansion</b>	6.0 x 10 <sup>-5</sup> per °C (Temperature range -20 °C to +40 °C)	(EN 1770)
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<b>Glass Transition Temperature</b>	<b>Curing time</b>	<b>Curing temperature</b>	<b>TG</b>	(EN 12614)
	30 days	+30 °C	+53 °C	

<b>Heat Deflection Temperature</b>	<b>Curing time</b>	<b>Curing temperature</b>	<b>HDT</b>	(ASTM D 648)
	7 days	+15 °C	+43 °C	
	7 days	+23 °C	+49 °C	
	3 days	+40 °C	+60 °C	
	7 days	+40 °C	+66 °C	

Resistant to continuous exposure +45 °C.

<b>Service Temperature</b>	-40 °C to +45 °C
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**SYSTEM INFORMATION**

<b>System Structure</b>	Substrate primer - Sikadur®-330 / Sikadur®-300. Impregnating/laminating resin - Sikadur®-300. Structural strengthening fabric - SikaWrap® type to suit requirements.
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**APPLICATION INFORMATION**

<b>Mixing Ratio</b>	Component A : component B = 100 : 34.5 by weight When using bulk material the exact mixing ratio must be safeguarded by accurately weighing and dosing each component.
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<b>Consumption</b>	Guide: 0.4–1.0 kg/m <sup>2</sup> .
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<b>Ambient Air Temperature</b>	+15 °C min. / +40 °C max.
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<b>Dew Point</b>	Beware of condensation. Substrate temperature during application must be at least 3 °C above dew point.
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<b>Substrate Temperature</b>	+15 °C min. / +40 °C max.
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<b>Substrate Moisture Content</b>	< 4 % pbw
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<b>Pot Life</b>	<b>Temperature</b>	<b>Potlife</b>	<b>Open time</b>	(EN ISO 9514)
	+15 °C	~ 6 hours	~ 3 hours	
	+23 °C	~ 4 hours	–	
	+40 °C	~ 90 minutes	~ 60 minutes	

The potlife begins when the resin and hardener are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quantity mixed, the shorter the potlife. To obtain longer workability at high temperatures, the mixed adhesive may be divided into portions. Another method is to chill components A+B before mixing them (not below +5 °C).

# APPLICATION INSTRUCTIONS

## SUBSTRATE QUALITY

The substrate must be sound and of sufficient tensile strength to provide a minimum pull off strength of 1.0 N/mm<sup>2</sup> or as per the requirements of the design specification.

See also the "Method Statement for SikaWrap® manual wet application" Ref 850 41 03 and the "Method Statement for SikaWrap® saturator machine wet application" Ref 850 41 04.

## SUBSTRATE PREPARATION

See the "Method Statement for SikaWrap® manual wet application" Ref 850 41 03 and the "Method Statement for SikaWrap® saturator machine wet application" Ref 850 41 04.

## MIXING

Pre-batched units:

Mix components A+B together for at least 3 minutes at low speed. Avoid aeration while mixing. Then, pour the whole mix into a clean container and stir again for approx. 1 more minute at low speed to keep air entrapment at a minimum.

Bulk packing, not pre-batched:

Add the components in the correct proportions into a suitable mixing pail and stir correctly using an electric low speed mixer as above for pre-batched units.

## APPLICATION METHOD / TOOLS

See the "Method Statement for SikaWrap® manual wet application" Ref 850 41 03 and the "Method Statement for SikaWrap® saturator machine wet application" Ref 850 41 04.

## CLEANING OF TOOLS

Clean all equipment immediately with Sika® Colma Cleaner. Cured material can only be removed mechanically.

## LIMITATIONS

This product may only be used by experienced professionals.

Sikadur®-300 must be protected from rain for at least 24 hours after application. Ensure placement of fabric and laminating with roller takes place within open time.

For application in cold or hot conditions, pre-condition material for 24 hours in temperature controlled storage facilities to improve mixing, application and pot life limits.

For further information on over coating, number of layers or creep, please consult a structural engineer for calculations and see also the "Method Statement for SikaWrap® manual wet application" Ref 850 41 03 and the "Method Statement for SikaWrap® saturator machine wet application" Ref 850 41 04.

Sikadur® resins are formulated to have low creep under permanent loading. However due to the creep behaviour of all polymer materials under load, the long

term structural design load must account for creep. Generally the long term structural design load must be lower than 20–25 % of the failure load. Please consult a structural engineer for load calculations for your specific application.

## 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 (MSDS) 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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