

# PRODUCT DATA SHEET

## Sikadur<sup>®</sup>-300

Epoxy impregnating / laminating resin for SikaWrap<sup>®</sup> structural strengthening fabrics

### PRODUCT DESCRIPTION

Sikadur<sup>®</sup>-300 is a 2-part, epoxy based impregnating / laminating resin for SikaWrap<sup>®</sup> structural strengthening fabrics.

### USES

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

- As an impregnating / laminating resin for the SikaWrap<sup>®</sup> fabric reinforcement wet application method.
- As a substrate primer for the wet application method.

### CHARACTERISTICS / ADVANTAGES

- Easy to mix.
- Application by impregnation roller.
- Formulated for manual or mechanical saturation methods.
- Good adhesion to many substrates.
- High mechanical properties.
- Extra long pot-life.

### APPROVALS / STANDARDS

- Flat bars and composite mats PN-EN 196-1, DIN 53452, Sika CarboDur, IBDiM, Approval No. AT/2008-03-0336/1.
- CE Marking and Declaration of Performance to EN 1504-4: Structural bonding.

### PRODUCT INFORMATION

<b>Product Declaration</b>	EN 1504-4: Structural bonding	
<b>Chemical Base</b>	Epoxy resin	
<b>Packaging</b>	Part A	22,305 kg pre-batched unit
	Part B	7,695 kg pre-batched unit
	Bulk containers	Refer to current price list
	Refer to current price list for packaging variations	
<b>Shelf Life</b>	24 months from date of production	
<b>Storage Conditions</b>	The product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging.	
<b>Colour</b>	Part A	~amber liquid
	Part B	~pale yellow liquid
	Parts A + B mixed	~light-yellow liquid
<b>Density</b>	Mixed resin ~1,16 kg/l Value at +23 °C.	

**Viscosity**

Shear rate: 50/s

**Temperature**

+15 °C

+23 °C

+40 °C

**Viscosity**

~2000 mPa·s

~700 mPa·s

~200 mPa·s

**TECHNICAL INFORMATION**

<b>Flexural E-Modulus</b>	~2800 N/mm <sup>2</sup> (7 days at +23 °C)	(DIN EN 1465)
<b>Tensile Strength</b>	~45 N/mm <sup>2</sup> (7 days at +23 °C)	(ISO 527)
<b>Tensile Modulus of Elasticity</b>	~3500 N/mm <sup>2</sup> (7 days at +23 °C)	(ISO 527)
<b>Elongation at Break</b>	1,5 % (7 days at +23 °C)	(ISO 527)
<b>Tensile adhesion strength</b>	Concrete fracture (> 4 N/mm <sup>2</sup> ) on sandblasted substrate	(EN ISO 4624)
<b>Coefficient of Thermal Expansion</b>	~6,0 × 10 <sup>-5</sup> (±0,2 × 10 <sup>-5</sup> ) 1/K (linear expansion between -20 °C and +40 °C)	(EN 1770)
<b>Service Temperature</b>	-40 °C to +45 °C	
<b>Glass transition temperature</b>	<b>Curing time</b> 30 days	<b>Curing temperature</b> +30 °C
		<b>TG</b> +53 °C
		(EN 12614)
<b>Heat deflection temperature</b>	<b>Curing time</b> 7 days 7 days 3 days 7 days	<b>Curing temperature</b> +15 °C +23 °C +40 °C +40 °C
		<b>HDT</b> +43 °C +49 °C +60 °C +66 °C
		(ASTM D 648)
	Resistant to continuous exposure +45 °C.	

**SYSTEM INFORMATION****System Structure**

- Substrate primer: Sikadur®-300 / Sikadur®-330.
- Impregnating / laminating resin: Sikadur®-300.
- Structural strengthening fabric: SikaWrap® (type to suit requirements).

**APPLICATION INFORMATION**

<b>Mixing Ratio</b>	Part A : Part B = 100 : 34,5 by weight
<b>Consumption</b>	Guide: ~0,4–1,0 kg/m <sup>2</sup> Also refer to: <ul style="list-style-type: none"> <li>▪ Method Statement: SikaWrap® manual wet application - Ref. 850 41 03.</li> <li>▪ Method Statement: SikaWrap® saturator machine wet application - Ref. 850 41 04.</li> </ul>
<b>Ambient Air Temperature</b>	+15 °C min. / +40 °C max.
<b>Dew Point</b>	Beware of condensation. The substrate and uncured applied resin must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the resin surface.
<b>Substrate Temperature</b>	+15 °C min. / +40 °C max.

## Substrate Moisture Content

≤ 4 % parts by weight

The following test methods can be used: Sika®-Tramex meter, CM-measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet).

Pot Life	Temperature	Pot-life	Open time	(EN ISO 9514)
	+15 °C	~3 hours	~6 hours	
	+23 °C	-	~4 hours	
	+40 °C	~60 minutes	~90 minutes	

The pot-life begins when Parts A+B are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quantity mixed, the shorter the pot-life. To obtain longer workability at high temperatures, the mixed adhesive may be divided into smaller quantities. Another method is to chill Parts A+B before mixing (although not below +5 °C).

## VALUE BASE

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.

## FURTHER DOCUMENTS

- Method Statement: SikaWrap® manual wet application - Ref. 850 41 03.
- Method Statement: SikaWrap® saturator machine wet application - Ref. 850 41 04.

## LIMITATIONS

- Sikadur® resins are formulated to have low creep under permanent loading. However due to the creep behaviour of all polymer materials under load, when using adhesive for structural applications, 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. A structural engineer must be consulted for design calculations for specific structural applications.
- Protect 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.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

Substrates must be structurally sound and of sufficient tensile strength to provide a minimum tensile strength of 1,0 N/mm<sup>2</sup> or as required in the design specifica-

tion.

Reference must be made to the Sika® Method Statements:

- Method Statement: SikaWrap® manual wet application - Ref. 850 41 03.
- Method Statement: SikaWrap® saturator machine wet application - Ref. 850 41 04.

### SUBSTRATE PREPARATION

Reference must be made to the Sika® Method Statements:

- Method Statement: SikaWrap® manual wet application - Ref. 850 41 03.
- Method Statement: SikaWrap® saturator machine wet application - Ref. 850 41 04.

### MIXING

#### Pre-batched unit

Prior to mixing all parts, mix Part A (resin) briefly using an electric single or double paddle mixer (maximum 300 rpm) with a spiral paddle.

Add Part B (hardener) to part A and mix Parts A+B continuously for at least 3 minutes until a uniform mix has been achieved. To ensure thorough mixing, pour materials into a clean container and mix again for approximately 1 minute. Overmixing must be avoided to minimise air entrainment. Mix full units only. Mixing time for A+B = ~4 minutes.

#### Bulk container

Add both parts in the correct proportion into a suitable clean, dry container and mix in the same way as for the pre-batched unit. Mix only the quantity which can be used within its pot-life.

### APPLICATION METHOD / TOOLS

Reference must be made to the Sika® Method Statements:

- Method Statement: SikaWrap® manual wet application - Ref. 850 41 03.
- Method Statement: SikaWrap® saturator machine wet application - Ref. 850 41 04.

### CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened material can only be mechanically removed.

## 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.

## 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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