

PRODUCT DATA SHEET

Sikadur[®]-300

High-Modulus, High-strength, 2-part epoxy Impregnating resin used with SikaWrap Structural Strengthening systems

DESCRIPTION

Sikadur[®]-300 is a two-component 100% solids, moisture-tolerant, high strength, high modulus epoxy. Sikadur[®]-300 is an unfilled primer or impregnation resin with an extra-long pot life and a slow curing speed.

Sikadur[®]-300 is compliant with the 2012 and 2009 International Building Codes (IBC) and the 1997 Uniform Building Code (UBC) per ICC-ES Evaluation Report ESR- 3288.

USES

Sikadur[®]-300 may only be used by experienced professionals.

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- Impregnating resin for SikaWrap[®] fabric reinforcement for the wet application method
- Primer resin for the wet application system
- is used as a seal coat and impregnating resin for horizontal and vertical applications.

CHARACTERISTICS / ADVANTAGES

- Easy mix and application by trowel and impregnation roller
- Manufactured for manual or mechanical saturation methods
- High mechanical properties
- Extra-long pot life
- Tolerant of moisture before, during and after cure
- High strength, high modulus adhesive
- Excellent adhesion to concrete, masonry metals, wood and most structural materials
- Fully compatible and developed specifically for the SikaWrap[®] System
- High temperature resistance
- High abrasion and shock resistance
- Solvent-free, VOC compliant

APPROVALS / CERTIFICATES

- 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

Composition	Epoxy resin
Packaging	15lt kit
Shelf life	24 months from date of production
Storage conditions	Store in original, unopened, sealed and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C. Protect from direct sunlight.
Colour	Component A: light-yellow to amber liquid Component B: pale yellow to clear liquid Components A + B mixed: light-yellow to clear liquid

Density 1.16 kg/l (component A+B mixed) (at +23 °C)

Viscosity	Temperature	Viscosity
	+15 °C	~2,000 cps
	+23 °C	~700 cps
	+40 °C	~200 cps

SYSTEM INFORMATION

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

TECHNICAL INFORMATION

Compressive strength	4° C	23°C	32°C	(ASTM D-695)	
	3 days	-	~55 MPa		-
	7 days	~7.0 MPa	~80 MPa		~80 MPa
	28 days	-	~75 MPa		-

Material cured and tested at the temperatures indicated and 50 % R.H.

Modulus of elasticity in compression ~2,620 MPa (7 days) +23°C, 50%R.H

Modulus of elasticity in flexure ~ 3,500 MPa (+23 °C, 50 % R.H) (ASTM D-790)
~ 4,130 MPa (+60 °C, 50 % R.H, post cured min. 48hrs)

Tensile strength ~ 41 MPa (+23°C, 50% R.H) (ASTM D-790)
~ 70 MPa
(+23°C, 50% R.H , post cured min.48hrs)

Modulus of elasticity in tension ~ 3,500 N/mm² (7 days at +23 °C) (ISO 527)

Tensile strain at break 1.5 % (7 days at +23 °C) (ISO 527)

Tensile adhesion strength Concrete fracture (> 4 N/mm²) on sandblasted substrate (EN ISO 4624)

Coefficient of thermal expansion 6.0 x 10⁻⁵ per °C (Temperature range -20 °C – +40 °C) (EN 1770)

Service temperature -40 °C to +45 °C

Glass transition temperature	Curing time	Curing temperature	TG	(EN 12614)
	30 days	+30 °C	+53 °C	

Heat deflection temperature	Curing time	Curing temperature	HDT	(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.

APPLICATION INFORMATION

Mixing ratio 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.

Consumption 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.
Guide: 0.4–1.0 kg/m².

Ambient air temperature	+15 °C min. / +40 °C max.		
Dew point	Beware of condensation. Substrate temperature during application must be at least 3 °C above dew point.		
Substrate temperature	+15 °C min. / +40 °C max.		
Substrate moisture content	< 4 % pbw		
Pot Life	Temperature	Potlife	Open time
	+15 °C	~6 hours	~3 hours
	+23 °C	~4 hours	–
	+40 °C	~90 minutes	~60 minutes
<small>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).</small>			

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.

IMPORTANT CONSIDERATIONS

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.

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 Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

The substrate must be sound and of sufficient tensile

strength to provide a minimum pull off strength of 1.5 N/mm² or as per the requirements of the design specification ACI 440.2R, AS5100.8:2017 or Vic Roads Spec Section 688: 2018 .

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 EQUIPMENT

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

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product 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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