

Product Data Sheet
Edition 09/05/2016
Identification no:
02 04 01 04 001 0 000006
Sikadur®-300

Sikadur®-300

2-part epoxy impregnation resin

Product Description

Sikadur®-300 is a two part, epoxy based impregnating resin.

Uses

- Impregnating resin for SikaWrap® 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

Tests

Approval / Standards

Conforms to the requirements of:

- ICBO Evaluation Report ER 5558 (USA).
 - Road an Bridges Research Institute (Poland): IBDiM No AT/2003-04-336.
- Testing according to EN 1504-4

Product Data

Form

Appearance / Colours

Resin part. A:	liquid
Hardener part B:	liquid
Colour:	
Part A:	light-yellow to amber
Part B:	pale yellow to clear liquid
Part A + B mixed:	light-yellow to clear liquid

Packaging

Standard:	
Part A:	7.435 kg
Part B:	2.565 kg pails
Industrial:	
Part A:	22.305 kg
Part B:	7.695 kg pails

Construction



Storage

Storage Conditions / Shelf-Life 24 months from date of production if stored properly in original unopened, sealed and undamaged packaging in dry conditions at temperatures between +5°C and +25°C. Protect from direct sunlight.

Technical Data

Chemical Base Epoxy resin.

Density Mixed Resin: 1.16 kg/l (at +23°C).

Viscosity Shear rate: 50 /s

Temperature	Viscosity
+15°C	~ 2'000 mPas
+23°C	~ 700 mPas
+40°C	~ 200 mPas

Thermal Expansion Coefficient 6.0×10^{-5} per °C (-20°C to +40°C).

Thermal Stability Heat Distortion Temperature (HDT) (ASTM D648)

Curing	Temperature	HDT
7 days	+15°C	+43°C
7 days	+23°C	+49°C
3 days	+40°C	+60°C
7 days	+40°C	+66°C

Service Temperature -40°C to +45°C.

Mechanical / Physical Properties

Tensile Strength 45 N/mm² (7 days at +23°C). (DIN 53455)

Bond Strength Concrete fracture (> 4 N/mm²) on sandblasted substrate: > 3 days. (EN 24624)

E-Modulus Flexural: 2800 N/mm² (7 days at +23°C) (DIN 53452)

Tensile: 3500 N/mm² (7 days at +23°C) (DIN 53455)

Elongation at Break 1.5% (7 days at +23°C). (DIN 53455)

Resistance

Chemical Resistance The product is not suitable for chemical exposure.

Thermal Resistance Continuous exposure +45°C.

System Information

System Structure	Substrate primer - Sikadur®-330 / Sikadur®-300 / Sikadur®-300 with Sikadur®-513. Impregnating/laminating resin - Sikadur®-300. Structural strengthening fabric - SikaWrap® type to suit requirements.
-------------------------	---

Application Details

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/m ² .
Substrate Quality	The substrate must be sound and of sufficient tensile strength to provide a minimum pull off strength of 1.0 N/mm ² 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.

Application Conditions / Limitations

Substrate Temperature	+15°C min. / +40°C max.
Ambient Temperature	+15°C min. / +40°C max.
Substrate Moisture Content	≤ 4% pbw. Test method: Sika-Tramex meter.
Dew Point	Beware of condensation! Substrate temperature during application must be at least 3°C above dew point.

Application Instructions

Mixing	Part A : part B = 100 : 34.5 by weight When using bulk material the exact mixing ratio must be safeguarded by accurately weighing and dosing each component.
Mixing Time	Pre-batched units: Mix parts 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 parts 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 mechanically removed.

Potlife

Potlife:

Temperature	Time
+15°C	6 hours
+23°C	4 hours
+40°C	90 minutes

Potlife starts with the mixing of both parts (resin and hardener). At low ambient temperature pot life will be extended, at elevated temperatures this will be reduced. The higher the quantity of material mixed, the shorter the potlife.

Open time:

Temperature	Time
+15°C	3 hours
+40°C	60 minutes

Waiting Time / Overcoating

To (pre-) cured resin:

Products	Substrate temperature	Minimum	Maximum
Sikadur®-300	+15°C	36 hours	Cured resin older than 7 days has to be degreased with Sika® Colma Cleaner and gently abraded with sandpaper before coating.
Sikadur®-300	+23°C	24 hours	
	+40°C	12 hours	

Products	Substrate temperature	Minimum	Maximum
Sikadur®-300	+15°C	7 days	Cured resin older than 7 days has to be degreased with Sika® Colma Cleaner and gently abraded with sandpaper before coating.
Sikagard®-coloured coatings	+23°C	5 days	
	+40°C	3 days	

Times are approximate and will be affected by changing ambient conditions.

Notes on Application / Limitations

This product may only be used by experienced professionals.

The 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.

Curing Details

Applied Product ready for use

Temperature	Full cure
+15°C	14 days
+23°C	7 days
+40°C	5 days

All cure times are approximate and will be affected by changing ambient conditions.

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.

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.

Health and Safety Information

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.



Sika South Africa (Pty) Ltd
9 Hocking Place,
Westmead, 3608
South Africa

E-mail: headoffice@za.sika.com
Phone +27 31 792 6500
Telefax +27 31 700 1760
www.sika.co.za

