BUILDING TRUST

PRODUCT DATA SHEET

Sikadur®-300

Epoxy impregnating / laminating resin for SikaWrap® structural strengthening fabrics

PRODUCT DESCRIPTION

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

USES

Sikadur®-300 installation works to be carried out only by Sika Approved Contractors. Please observe information given by Product Data Sheets.

- As an impregnating / laminating resin for the SikaWrap® 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

Product Declaration	EN 1504-4: Structural bonding	
Chemical Base	Epoxy resin	
Packaging	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	
Shelf Life	24 months from date of production	
Storage Conditions	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.	
Colour	Part A	~amber liquid
	Part B	~pale yellow liquid
	Parts A + B mixed	~light-yellow liquid
Density	Mixed resin ~1,16 kg/l Value at +23 °C.	

Viscosity

Shear rate: 50/s

Temperature	Viscosity
+15 °C	~2000 mPa·s
+23 °C	~700 mPa·s
+40 °C	~200 mPa·s

TECHNICAL INFORMATION

Flexural E-Modulus	~2800 N/mm² (7 days at +23 °C)	(DIN EN 1465)
Tensile Strength	~45 N/mm² (7 days at +23 °C)	(ISO 527)
Tensile Modulus of Elasticity	~3500 N/mm² (7 days at +23 °C)	(ISO 527)
Elongation 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 × 10^{-5} (±0,2 × 10^{-5}) 1/K (linear expansion between -20 °C and +40 °C)	(EN 1770)
Service Temperature	–40 °C to +45 °C	

Glass transition temperature (EN 12614)

Curing time	Curing temperature	TG
30 days	+30 °C	+53 °C

Heat deflection temperature (ASTM D 648)

Curing time	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

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

Mixing Ratio

Part A : Part B = 100 : 34,5 by weight

Consumption

Guide: ~0,4–1,0 kg/m²
Also refer to:

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

Ambient Air Temperature

+15 °C min. / +40 °C max.

Dew Point

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.

Substrate Temperature

+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 (EN ISO 9514)

Temperature	Pot-life	Open time
+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 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

Local safety regulations must be observed and it advisable to wear PPI when working with this product with particular attention paid to cutting and handling. Transportation Class: The product is not classified as hazardous good for transport. Disposal: The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Substrates must be structurally sound and of sufficient tensile strength to provide a minimum tensile strength of 1,0 N/mm² or as required in the design specification.
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

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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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