

Sikadur® 301

High-modulus, high-strength, impregnating resin

Description	Sikadur® 301 is a two-component 100% solids, moisture-tolerant, high strength, high modulus structural epoxy adhesive.
Where to Use	For use as a priming sealer and/or an encapsulating resin with the SikaWrap® Structural Strengthening System fabrics.
Advantages	<ul style="list-style-type: none">■ Medium pot life.■ Easy to mix.■ 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® Systems.■ High temperature resistance.■ High abrasion and shock resistance.■ Solvent-free, VOC compliant.
Coverage	As a sealer: Approx. 75 ft ² /gal. (1.84 m ² /liter). As an impregnating resin: Approx. 50 ft ² /gal. (1.23 m ² /liter).
Packaging	4 gallon unit (15.14 liters).

Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	2 years in original, unopened container.	
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F (18°-24°C) before using.	
Color	Light gray	
Mixing Ratio	Component 'A' : Component 'B' = 3 : 1 by volume	
Viscosity (mixed)	Approx. 2,700 cps	
Pot Life	Approx. 40 minutes (1 gallon volume)	
Contact Time	Approx. 90 minutes	
Heat Deflection Temperature (ASTM D-648) 7 day	117°F (47°C)	
Glass Transition Temperature (T_g) 7 day	120°F (49°C)	
Mechanical Properties		
Tensile Properties (ASTM D-638)		
7 day	Tensile Strength	8,000 psi (52.0 MPa)
	Modulus of Elasticity	290 ksi (2,000 MPa)
	Elongation at break	3.5%
Flexural Properties (ASTM D-790)		
7 day	Flexural Strength	13,000 psi (90.0 MPa)
	Tangent Modulus	500 ksi (3,448 MPa)
	Strain at Yield	3.0%
Compressive Properties (ASTM D-695)		
	Compressive Strength	
	1 day	4,000 psi (27.6 MPa)
	3 day	11,900 psi (82.1 MPa)
	7 day	13,900 psi (96.0 MPa)
	Compressive Modulus	
		250 ksi (1,725 MPa)

Construction



Sika®

PRIOR TO EACH USE OF ANY SIKA PRODUCT, THE USER MUST ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS ON THE PRODUCT'S MOST CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET WHICH ARE AVAILABLE ONLINE AT [HTTP://USA.SIKA.COM/](http://USA.SIKA.COM/) OR BY CALLING SIKA'S TECHNICAL SERVICE DEPARTMENT AT 800.933.7452 NOTHING CONTAINED IN ANY SIKA MATERIALS RELIEVES THE USER OF THE OBLIGATION TO READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS FOR EACH SIKA PRODUCT AS SET FORTH IN THE CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET PRIOR TO PRODUCT USE.

How to Use

Surface Preparation

The concrete surface should be prepared to a minimum concrete surface profile (CSP) 3 as defined by the ICRI-surface-profile chips. Localized out-of-plane variations, including form lines, should not exceed 1/32 in. (1 mm).

Substrate must be clean, sound, and free of surface moisture. Remove dust, laitance, grease, oils, curing compounds, waxes, impregnations, foreign particles, coatings and disintegrated materials by mechanical means (i.e. sandblasting). For best results, substrate should be dry. However, a saturated surface dry condition is acceptable.

Mixing

Pre-mix 'A' component, ('B' component does not require mixing). Mix entire unit, do not batch. Pour contents of Part 'B' into Part 'A'. Mix thoroughly for 5 minutes using a paddle style mixer on low speed (400-600 rpm) rotary drill until uniformly blended.

Application

As a sealer: Apply mixed Sikadur® 301 epoxy to a properly prepared substrate using a brush or roller. Sikadur® 301 should be supplied at a sufficient rate to fully saturate the substrate. Coverage rates are based on a substrate with normal porosity.

As an impregnating resin: Saturate SikaWrap® fabrics until fibers are completely wet-out. For vertical and overhead installations, Sikadur® 330 may be used first to prime/tack the substrate prior to installing the fabric.

Sikadur® 301 can be applied in either Dry Lay-Up or Wet Lay-Up fabric installation procedures. Consult the SikaWrap® fabric technical data sheet for more information. If used as an impregnating resin in the Wet Lay-Up procedure, Sikadur® 301 should be manually applied onto both sides of the fabric using a brush or roller. After saturating, excess resin should be removed from the wet out fabric using a squeegee.

Due to the mixed viscosity of Sikadur® 301, an automated fabric-saturating device should not be used. If automated fabric-saturating device is intended for use, consult the technical data sheets for appropriate impregnating resins (i.e. Sikadur® 300 or Sikadur® Hex 300).

Limitations

- Minimum substrate and ambient temperature 40°F (4°C). Maximum substrate and ambient temperature 95°F (35°C).
- Do not thin with solvents.
- Material is a vapor barrier after cure.
- Minimum age of concrete must be 21-28 days depending on curing and drying conditions.
- At low temperatures and/or high relative humidity, a slight oily residue (blush) may form on the surface of the cured Sikadur® 301 epoxy. If an additional layer of fabric or a coating is to be applied onto the cured epoxy, this residue must first be removed to ensure adequate bond. The residue can be removed with either a solvent wipe or with water and detergent. In both cases, the surface should be wiped dry prior to application of the next layer of fabric or coating.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

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