

Sikadur®-31 LP

Thixotropic epoxy resin adhesive

Construction

Product Description

Sikadur®-31 LP is a thixotropic two part adhesive and repair mortar, based on a combination of epoxy resins and specially selected high strength fillers. Its pasty consistency allows an easy and versatile application.

Uses

- As an adhesive for the building industry and trowel applied patching mortar for concrete, stone, ceramics, mortar, plasterwork, steel, iron, aluminium, wood, wood-fiber chip boards, asbestos cement, polyester, epoxy and glass
- Rigid connection of narrow joints
- Bonding of concrete elements, bridge parts, columns, consoles (brackets), kerbstones and mounting supports
- Patching vertical and overhead surfaces
- Repair of joint corners
- Anchoring of steel bars, for example starter bars
- Adhesive for Sikadur Combiflex joint sealing system

Characteristics / Advantages

- Application on dry and damp concrete surfaces
- Can be applied on vertical and horizontal surfaces
- Good workability and easy mixing
- Hardens even under high humidity
- Non-flammable
- Fast curing even at low temperatures
- High mechanical strength
- High abrasion- and impact-resistance
- Shrinkage free hardening
- Components of different colours, therefore good control of homogeneity during mixing
- Approved for contact with potable water as part of the Sikadur®-Combiflex® System

Tests

Approval / Standards

Complies with ASTM C881-78 Type 1, Grade 3, Classes B and C

Product Data

Form

Appearance / Colours

Grey (Part A: White Resin and Part B: Black Hardener)

Packaging

5 kg sets



Storage

Storage Conditions / Shelf Life	2 years from the date of production if stored properly in original, unopened and undamaged packaging in dry conditions at temperatures between +5°C and +30°C.
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Technical Data

Density (at 20°C)	~ 1.65 kg/ltr (mixed)
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Coefficient of Thermal Expansion	50 x 10 ⁻⁶ per °C (temperature range -20°C to +40°C)
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Mechanical / Physical Properties

Compressive Strength	50 – 60 N/mm ²	(After 10 days at +20°C to +30°C)
Flexural Strength	20 – 25 N/mm ²	(After 10 days at +20°C to +30°C)
Tensile Strength	15 – 20 N/mm ²	(After 10 days at +20°C to +30°C)
Bond Strength	<div><div></div> To concrete</div> <div><div></div> To grit blasted steel</div>	<div>3.0 – 3.5 N/mm² (concrete failure)</div> <div>~ 15.0 N/mm² (After 10 days at +20°C to +30°C)</div>
E-Modulus	4,300 N/mm ²	

System Information

Application Details

Consumption	Thickness (mm)	2	4	10
	Consumption (kg/m ²)	~ 3.3	~ 6.6	~ 16.5

Note: Figures given do not allow for surface texture and wastage.

Substrate Quality	All surfaces must be clean, sound and free from any dust, ice, oils, grease or other surface contaminants.
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Substrate Preparation / Priming	Concrete/Mortar brickwork Mechanically abrade the surface with a needle gun, mechanical wire brush, sandblast or grind. All surface laitance must be removed. Concrete should be at least 3 weeks old.
	Metals Remove any paints, oils, grease, rust and oxide films by grit blasting. Where required, apply 1 coat of Friazinc®-R MY as a primer/travel coat (refer to Product Data Sheet for details). Sikadur®-31 LP may be applied after approximately 8 hours. In the event of extended waiting time, the surface of Friazinc®-R MY should be thoroughly cleaned with fresh water.

Application Conditions / Limitations

Application Temperature	+20°C min. / +40°C max.
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Application Instruction

Mixing Ratio Parts A : B 2 : 1 by weight and volume

Mixing Mix Parts A + B together for at least 2 minutes with a mixing spindle attached to a low speed electric drill (max. 600 rpm) until the material becomes smooth in consistency and an even grey colour of the mixture is obtained.

Avoid aeration while mixing.

Application Method / Tools Apply by trowel, serrated spreader, spatula or stiff brush (minimum thickness per layer 1 mm and maximum thickness per layer 30 mm, on vertical surfaces it is non-sag up to 10 mm thickness). Work Sikadur®-31 LP well into the substrate, especially if the substrate is damp.

Bond any subsequent materials onto Sikadur®-31 LP whilst it is still tacky.

Cleaning of Tools Clean all tools and application equipment with Sika® Colma Cleaner immediately after use. Hardened and/or cured material can only be mechanically removed.

Potlife (mixed)	At +40°C	At +30°C	At +20°C
	~ 25 minutes	~ 50 minutes	~ 90 minutes

Notes on Application / Limitations

- Minimum age of the new concrete – between 3 to 6 weeks depending on the climate
- Do not thin Sikadur®-31 LP
- Not resistant to prolonged periods of high temperatures
- Layer thickness:
 - Minimum 1 mm
 - Maximum 30 mm
 - Non-sag on vertical surfaces up to 10 mm

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.

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 (available upon request) containing physical, ecological, toxicological and other safety-related data.

Legal Note

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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