

## Sikadur®-52

### Low viscosity injection resin

#### Product Description

Sikadur®-52 is two part, solvent-free, low viscosity injection-liquids, based on high strength epoxy resins. .

#### Uses

As an injection resin with good adhesion to concrete, mortar, stone, steel and wood. Sikadur®-52 is used to fill and seal voids and cracks in structures such as bridges and other civil engineering buildings, industrial and residential buildings, e.g. columns, beams, foundations, walls, floors and water retaining structures. It not only forms an effective barrier against water infiltration and corrosion promoting media, but it also structurally bonds the concrete sections together.

#### Characteristics / Advantages

- Solvent-free
- Suitable for both, dry and damp conditions
- Usable at low temperatures
- Shrinkage free hardening
- High mechanical and adhesive strengths
- Hard but not brittle
- Low viscosity
- Injectable with single component pumps

#### Product Data

##### Form

<b>Colours</b>	Part A:	Transparent
	Part B:	Brownish
	Part A+B mixed:	Yellowish-brownish

<b>Packaging</b>	Pre batched 3kg units
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##### Storage

<b>Storage Conditions/ Shelf-Life</b>	24 months from date of production if stored properly in unopened, undamaged and sealed original packaging, in dry conditions at temperatures between +5°C and +30°C.
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## Technical Data

**Chemical Base** Modified solvent-free two-part epoxy resin.

**Density** Part A+B mixed (2 : 1): 1.1 kg/l (at +20°C)

### Viscosity

Temperature	A+B mixed (2 : 1)
+10°C	~ 1200 mPa·s
+20°C	~ 430 mPa·s
+30°C	~ 220 mPa·s
+40°C	-

**Thermal Expansion Coefficient**  $8.9 \times 10^{-5}$  per °C (from -20°C to +40°C) (According to EN ISO 1770)

## Mechanical / Physical Properties

**Compressive Strength** 52 N/mm<sup>2</sup> (after 7 days at +23°C) (According to ASTM D695-96)

**Flexural Strength** 61 N/mm<sup>2</sup> (after 7 days at +23°C) (According to DIN 53452)

**Tensile Strength** 37 N/mm<sup>2</sup> (after 7 days at +23°C) (According to ISO 527)

**Bond Strength** To concrete: (According to DafStb-Richtlinie, part 3)  
> 4 N/mm<sup>2</sup> (failure in concrete) (after 7 days at +23°C)

**E-Modulus** Flexural Strength: 1800 N/mm<sup>2</sup> (after 7 days at +23°C) (According to DIN 53 452)

## System Information

### Application Details

**Consumption / Yield** 1 kg of Sikadur®-52 is ~ equal to 1 l injection resin.

**Substrate Preparation** Requirements:  
Sound, clean, free from oil and grease, old coatings and surface treatments etc.  
  
Pre-treatment for good bond:  
Concrete, mortar, stone should be thoroughly prepared by high pressure water jetting or mechanical means such as grinding, chiselling etc. Cracks must be cleaned to remove dust with compressed air.

### Application Conditions / Limitations

**Substrate Temperature** +5°C min. / +30°C max.

**Substrate Moisture Content** Dry or damp (SSD - Saturated Surface Dry: no standing water)

### Application Instructions

**Mixing** Mixing ratio A : B = 2 : 1 parts by weight and by volume

**Mixing Time** Add all of part B to part A. Mix with an electric mixer at slow speed (max. 250 rpm) for at least 3 minutes. Avoid entraining air.

## Application Method / Tools

Cracks in horizontal slabs:  
Saturate a few times using a brush or gravity fill them by pouring mixed Sikadur®-52 between two "dams" e.g. made from Sikaflex® sealant. Cracks penetrating slabs to their soffit should first be sealed on the underside, e.g. with Sikadur®-31 epoxy mortar or a suitable cementitious Sika mortar.

Cracks in vertical structures:  
Mixed Sikadur®-52 can be injected under pressure into the cracks using a single component injection pump, such as the Aliva AL-1200, AL-1250 or the Sika® Hand Pump. Injection ports (packers) are set at approx. 25 cm intervals beside the crack and the crack between the injection ports (packers) sealed e.g. with Sikadur®-31 to prevent injection resin to escape during the injection process. Vertical cracks should always be injected from the bottom upwards. As soon as injection resin oozes out of the next packer / injection port, the first one is sealed and the injection process continued from the next one. After completion of the injection process, the injection ports (packers) as well as the sealing material between the ports are removed.

## Cleaning of Tools

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

## Potlife

Temperature	1 kg mixture
+5°C	~ 120 minutes
+10°C	~ 80 minutes
+23°C	~ 25 minutes
+30°C	~ 10 minutes
+40°C	-

## Notes on Application / Limitations

Maximum width of cracks to be injected: 5 mm.  
Sikadur®-52 is suitable for dry and damp, but not for wet injection 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.



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