



Specialist Construction Supplies for Repair, Maintenance, Building & Infrastructure

Sikadur 52 Data Sheet

Specification notes

Product: **Sikadur 52**

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Product Data Sheet
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Sikadur®-52 Injection Type N

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Low viscosity injection resin

Product Description

Sikadur®-52 Injection Type N is a two part, solvent-free, low viscosity injection-liquid, based on high strength epoxy resin.

Type N (= Normal Potlife) is used for substrate temperatures between +5°C and +30°C (UK).

Uses

As an injection resin with good adhesion to concrete, mortar, stone, steel and wood. Sikadur®-52 Injection Type N 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

Colours	Part A:	Transparent
	Part B:	Brownish
	Part A+B mixed:	Yellowish-brownish

Packaging	Pre batched:
	Part A+B: 10 x 1 kg units



Storage

**Storage Conditions/
Shelf-Life**

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.

Technical Data

Chemical Base

Modified solvent-free two-part epoxy resin.

Density

Part A: 1.1 kg/l (at +20°C)
Part B: 1.0 kg/l (at +20°C)
Part A+B mixed (2 : 1): 1.1 kg/l (at +20°C)

Viscosity

Temperature	Type Normal part 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**

89 x 10⁻⁶ per °C (from -20°C to +40°C)

(According to EN ISO 1770)

**Mechanical / Physical
Properties**

Compressive Strength

52 N/mm² (after 7 days at +23°C)

(According to ASTM D695-96)

Flexural Strength

61 N/mm² (after 7 days at +23°C)

(According to DIN 53452)

Tensile Strength

37 N/mm² (after 7 days at +23°C)

(According to ISO 527)

Bond Strength

To concrete:
> 4 N/mm² (failure in concrete) (after 7 days at +23°C)

(According to DafStb-Richtlinie, part 3)

E-Modulus

Flexural Strength:
1800 N/mm² (after 7 days at +23°C)

(According to DIN 53 452)

System Information

Application Details

Consumption / Yield 1 kg of Sikadur[®]-52 Injection Type N 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 Humidity 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 Prebatched packaging:
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.

Bulk packaging:
Add both parts in the correct proportion into a suitable clean, dry container and mix in the same way as for the prebatched units.

Application Method / Tools

Cracks in horizontal slabs:
Saturate a few times using a brush or gravity fill them by pouring mixed Sikadur[®]-52 Injection Type N 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 Injection Type N 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/Thinner C immediately after use. Hardened / cured material can only be mechanically removed.

Potlife

Temperature	Normal Type (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 Injection Type N 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 should 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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