

Sikadur®-52

Low viscosity injection resin

Construction

Product Description

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

Uses

As an injection resin with good adhesion to dry 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.

Characteristics / Advantages

- Solvent-free
- Suitable for dry 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: colourless
Part B: brownish yellow
Part A+B mixed: yellowish-brownish

Packaging

0.9 kg (A+B) Pre-batched unit.
Part A: 0.8 kg plastic container
Part B: 0.1 kg plastic container

Storage

Storage Conditions/ Shelf-Life

12 months from date of production if stored properly in unopened, undamaged and sealed original packaging, in dry conditions at temperatures between +5°C and +40°C.

Technical Data

Chemical Base

Epoxy resin.

Mixed Density

1.14 kg/l (at +27°C)

Viscosity

~ 250 mPa·s at +30°C



Mechanical / Physical Properties

Compressive Strength

(According to ASTM C-579)

Curing time	+30°C
1 day	≥40 N/mm ²
7 days	≥55 N/mm ²
14 days	≥55 N/mm ²

Tensile Strength

≥35 N/mm² (after 7 days at +30°C)

(According to ISO 527)

Bond Strength

To concrete:

(According to ASTM C 882)

> 10 N/mm² (failure in concrete) (after 14 days at +30°C)

System Information

Application Details

Consumption / Yield

1.14 kg of Sikadur®-52 is ~ equal to 1 l injection resin.

Substrate Preparation

Requirements:

Sound, clean, free from oil and grease 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

+10°C min. / +40°C max.

Substrate Moisture Content

Dry condition

Application Instructions

Mixing

Part A : Part B = 8 : 1 (by weight)

Mixing Time

Pre batched 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 pre batched units.

Application Method / Tools

Successful application depends on very careful preparation. The surface to be treated must be structurally sound, free from standing water, oil, grease, surface contaminants. Dirt, dust and other foreign materials must be removed. Concrete which is fully contaminated with oil / grease must be removed to the depth of sound & uncontaminated concrete.

Impregnation of cracks on horizontal slabs:

Impregnation is applied with a paint brush or roller until complete saturation of the substrate is achieved. Cracks are sealed by pouring mixed Sikadur® 52 directly from the mixing vessel between two "dams" made from Sikaflex® sealant. Crack penetrating slabs to their soffit should first be sealed on the underside with Sikadur®-31 epoxy mortars or a suitable cementitious Sika mortar.

Injection of cracks on horizontal / vertical slabs:

Injection flange / nipples are fixed along the crack line at an approximately 25 cm centre-to-centre distance with Sikadur®-31. Crack mouth should be opened and sealed with Sikadur®-31. Crack penetrating slabs to their soffit should also be sealed on the underside with Sikadur®-31 epoxy mortars or a suitable cementitious Sika mortar. Mixed Sikadur®-52 can be injected under pressure through injection

ports using injection pump, such as Aliva AL-1200, AL-1250 or the Sika® Hand Pump. As soon as injection resin oozes out of the next injection port, the first one is sealed and injection process is continued from next port.

For horizontal crack, injection should start from any of the ends and to be continued and completed till the last port is used. For vertical crack, injection should start from the lowest port and continued upwards.

After completion of the injection process, the injection ports as well as the sealing materials 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

100 g mass

(According to FIP 5.1)

Temperature	Time
+30°C	~30 min

Notes on Application / Limitations

Maximum width of cracks to be injected: 5 mm.

Sikadur®-52 is suitable for dry condition.

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 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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