

## PRODUCT DATA SHEET

# Sikadur<sup>®</sup>-52

Low viscosity resin for injection

### DESCRIPTION

Sikadur<sup>®</sup>-52 is a two component system, based on high resistance epoxy resin, free of solvents.

### USES

As an injection resin with good adhesion to concrete, mortar, stone, steel and wood. Sikadur<sup>®</sup>-52 is used to fill and seal cracks and pores in structures such as buildings, bridges, industrial facilities and other structures, for example, in columns, beams, foundations, walls, pavements and water ponds. Sikadur<sup>®</sup>-52 structurally joins the concrete sections and forms an effective barrier against the infiltration of water and corrosive elements.

### CHARACTERISTICS / ADVANTAGES

- Does not contain solvents.
- It can be applied on dry or wet surfaces.
- Usable at low temperatures.
- Hardening without retraction.
- High adhesion and mechanical resistance.
- High non-brittle hardness.
- Low viscosity Injectable with one-component systems.

### APPROVALS / STANDARDS

Sikadur<sup>®</sup> 52 complies with ASTM C 881 - 78 Type I Grade 1 Class B + C.

### PRODUCT INFORMATION

|                   |   |
|-------------------|---|
| <b>Packaging</b>  | Part A : 6.67 kg<br>Part B : 3.33 kg                                  |
| <b>Colour</b>     | Transparent yellow liquid (mix A + B)                                 |
| <b>Shelf Life</b> | 2 years in a cool place and indoors in its original closed container. |

|                           |   |                            |
|---------------------------|---|----------------------------|
| <b>Storage Conditions</b> | Stored properly in undamaged and unopened original sealed packaging in cool dry conditions. Protect from direct sunlight and frost. |                            |
| <b>Density</b>            | 1.1 kg/l  |                            |
| <b>Viscosity</b>          | <b>Temperature</b>  | <b>Viscosity (mPa . s)</b> |
|                           | + 10 °C   | ~ 1200                     |
|                           | + 20 °C   | ~ 430                      |
|                           | + 30 °C   | ~ 220                      |

## TECHNICAL INFORMATION

|   |   |
|---|---|
| <b>Compressive Strength</b>             | 52 N/mm <sup>2</sup> (at 7 days at +23 °C) (ASTM D695-96)                     |
| <b>Tensile Strength in Flexure</b>      | 61 N/mm <sup>2</sup> (at 7 days at +23 °C) (DIN 53452)                        |
| <b>Modulus of Elasticity in Flexure</b> | 1800 N/mm <sup>2</sup> (at 7 days at +23 °C) (DIN 53452)                      |
| <b>Tensile Strength</b>                 | 37 N/mm <sup>2</sup> (at 7 days at +23 °C) (ISO 527)                          |
| <b>Tensile Adhesion Strength</b>        | In Concrete > 4 N / mm <sup>2</sup> (concrete failure) (at 7 days at + 23 °C) |
| <b>Coefficient of Thermal Expansion</b> | 8.9 x 10 <sup>-5</sup> per °C ( between -20 °C and + 40 °C) (EN ISO 1770)     |

## APPLICATION INFORMATION

| <b>Consumption</b>                | The consumption of Sikadur®-52 depends on the width and depth of the cracks, for 1 liter of filling, 1.1 kg of Sikadur®-52 is required.  |             |         |       |               |        |              |        |              |        |              |
|-----------------------------------|--|-------------|---------|-------|---------------|--------|--------------|--------|--------------|--------|--------------|
| <b>Substrate Temperature</b>      | +5 °C min. / +30 °C max.   |             |         |       |               |        |              |        |              |        |              |
| <b>Substrate Moisture Content</b> | Dry or wet (SSS - Saturated Superficially Dry: no water dripping)  |             |         |       |               |        |              |        |              |        |              |
| <b>Pot Life</b>                   | <table border="1"> <thead> <tr> <th>Temperature</th> <th>Potlife</th> </tr> </thead> <tbody> <tr> <td>+5 °C</td> <td>~ 120 minutes</td> </tr> <tr> <td>+10 °C</td> <td>~ 80 minutes</td> </tr> <tr> <td>+23 °C</td> <td>~ 25 minutes</td> </tr> <tr> <td>+30 °C</td> <td>~ 10 minutes</td> </tr> </tbody> </table> | Temperature | Potlife | +5 °C | ~ 120 minutes | +10 °C | ~ 80 minutes | +23 °C | ~ 25 minutes | +30 °C | ~ 10 minutes |
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| +5 °C                             | ~ 120 minutes  |             |         |       |               |        |              |        |              |        |              |
| +10 °C                            | ~ 80 minutes   |             |         |       |               |        |              |        |              |        |              |
| +23 °C                            | ~ 25 minutes   |             |         |       |               |        |              |        |              |        |              |
| +30 °C                            | ~ 10 minutes   |             |         |       |               |        |              |        |              |        |              |

## BASIS OF PRODUCT DATA

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.

## ECOLOGY, HEALTH AND SAFETY

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 (MSDS) containing physical, ecological, toxicological and other safety-related data.

### VOC DATA

The maximum content of Sikadur®-52 is 250 g/L VOC for the ready to use product.

## APPLICATION INSTRUCTIONS

### NOTES ON INSTALLATION

Maximum crack width to be injected: 5mm.  
Sikadur® 52 is suitable for dry and wet conditions but not for conditions with free water.

### SUBSTRATE PREPARATION

Requirements Healthy, clean, free of oil or grease, without surface treatment or coatings.  
Previous treatment for good adherence:  
Concrete, mortar, stone must be carefully prepared by means of high pressure water jet or mechanical means such as roughing, etc. Cracks must be cleaned to remove dust with pressurized air.

### MIXING

Mixing ratio A: B = 2: 1 (by weight); A: B = 1.8: 1 (by volume).  
Add all component B to part A. Mix with an electric mixer at low speed (max. 250 rpm) for at least 3 minutes. Avoid incorporating air.

### APPLICATION METHOD / TOOLS

Cracks in horizontal slabs:

Saturate the cracks with a brush or fill by gravity pouring Sikadur®-52 between two dikes made, for example, with Sikaflex® sealant. The cracks that cross the thickness of the slabs must be sealed on the underside, for example, with Sikadur® 31.

Cracks in vertical structures:

Sikadur®-52 can be injected by pressure into the crack using a pump or injection equipment for one or two components. Injection nozzles should be placed at intervals of approx. 25 cm above the crack. The crack must be superficially sealed, for example with Sikadur® 31, to prevent the resin from escaping during the injection process. Vertical cracks should always be injected from the bottom up. As soon as the resin appears through the next nozzle, seal the first one and continue the process through the next one. After completing the injection process, remove the injection nozzles and sealing material.

### CLEANING OF TOOLS

Tools and instruments must be cleaned after use with pyroxylin thinner. The hardened product can only be removed mechanically.

### 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.

### 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be

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#### Product Data Sheet

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