

# PRODUCT DATA SHEET

## Sikadur<sup>®</sup>-41 IN

### 3-PART THIXOTROPIC EPOXY PATCHING MORTAR

#### DESCRIPTION

Sikadur<sup>®</sup>-41 IN is a solvent-free, 3 component thixotropic mortar based on a combination of epoxy resins and selected quartz aggregates. After mixing it becomes an easy to use multipurpose repair and adhesive mortar.

#### USES

Sikadur<sup>®</sup>-41 IN may only be used by experienced professionals.

Sikadur<sup>®</sup>-41 IN can be used in a number of varying applications :

- As bonding mortar on stone, concrete, mortar, plaster work, etc.
- For vertical and overhead filling of cavities
- For damaged stair-nosings and spalled concrete
- As abrasion resistant protective layer
- Suitable for bearing pad for bridges and heavy machinery

#### CHARACTERISTICS / ADVANTAGES

- Easy to mix and apply
- Very good adhesion to most construction materials
- High strength mortar
- Thixotropic: non-sag in vertical and overhead applications
- Hardens without shrinkage
- Different coloured components (for mixing control)
- No primer needed
- High initial and ultimate mechanical strength
- Good abrasion resistance

#### PRODUCT INFORMATION

|                      |                                   |                            |
|----------------------|-----------------------------------|----------------------------|
| <b>Chemical Base</b> | Epoxy Resin                       |                            |
| <b>Packaging</b>     | Pre-batched unit (A+B+C)          | 6 kg                       |
|                      | Part A                            | 2.00 kg plastic container  |
|                      | Part B                            | 1.00 kg metal container    |
|                      | Part C                            | 3.00 kg bag                |
|                      | Pre-batched unit (A+B+C)          | 60 kg                      |
|                      | Part A                            | 20.00 kg plastic container |
|                      | Part B                            | 10.00 kg metal container   |
|                      | Part C                            | 30.00 kg bag               |
| <b>Colour</b>        | Part A                            | White paste                |
|                      | Part B                            | Black paste                |
|                      | Part C                            | Sand colour powder         |
|                      | Parts A+B+C mixed                 | Concrete Grey              |
| <b>Shelf Life</b>    | 12 months from date of production |                            |

**Storage Conditions** Store properly in original unopened, sealed and undamaged packaging, in dry conditions at temperatures between +5°C and +40°C. Protect from direct sunshine.

**Density** 2.00 ± 0.05 kg/liter (Part A+B+C mixed) (At +27°C)

## TECHNICAL INFORMATION

|                                    |   |                              |              |
|------------------------------------|---|------------------------------|--------------|
| <b>Compressive Strength</b>        | <u>1 day</u>  | <u>≥ 65 N/mm<sup>2</sup></u> | (ASTM C 579) |
|                                    | <u>7 days</u>   | <u>≥ 70 N/mm<sup>2</sup></u> |              |
|                                    | <u>14 days</u>  | <u>≥ 80 N/mm<sup>2</sup></u> |              |
|                                    | Curing Temperature (+30°C)  |                              |              |
| <b>Tensile Strength in Flexure</b> | ≥ 25 N/mm <sup>2</sup> (after 14 days at +30°C)                   |                              | (EN 196)     |
| <b>Tensile Strength</b>            | ~ 7 N/mm <sup>2</sup> (after 14 days at +30°C)                    |                              | (ISO 527)    |
| <b>Tensile Adhesion Strength</b>   | ≥ 10 N/mm <sup>2</sup> (Concrete failure) (after 7 days at +30°C) |                              | (ASTM C 882) |
| <b>Shrinkage</b>                   | Hardens without shrinkage   |                              |              |
| <b>Heat Deflection Temperature</b> | +46°C (7 days / +30°C)  |                              | (ASTM D 648) |

## APPLICATION INFORMATION

|                                   |   |               |  |
|-----------------------------------|---|---------------|--|
| <b>Mixing Ratio</b>               | Part A : Part B : Part C = 2 : 1 : 3 (by weight)  |               |  |
| <b>Consumption</b>                | 2 kg per m <sup>2</sup> per mm thickness  |               |  |
| <b>Layer Thickness</b>            | 30mm max.<br>When using multiple units, one after the other. Do not mix the following unit until the previous one has been used in order to avoid a reduction in handling time  |               |  |
| <b>Sag Flow</b>                   | Non-sag upto 20mm layer thickness on vertical surface   | (ASTM D 2730) |  |
| <b>Ambient Air Temperature</b>    | +10°C min. / +40°C max.   |               |  |
| <b>Substrate Temperature</b>      | +10°C min. / +40°C max.   |               |  |
| <b>Substrate Moisture Content</b> | When applied to mat moisture concrete, brush the adhesive well into substrate.  |               |  |
| <b>Pot Life</b>                   | ~30 minutes (100 g mass at +30°C)   | (FIP 5.1)     |  |
|                                   | The potlife begins when the resin and hardener are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quantity mixed, the shorter the potlife. To obtain longer workability at high temperatures, the mixed adhesive may be divided into portions. Another method is to chill parts A+B and C before mixing them (not below +5°C). |               |  |

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

Mortar and concrete must be older than 28 days (depends on minimal requirement of strengths). Verify the substrate strength (concrete, masonry, natural stone).

The substrate surface of concrete, mortar, rendering stone surfaces must be sound, clean, dry or mat damp (no standing water) and free from contaminants such as dirt, oil, grease, existing surface treatments and coatings, dust and other surface contaminants etc.

### SUBSTRATE PREPARATION

Substrate preparation work may be done by sand-blasting or any other mechanical means.

#### **Concrete, mortar, stone, bricks:**

Substrates must be sound, dry or mat damp (no standing water), clean and free from laitance, ice, grease, oils, old surface treatments or coatings and all loose or friable particles must be removed to achieve a laitance and contaminant free, open textured surface.

#### **Non-absorbent surfaces:**

Substrates must be sound, clean and de-rusted as required.

## PRIMING

Sikadur®-41 IN does not generally require a primer. However, on damp or wet surfaces (no standing water), use Sikadur®-31 IN as primer for horizontal, vertical and overhead application. Coat the surface completely with the primer using a stiff brush. Work the primer well into the surfaces. Apply Sikadur®-41 IN while the primer is still tacky.

## MIXING

Pre-batched units:

Mix components A+B together for at least 3 minutes with a mixing spindle attached to a slow speed electric drill (max. 300 rpm) until the material becomes smooth in consistency and a uniform grey colour. Then add part C and continue until mixture is homogeneous. Avoid aeration while mixing. Then, pour the whole mix into a clean container and stir again for approx. 1 more minute at low speed to keep air entrapment at a minimum. Mix only that quantity which can be used within its pot life.

## APPLICATION METHOD / TOOLS

Brush the adhesive well into the substrate. When using a thin layer adhesive, apply the mixed adhesive to the prepared surface with a spatula, trowel, notched trowel, (or with hands protected by gloves). Compact well and finally smooth-off well with a clean steel trowel. When Sikadur®-41 IN is required to be applied to a thickness of more than 30 mm, apply in layers. When applying as a repair mortar, use some form work. Sikadur®-31 IN can be used as primer to improve the bond.

## CLEANING OF TOOLS

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

## LIMITATIONS

Sikadur® resins are formulated to have low creep under permanent loading. However due to the creep behaviour of all polymer materials under load, the long term structural design load must account for creep. Generally the long term structural design load must be lower than 20 - 25 % of the failure load.

## 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.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

## 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 Safety Data Sheet (SDS) 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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