

Sikadur[®] 41

High strength epoxy resin patching mortar

Positioning

Description

Sikadur-41 is a solvent free, three component, non-slump mortar based on a combination of high strength epoxy resins and a blend of carefully selected mineral aggregates. After mixing, Sikadur 41 becomes an easy to use patching and repair mortar.

Uses

Sikadur 41 can be used:

- As a patching or repair mortar for mineral substrates such as concrete, cement mortar, etc. It will also adhere to clean steel and epoxy coatings.
- To repair or restore profiles on precast or cast insitu concrete elements.
- As a general patching mortar for vertical, overhead and horizontal voids.
- For dry-packing under machine bases, precast concrete components, bridge bearing pads, etc.
- For forming high strength ramps in doorways/openings where different levels are encountered.
- As an abrasion and impact resistant protective coating.

Advantages

- Suitable for application to both dry and damp surfaces.
- High early strength.
- High abrasion and impact resistance.
- Resistant to dilute acids, dilute alkalis, most oils, sewage, salt water, etc.
- Shrinkage free hardening.
- Very easy to mix.
- Curing is not affected by high humidity.
- Approved for contact with potable water once cured.

Tests

Approvals / Standards

Tested in accordance with BS6319. C/WRC approval for contact with potable water WFBS listing No. 8601066.

Product Data

Type:

Epoxy resin paste containing natural aggregate fillers.

Colours:

Component A = Cream / Component B = Dark Grey / Component C = Light Grey
Concrete Grey colour when mixed.

Packaging:

Supplied in 5.2 litre (10kg) (Components A + B + C)

Storage & Shelf Life:

Three (3) years in unopened, original containers when stored in dry conditions between +5°C and +25°C.

Technical Data

Density:

1.9 kg/litre approx.

Application temperature:

5°C to 30°C

Service temperature:

< 70°C

Shrinkage:

Negligible

Compressive strength:

24 hours (at 20°C) = 55 MPa approx.
7 days (at 20°C) = 75 MPa approx.

Flexural strength:

27 MPa approx. (@ 7 days BS 6319)

Tensile strength:

10-15 MPa approx. (@ 7 days BS 6319)

Elastic modulus:

15,000 MPa approx. (@ 7 days BS 6319)

Bond strength:

(when used with

Sandblasted Steel = 10 - 15 MPa approx.

Sikadur 31 primer)

Sandblasted Concrete > 3 MPa (concrete failure)



Pot life: (5 kg mix) 5°C = 180 minutes approx.
10°C = 120 minutes approx.
20°C = 60 minutes approx.
30°C = 20 minutes approx.

Application thickness: 3 mm to 60 mm per layer

Application Conditions

Surface Preparation

- All surfaces must be clean, dry and free from any dirt, oil, dust, grease, etc.
- All cement laitance should be removed by scabbling, sandblasting, etc.
- The prepared surface must be free from any standing water.
- Steel surfaces must have all paints, films, oils, rust and other contaminants removed by grit blasting. Apply primer immediately after blasting is completed to prevent rust from recurring.
- Epoxy surfaces must be sanded then washed clean with Sika Colma Cleaner. Allow to dry.

Priming

- Before applying Sikadur 41 surface priming must be carried out to ensure that satisfactory substrate “wetting” is achieved at the bond interface. Priming will promote maximum adhesion, particularly on damp surfaces.
- Priming can be carried out by using either Sikadur 31 or Sikadur 32. The primer should be scrubbed well into the surface.
- After priming, the Sikadur 41 must be applied ‘wet on wet’, i.e. while the primer is still tacky. If the primer has dried another coat must be reapplied within 24 hours.

Mixing

- Add the entire contents of Component B to Component A. Using a Sika mixing paddle attached to a low speed electric drill (max 500 rpm) mix together until a smooth streak free paste is achieved. Component C (aggregate) can then be slowly added while mixing continues until a uniformly mixed, lump free mortar is achieved.
- Part batching of Sikadur 41 is not recommended unless strict measurement of the components, in accordance with the mix ratio of the factory proportioned pack, is observed and adhered to.
- The amount of Component C can be adjusted to give the desired mortar consistency.

Application

- Apply Sikadur 41 directly to the primed substrate using a spatula, trowel or gloved hand, depending on application. The material must be well compacted into the cavity to ensure a dense, tight matrix is achieved.
- The surface can then be screeded and floated to achieve the desired finish. If necessary the steel float face may be wiped with Sika Colma Cleaner intermittently during finishing to help achieve a smooth surface finish. Do not under any circumstances apply Colma Cleaner directly to the surface of the epoxy.

Cleaning

- Clean all tools and equipment immediately after use with Sika Colma Cleaner.
- It is recommended that protective gloves and clothing be worn during application, however uncured Sikadur 41 may be removed from skin with warm soapy water.
- Cured Sikadur 41 can only be removed mechanically.

Important Notes

- Do not apply Sikadur 41 to surfaces with standing water on them.
- Sikadur 41 will not cure at temperatures below 5°C.
- Optimal application temperatures for Sikadur 41 are between 10°C and 30°C.
- To avoid shrinkage caused by exotherm Sikadur 41 should not be applied in layers of more than 60 mm thick. Greater thicknesses should be built up successively in layers.
- The temperature at which Sikadur 41 is stored during the 24 hrs before mixing will govern its pot life when mixed.

Notes

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 & Safety Information

Protective Measures

- Avoid contact with foodstuffs and utensils. Avoid prolonged skin contact. Wear protective clothing, gloves, goggles, etc. In the event of contamination wash thoroughly with water. If the eyes or mouth are affected wash with clean water and obtain medical attention immediately.
- Local regulations as well as health and safety advice on packaging labels must be observed.

Transportation Class

Sikadur 41, Component B has a dangerous goods classification for transportation: Haz. Class 8, UN No. 1759, Haz. Chem. 2X, Packing Group III.

Important Notes

- Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.
- Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.

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.



Project Reference PORCHE



Requirement:

An existing concrete ramp proved to be too steep for some cars to drive up without causing damage to the vehicle. A strong and durable product was required to reduce the incline of the ramp and withstand the impact of frequent vehicular traffic.

Solution:

Sikadur 32, a two-component epoxy bonding agent was applied to the prepared surface to ensure a strong bond was achieved between the old ramp and the reprofiled section. While the tie coat was still tacky, Sikadur 41, a three-component epoxy repair mortar was applied to reprofile the existing ramp to reduce the incline to a more acceptable level.

Products Used:

Sikadur 32 High performance epoxy tie coat for concrete screeds and toppings
Sikadur 41 High strength epoxy resin patching mortar

Reference: AKL254



Sika (NZ) Ltd
PO Box 19 192
Avondale
Auckland
New Zealand

Phone: 0800 SIKA NZ
Fax: 0800 SIKA FAX
Email: info@nz.sika.com

0800 745 269
0800 745 232
www.sika.co.nz

