

PRODUCT DATA SHEET

Sikadur[®]-53 UF Grout

MOISTURE INSENSITIVE FREE FLOW HIGH STRENGTH EPOXY RESIN GROUT

DESCRIPTION

Sikadur[®]-53 UF Grout is an epoxy based solvent free 3-component ready to use moisture insensitive pourable grout. It has been developed to meet special requirement of grouting in wet/ under water. After mixing, the liquid is poured into the cavity where it displaces the water cures to a rigid high strength material.

USES

Sikadur[®]-53 UF Grout may only be used by experienced professionals.

Sikadur[®]-53 UF Grout is recommended for grouting of :

- Bridge bearing plates
- Machine bases
- Fixing bolts and anchors even for dynamic loading
- Rail tracks, vertically placed dowel bars

CHARACTERISTICS / ADVANTAGES

Sikadur[®]-53 UF Grout provides following beneficial properties :

- Moisture insensitive grout
- High early strength
- Cures without shrinkage
- Excellent adhesion to cement and metal substrate
- Easy to apply
- Free flowing

PRODUCT INFORMATION

Chemical Base	Epoxy resin
Packaging	11 kg (A+B+C): Pre-batched unit : Part A: 2.00 kg plastic container Part B: 1.00 kg plastic container Part C: 8.00 kg bag
Colour	Cement grey, flowable mortar
Shelf Life	12 months from the date of production
Storage Conditions	Store properly in original and unopened, sealed and undamaged packaging, in dry conditions at temperatures between +5°C and +40°C. Protect from direct sun light.
Density	Mixed Density : 1.9 kg/l at 27°C

Compressive Strength

(According to FIP 5.12 and IS 9162-1979)

Curing time	+30°C
1 day	45 N/mm ²
7 days	>60 N/mm ²

Product cured and tested at temperature indicated.
Test specimen size: 50 x 50 x 50mm

Tensile Adhesion Strength>10 N/mm² (Bond Strength to concrete in 14 days) (According to ASTM C882)**Mixing Ratio**

Part A : Part B : Part C = 2 : 1 : 8 (by weight)

Layer Thickness

50 mm (maximum)

Product Temperature

Sikadur®-53 UF Grout must be applied at temperatures between +10°C and +40°C.
Condition the material by also storing at this temperature for 48 hours before use.

Ambient Air Temperature

+10°C min. / +40°C max.

Dew Point

Substrate temperature during application must be at least 3°C above dew point to avoid condensation.

Substrate Temperature

+10°C min. / +40°C max.

Pot Life

~20 minutes at +30°C for 100g mass

(According to 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 (i.e. only when application temperatures are above +20°C).

SUBSTRATE QUALITY

Verify the substrate strength (concrete, natural stone etc.).

The substrate surface (all types) must be clean and free from contaminants such as dirt, oil, grease, existing surface treatments and coatings etc.

Steel substrates must be de-rusted to a standard equivalent to Sa 2.5

The substrate must be sound and all loose particles must be removed.

SUBSTRATE PREPARATION

Concrete, mortar, stone:

Substrates must be sound, clean and free from laitance, 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.

Steel:

Must be cleaned and prepared thoroughly to an acceptable quality standard equivalent to SA 2.5 i.e. by blastcleaning and vacuum.

Surface and base plate contact area must be clean and sound. Remove dust, laitance, oils, grease, curing compounds, impregnations, waxes, foreign particles, coatings, and disintegrated materials by mechanical means, i.e. chipping with a chisel, blastcleaning etc. All anchor pockets or sleeves must be free of water. Apply grout immediately to prevent re-oxidizing / rust formation.

MIXING

Add Component-B to Component-A and stir with a slow speed electric drill fitted with appropriate size and type of impeller (maximum 400 rpm) to avoid entrapping air. Then pour component-C in parts and mix for 2-3 minutes until an even colour of the mix is obtained. Care should be taken so that no air is introduced in the liquid mix during mixing.

APPLICATION METHOD / TOOLS

Forming:

The consistency of the Sikadur®-53 UF Grout epoxy grout system requires the use of permanent or temporary forms to contain the material around base plates, for example. In order to prevent leakage or seepage, all of these formers must be sealed. Apply polyethylene film or wax to all forms to prevent adhesion of the grout. Prepare the formwork to maintain more than 100 mm liquid head to facilitate placement. A grout box equipped with an inclined through attached to the form will enhance the grout flow and minimize air encapsulation.

Pour the mixed grout into the prepared forms from one or two sides only, to eliminate air entrapment. Maintain the liquid head to ensure intimate contact to the base plate. Place sufficient epoxy grout in the forms to rise slightly above the underside (3 mm) of the base plate. The minimum void depth beneath the baseplate shall be 12 mm. Where the void beneath the base plate is greater than 150 mm, place the epoxy

grout in successive 50 mm lifts or less, once the preceding lift has cooled.
Once hardened, check the adhesion by tapping with a hammer.

CLEANING OF TOOLS

Sweep excess grout into appropriate containers for disposal before it has hardened. Dispose of in accordance with applicable local regulations. Uncured material can be removed with Sika Colma Cleaner. Cured material can only be removed mechanically.

FURTHER DOCUMENTS

Minimum substrate temperature: +10°C. The material must be conditioned by being stored in an area with an ambient temperature between +10° and +30°C for a minimum of 48 h before using. Do not thin with solvents. Solvents will prevent proper curing and change mechanical properties.

Sikadur®-53 UF Grout is a vapour barrier when cured. Minimum grout depth: 10 mm. Maximum grout depth: 50 mm per lift. The last lift must be kept at 50 mm. Component C must be kept dry. For specific bolt grouting applications please refer to Sika Technical Services. For proper seating, allow the grout to rise above the bottom (3 mm) of the base plate.

Avoid splitting prebatched units to mix. Mix complete units only. Cold ambient, substrate or material temperatures will influence the curing and flow characteristics of Sikadur®-53 UF Grout. Do not subject cured epoxy grout to sudden temperature changes especially during early curing stages. Contact Sika Technical Services for control joint spacing on large base plate grouting projects.

LIMITATIONS

Strength Development : Confirm the strength development by producing cubes on site and testing them for compressive and flexural strength.

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 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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