

**Product Data Sheet**  
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Sikadur®-53 UF (Mortar)

# Sikadur®-53 UF (Mortar)

## Moisture insensitive epoxy resin mortar

**Product Description** Sikadur®-53 UF (Mortar) is an epoxy based solvent free, three-component moisture insensitive mortar. It has been developed to meet special requirement of concrete repair particularly in damp, wet and under water condition. After mixing, the mortar is placed on moist concrete, when it cures to a rigid, high strength material.

**Uses** Sikadur®-53 UF (Mortar) is recommended:

- For repair of damp and wet concrete
- For rapid installation and repair

**Characteristics / Advantages** Sikadur®-53 UF (Mortar) provides following beneficial properties:

- High early strength despite hardening under water
- Cures without shrinkage
- Excellent adhesion to cement substrate even under salt water

### Tests

**Approval / Standards** Testing according to ASTM, C881M-02, Type I, Grade 3, Class B+C.

## Product Data

### Form

**Colours** Part A: clear  
Part B: reddish yellow  
Part C: sand  
Part A+B+C mixed: reddish yellow

**Packaging** 10.5 kg (A+B+C) Pre-batched unit.

Part A: 1.00 kg plastic container  
Part B: 0.50 kg plastic container  
Part C: 9.00 kg bag

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

### Technical Data

**Chemical Base** Epoxy resin.

**Mixed Density** ~ 2.1 kg/l at 27°C

**Sag Flow** (According to FIP 5.3 with measurement according to ASTM D2730)  
On vertical surfaces it is non-sag up to 20 mm thickness

**Layer Thickness** 60 mm max.

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>Thermal Stability</b>	Heat Deflection Temperature (HDT): HDT = +47°C (7 days / +30°C)	(According to ASTM D-648)
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## Mechanical / Physical Properties

**Compressive Strength** (According to ASTM C 881)

Curing time	Curing temperature(+30°C)
3 hours	>20 N/mm <sup>2</sup>
6 hours	>25 N/mm <sup>2</sup>
1 day	>35 N/mm <sup>2</sup>
7 days	>60 N/mm <sup>2</sup>

**Bond Strength** (According to ASTM C 882)

Time	Temperature	Substrate	Bond strength
14 day	+30°C	Concrete dry	> 4 N/mm <sup>2</sup> *
14 day	+30°C	Concrete moist	> 4 N/mm <sup>2</sup> *

\*100% concrete failure.

## System Information

### Application Details

**Consumption / Dosage** The consumption of Sikadur<sup>®</sup>-53 UF (Mortar) is ~ 2.1 kg/m<sup>2</sup> per mm of thickness.

**Substrate Quality** Verify the substrate strength (concrete, masonry, natural stone).  
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 similar to Sa 2.5.  
The substrate must be sound and all loose particles must be removed.

**Substrate Preparation** Concrete, mortar, stone, bricks:  
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 i.e. by blast cleaning and vacuum. Avoid dew point conditions.  
Other surfaces (polyester, epoxy, glass, ceramic):  
On these substrates pre-apply Sikadur<sup>®</sup>-31 and then, "wet on wet" apply Sikadur<sup>®</sup>-53 UF (Mortar)

### Application Conditions / Limitations

<b>Substrate Temperature</b>	+5°C min. / +40°C max.
<b>Ambient Temperature</b>	+5°C min. / +40°C max.
<b>Material Temperature</b>	Sikadur <sup>®</sup> -53 UF (Mortar) must be applied at temperatures between +10°C and +40°C.

## Application Instructions

### Mixing

Part A : Part B : Part C = 2 : 1 : 18 (by weight)

### Mixing Time



Pre-batched units:  
Mix parts A+B together for at least 3 minutes with a mixing spindle attached to a slow speed electric drill (max. 600 rpm) until the material becomes smooth in consistency and a uniform colour. Then add part C and continue until mixture is homogeneous. Avoid aeration while mixing. The, pour the whole mix into a clean container and stir again for ~ 1 more minute at low speed to keep air entrapment at a minimum. Mix only that quantity which can be used within its potlife.

### Application Method / Tools

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).

When applying as a repair mortar use some formwork.

When using for bonding metal profiles onto vertical surfaces ,support and press uniformly using props for at least 12 hours, depending on the thickness applied (not more than 5 mm) and the room temperature.

Once hardened check the adhesion by tapping with a hammer.

### 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)

+30°C	~20 minutes
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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).

### 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

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