BUILDING TRUST

PRODUCT DATA SHEET

Sikadur®-53 UF (Mortar)

MOISTURE INSENSITIVE EPOXY RESIN MORTAR

DESCRIPTION

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

USES

Sikadur®-53 UF (Mortar) may only be used by experienced professionals.

Sikadur®-53 UF (Mortar) is used for:
- For repair of damp and wet concrete
- For rapid installation and repair

CHARACTERISTICS / ADVANTAGES

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

PRODUCT INFORMATION

Chemical Base	Epoxy resin	
Packaging	Part A+B+C Pre-batched unit	10.5 kg x 4 sets
	Part A	1.00 kg plastic container
	Part B	0.50 kg plastic container
	Part C	9.00 kg bag
Colour	Part A	Clear
	Part B	Reddish Yellow
	Part C	Sand
	Part A+B+C mixed	Reddish Yellow mortar
Shelf Life	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	Part A+B+C Mixed : 2.1 ± 0.1 kg/L (at +27°C)	

TECHNICAL INFORMATION

Compressive Strength	3 hours		≥ 20 N/mm²	(ASTM C579)
	6 hours		≥ 25 N/mm²	
	1 day		≥ 35 N/mm²	
	7 days		≥ 60 N/mm²	
	At curing temperature +30°C			
Tensile Strength in Flexure	1 day		15 N/mm²	(EN 196)
	7 days		16.5 N/mm²	
	Curing Temperature at +30° C			
Tensile Strength	10.2 N/mm² (after 7 days at +30° C)			(ISO 527-2)
Tensile Adhesion Strength	14 days	Dry concrete	≥ 4 N/mm²	(ASTM C882)
	14 days	Moist concrete	≥ 4 N/mm²	
	At curing temperature +30°C, 100% Concrete failure			
Heat Deflection Temperature	+47°C (7 days / +30°C)			(ASTM D648)

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B : Part C = 2 : 1 : 18 (by weight)
Consumption	~2.1 kg/m² per mm of 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.
Flowability	Sag Flow : Non-sag upto 20mm thickness on vertical surface
Product Temperature	+10°C min. / +40°C max.
Ambient Air Temperature	+5°C min. / +40°C max
Substrate Temperature	+5°C min. / +40°C max
Pot Life	~ 20 minutes (100 g mass at +27°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

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 / masonry / 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 i.e. by blast cleaning and vacuum.
Avoid dew point conditions.

Other surfaces (polyester, epoxy, glass, ceramic)
On these substrates pre-apply Sikadur®-31 and then, “wet on wet” apply Sikadur®-53 UF (Mortar).

MIXING

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.

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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