

## PRODUCT DATA SHEET

# SikaCeram<sup>®</sup> FLX 25

(formerly MTile FLX 25)

High performance, highly deformable, multi-purpose tile adhesive for large format ceramic coverings, mosaic, porcelain and moisture tolerant natural stone

### DESCRIPTION

SikaCeram<sup>®</sup> FLX 25 is a high performance, one-pack, polymer containing, water resistant, premixed adhesive. Consisting of portland cement, sand and specific additives. Suitable for use in hot and tropical climatic conditions.

### USES

- Suitable for indoor and outdoor use on walls and floors
- Suitable for bonding of non-vitrified tiles, vitrified tiles, fully vitrified tiles, porcelain mosaic, glass mosaic, glass tiles, brick tiles, terracotta, artificial and non-staining moisture tolerant natural stone
- Suitable for swimming pools, pool surroundings, wet rooms and cold storage depots
- Suitable to be applied on cement screeds, ground anhydrite and/or gypsum based floated screeds, precast concrete elements, aerated concrete, heated screeds, plasterboards, gypsum fiber boards, dry screeds, insulation boards, plaster slabs, plaster, masonry, old ceramic tiles and sound wooden substrates such as wooden chipboards, OSB boards, cork rubber mats, etc.
- Suitable to apply directly on various Sika<sup>®</sup> water-proofing products
- Suitable for laying tiles on top of impact sound insulation mats
- Suitable for bonding of very large sized tiles

### FEATURES

- Easy to mix and use
- Smooth application
- Single component system
- Water resistant
- Highly deformable
- Excellent adhesion to various substrates
- No vertical slipping, non-sag

### CERTIFICATES AND TEST REPORTS

SikaCeram<sup>®</sup> FLX 25 meets the requirements of EN 12004-1 for class C2TES2

## PRODUCT INFORMATION

Composition	Powder mixture with elastifying polymers. Does not contain any asbestos or other mineral fibers. No injurious silica dust during the application.
Packaging	20 kg bag
Shelf life	12 months from date of production
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight, heat and moisture.
Appearance and colour	Grey powder

## TECHNICAL INFORMATION

Transverse deformation	<b>Value</b>	<b>Requirements EN 12004-1,</b>	(EN 12004-2)	
	w/p=0.28 ≥ 5.0 mm	<b>class S2</b> ≥ 5.0 mm		
Tensile adhesion strength	w/p = 0.28	<b>Value</b>	<b>Requirement EN 12004, class C2</b>	(EN 12004-2)
	Initial	≥ 2.0 N/mm <sup>2</sup>	≥ 1.0 N/mm <sup>2</sup>	
	After water immersion	≥ 1.0 N/mm <sup>2</sup>	≥ 1.0 N/mm <sup>2</sup>	
	After heat ageing	≥ 1.0 N/mm <sup>2</sup>	≥ 1.0 N/mm <sup>2</sup>	
Service temperature	-30°C min. / +80°C max.			
Slip resistance	<b>Value</b>	<b>Requirements EN 12004-1,</b>	(EN 12004-2)	
	w/p=0.28 ≤ 0.5 mm	<b>class T</b> ≤ 0.5 mm		

## SYSTEM INFORMATION

System structure	In normal conditions, no primer is required. However, for very high absorbent substrates or non-absorbent substrates, please contact Sika Technical Service for recommendation.
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## APPLICATION INFORMATION

Consumption	<p>Powder consumption and coverage depends on the surface profile and roughness of the substrate, size and reverse profile of the tiles and the placing technique (simple placing "floating" or back to back "buttering-floating").</p> <p>As a guide for solid bed application: For 1 mm thickness over 1 m<sup>2</sup> area approximately 1 kg of powder is required.</p> <p>This figure is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment. Above consumption indications refer to the installation of slightly profiled, non-vitrified or vitrified tiles on flat substrate e.g. render or cement screed.</p> <p>For small sized tiles (side ≤30 cm), use small squared notch size trowel (4 - 6 mm) and progressively increases for medium tiles (side ≤45 cm, trowel 6 - 8 mm) or large tiles (side ≤60 cm, trowel 8 - 10 mm).</p>
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<b>Layer thickness</b>	Max. 10 mm (locally up to 12 mm thickness possible, for small area leveling purpose)	
<b>Ambient air temperature</b>	+5°C min. / +40°C max.	
<b>Mixing ratio</b>	5.6 L of water per 20 kg bag	
<b>Maturing time</b>	~3 min (Slake time)	
<b>Pot Life</b>	~35 min (at +25°C)	
<b>Open Time</b>	≥ 30 min. (at +23°C ± 2°C, RH: 50% ± 5%)	(EN 12004-2)
<b>Applied product ready for use</b>	Tiles can be grouted	~24 h
	Foot traffic	~24 h
	Able to bear weight	~7 days
	Fully cured	~28 days
Values determined in laboratory conditions: +25°C ± 2°C, R.H. 50 % ± 5 %. Higher temperatures will reduce the indicated waiting times, lower temperatures will increase the indicated waiting time.		

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## IMPORTANT CONSIDERATIONS

- Protect from adverse weather conditions, such as extremely high or low temperatures, rain, wind, etc. for at least 24 hours. In case of exposure to frost and direct exposure to sun, protect for 5 - 7 days from application.
- Avoid application in direct sunlight and/or strong wind / draughts.
- Make a test area prior to carrying out any work with natural stones.
- Substrates made of precast concrete elements and/or in-situ concrete must be sufficiently cured as per common industry practice.
- The open time may be reduced in case of absorbent substrates.
- Never add water or dry powder to reconstitute a SikaCeram® FLX 25 mix which has already begun to set.
- When laying tiles outdoors use SikaCeram® FLX 25 in the combined method (buttering-floating).
- After laying mosaic tiles it is required to remove the adhesive from the joints down to a uniform depth to ensure proper, stain-free grouting afterwards. This also applies to front-sided paper-faced mosaic.
- When laying mosaic in swimming pools use only front sided paper-faced or front-sided foil-faced mosaic.
- Glass tiles with a reaction resin coating on the reverse side may be laid with SikaCeram® FLX 25 only if the coating is alkali resistant.
- For natural stones or artificial stones subject to staining and/or deformation please use suitable tile adhesive. Please consult Sika Technical Service for recommendation.

- For facade tiles installation and fixing, follow the recommendations stated in BS 5385-1:2018 and/or DIN 18 515-1 "Outwall claddings" standards.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### EQUIPMENT

Select the most appropriate equipment required for the project:

#### Substrate preparation equipment:

- Grinding equipment
- Abrading equipment
- Power washing equipment
- Sandblasting equipment

#### Mixing equipment:

- Low speed electric double paddle mixer (300–400 rpm) with a spiral mixing paddle.

#### Application equipment:

- Notched trowel, various sizes

### SUBSTRATE QUALITY

Minimum age of the substrate:

- SikaScreed® or SikaLevel® range – 3 days
- Cement screed - 28 days

Note: The screed drying time is subject to the screed thickness and site conditions. For applications before 28 days please contact Sika's Technical Service Department.

Newly applied cement screeds must not have a residual moisture content over 4%, anhydrite and/or gypsum-based screeds not more than 0.5% (measured with a CM meter).

## SUBSTRATE PREPARATION

- Cementitious substrates must be sufficiently cured and dried.
- All substrates must be structurally sound, able to support the weight of the new tiling and provide a firm and securely fixed background.
- The substrate must be flat, tight and free from easily removable parts, non-deformable and correctly aged.
- Substrates must be clean, dry, free of any loose or friable particles, contaminants such as dust, dirt, oil, wax polish, grease, cement laitance or efflorescence.
- Use adequate mechanical preparation techniques to remove from the substrate, all traces of any materials that could reduce the product's adhesion to the substrate.
- The substrate must be plumb and flush in accordance with BS 5385. Plaster substrates must be approved by the plaster manufacturer for fixing ceramic tiles and must be suitable for the intended area of use.
- Smooth surfaces must be roughened lightly to improve adhesion.
- To confirm adequate surface preparation and adhesion, carry out a small trial before full application.
- For larger and thicker areas of substrate re-profiling, use suitable mortars from the Sika MonoTop® or SikaEmaco® range. Level concrete floors with SikaScreed® or SikaLevel® range.
- For any repairs of the substrate materials of SikaEmaco®, SikaRep® or Sika MonoTop® range should be used, applied at least 24 hours before laying the ceramic tiles.
- Identify cracks in the substrate and seal appropriately with e.g. Sikadur® epoxy resins.
- For applications in hot climates / environments, or on absorbent substrates, thoroughly pre-dampen (saturate) the substrate before product application. Avoid any ponding / standing water on the substrate. Surface must not be damp to touch.
- For tiling in constantly damp or wet rooms, a suitable Sika® waterproofing product / system must be applied to the substrate before tiling.
- For large sized tile application, joints in the substrate ideally should be mirrored in joints between tiles, or decoupling membrane should be used. Contact Sika Technical Service for recommendation.
- Prime very absorbent cement-based substrates and aerated concrete with suitable primer. Contact Sika Technical Service for recommendation.
- Prior to tile-on-tile applications or any other unconventional build-up, contact Sika Technical Services for recommendation.

## MIXING

- Mix a bag with the necessary, above mentioned, amount of water, using an electric blender with a double mixing spiral at low speed, in a clean bucket, to obtain a smooth paste free of lumps.
- Use a blender at 500 rpm maximum; do not mix at faster rate because of mechanical strength decay of the cured product.
- Allow a maturing time (slake time) of approx. 3 minutes for SikaCeram® FLX 25 in the mixing container, then remix briefly prior to application.
- Always start with minimum recommended quantity of water (water/powder ratio), only if required, gradually add water to desired consistency. Do not exceed the maximum allowed limit of water per bag weight.
- The obtained mix results should be very creamy, easily spreadable and thixotropic.
- Do not mix more material than can be used within 30 minutes.

## APPLICATION

SikaCeram® FLX 25 is applied using notched trowel. The amount of product should be enough to ensure complete wetting of the tiles rear. Tiling has to be carried out on fresh glue exerting an adequate pressure to ensure contact with the adhesive and thus the perfect bonding. In case a surface film is formed on the adhesive (skinning), it is necessary to wipe it off and re-apply. Avoid wetting already applied adhesive with water, as it may negatively affect its properties. Note: For tiles > 900 cm<sup>2</sup> (30 x 30 cm), the double spreading ("buttering") technique is always recommended.

### Adhesive application:

- Apply a thin scratch coat to the substrate with the smooth edge of the trowel.
- Comb mortar onto the fresh scratch coat with a notched trowel.
- Apply sufficient adhesive to the prepared fixing surfaces with the notched trowel to the required bed thickness, in one direction.
- Place the tiles in the adhesive bed with a twist and slide motion and adjust to correct position.
- Adjust the tiles if required.
- Clean off surplus adhesive from tile face and between tile joints before the adhesive has dried.

## CLEANING OF EQUIPMENT

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

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## 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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ISO 9001, 14001, 45001 – SGS  
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- Sika Gulf B.S.C. (c)  
ISO 9001, 14001 – SGS  
- Sika Saudi Arabia Limited  
ISO 9001, 14001 – TÜV  
- Sika MB Construction Chemicals LLC  
- Sika Construction Chemicals for Manufacturing LLC  
- Master Builders Solutions LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



### Product Data Sheet

SikaCeram® FLX 25  
September 2024, Version 04.01  
02171010200000970