

PRODUCT DATA SHEET

SikaCeram[®]-241 Flex

HIGH PERFORMANCE, FLEXIBLE CEMENTITIOUS TILE ADHESIVE, C2TES1 CLASSIFIED ACCORDING TO EN 12004-1



DESCRIPTION

SikaCeram[®]-241 Flex is one component, high performance, deformable, white, pre-mixed cementitious tile adhesive, consisting of selected aggregates, special admixtures and polymers.

It can be used for deformable layers up to 15 mm total thickness. It is suitable for external and internal applications, in horizontal and vertical surfaces.

USES

SikaCeram[®]-241 Flex is suitable for bonding the following tile types:

- Ceramic tiles monocottura, bicottura
- Large size tiles
- Mosaic tiles
- Clinker, cotto tiles
- Artificial granite tiles (including gres porcelanato tiles)
- Marbles and natural stone, provided they are not sensitive to water

SikaCeram[®]-241 Flex can be used in different substrates, such as:

- Concrete and cementitious mortars
- Flexible cementitious mortars
- Existing marble tiles, mosaics and ceramic tiles
- Bricks and renderings
- Cementitious boards, gypsum boards (using the suitable primer)

SikaCeram[®]-241 Flex can be used in floors and wall, in areas such as:

- Kitchens, balconies, patios, terraces
- Bathrooms, shower areas
- Substrates with underfloor heating
- Areas with intense traffic

SikaCeram[®]-241 Flex is suitable for use with underfloor heating, on facades and external areas, as part of **Sika's Tile Adhesive System** in combination with flexible, waterproof, cement-based Sikalastic[®] mortars (according to EN 14891).

CHARACTERISTICS / ADVANTAGES

- Part of Sika's Tile Adhesive System in combination with flexible, cement-based Sikalastic[®] mortars
- Highly deformable
- Highly thixotropic, no vertical slipping
- Extended open time
- Exceptional adhesion even on demanding substrates
- Water and weather resistant
- Applicable up to 15 mm thickness

APPROVALS / CERTIFICATES

CE Marking and Declaration of Performance according to EN 12004-1 - Adhesives for ceramic tiles

PRODUCT INFORMATION

Composition	Portland cement, selected aggregates, special additives and polymers
Packaging	25 kg bag
Appearance / Colour	Powder, white
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 +35°C.

Density	Fresh mortar density: ~ 1,60 kg/l (at +20°C)
Maximum Grain Size	~ 0,5 mm
Product Declaration	CE-marking and Declaration of Performance as Improved deformable cementitious adhesive with reduced slip and extended open time, C2TES1 according to EN 12004-1:2017, based on assessment by notified laboratory and factory production control.

TECHNICAL INFORMATION

Tensile Adhesion Strength	$\geq 1,0 \text{ N/mm}^2$ (Initial) $\geq 1,0 \text{ N/mm}^2$ (after Heat Ageing) $\geq 1,0 \text{ N/mm}^2$ (after Water Immersion) $\geq 1,0 \text{ N/mm}^2$ (after Freeze/Thaw cycles)	(EN 12004-2)
Transverse deformation	$\geq 2,5 \text{ mm}$	(EN 12004-2)
Slip Resistance	$\leq 0,5 \text{ mm}$	(EN 12004-2)

APPLICATION INFORMATION

Mixing Ratio	6,5 – 7,3 L of water per 25 kg bag																
Consumption	The consumption depends on the surface profile and roughness of the substrate as well as on the size of the tiles and the placing technique (simple placing or back-buttering). As a guide, in kilogramme of powder per m ² :																
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Layer Thickness	max. 15 mm																
Ambient Air Temperature	+8°C min. / +35°C max.																
Substrate Temperature	+8°C min. / +35°C max.																
Maturing Time	~ 5 min. at +23 °C																
Pot Life	~ 3-4 hours at +23 °C																
Open Time	30 minutes (tensile adhesion strength $\geq 0,5 \text{ N/mm}^2$)	(EN 12004-2)															
Adjustability Time	~ 30 min. at +23 °C																
Applied Product Ready for Use	<table border="1"> <tr> <td>Before floor grouting – light foot traffic</td> <td>24 hours*</td> </tr> <tr> <td>Before wall grouting</td> <td>5-12 hours*</td> </tr> <tr> <td>Before opening to full traffic</td> <td>~ 14 days*</td> </tr> </table>	Before floor grouting – light foot traffic	24 hours*	Before wall grouting	5-12 hours*	Before opening to full traffic	~ 14 days*										
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* Values got at laboratory conditions: 23°C ± 2°C – R.H. 50% ± 5%. Higher temperatures reduce the indicated lapse time, oppositely, lower temperature increase them.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

SikaCeram®-241 Flex is applied directly on cementitious substrates, plaster, concrete, existing tiles, mosaic, marbles. Under normal conditions, no primer is required. However for difficult and/ or highly absorbent substrates, the following primers can be used:

Substrate	Primer
Porous substrates (gypsum boards, cementitious boards, e.t.c.)	Sika® Primer-11 W+
Porous sealing and adhesion promoting in porous and non-porous substrates	SikaTop® -10
PVC, linoleum, epoxy coatings, gypsum renderings, e.t.c.	Sika® Primer-21 W
Metal substrates	Sikafloor®-156/161 (broadcasted with quartz sand)

In case of other substrates, please consult our Technical Department. For additional details, please refer to the respective Product Data Sheet of the primer used. The substrate must be cement laitance free, clean and free from dirt, oil, grease or other contaminants and loose or friable particles.

The substrate must be perfectly flat, sound and correctly aged. Any small gradients or bumps can be leveled and filled with a layer of SikaCeram®-241 Flex at a maximum thickness of 5 mm, applied at least 24 h before laying the ceramic tiles. For higher thickness, site-batched mortars prepared with Sikalastec® Max or Sika ViscoBond® or repair mortars from the Sika MonoTop® or SikaRep® range can be used.

In case of demands for substrate levelling, the use of Sikafloor® Level products is recommended (self-leveling cementitious floor screeds).

MIXING

Mix 25 kg bag with the necessary, above mentioned amount of water, using an electric mixer with a suitable mixing spiral at low speed (500 rpm maximum, in order to avoid air occlusion), in a clean bucket and until obtaining a smooth, lump-free paste. After mixing, leave the product to stand for 5 min. and then briefly stir it again prior to application. The obtained mix results very creamy, easily spreadable and highly thixotropic.

APPLICATION

SikaCeram®-241 Flex 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 while the adhesive is still fresh, exerting an adequate pressure to ensure full contact with the adhesive, and thus the perfect bonding. In case a surface film is formed on the adhesive, it is necessary to "wipe" the trowel on the adhesive layer previously applied. Avoid wetting with water the already applied ad-

hesive, as this can impair the bonding process. Select the suitable trowel size that will exert the suitable adhesive thickness on the back size of the tile.

SikaCeram®-241 Flex can be used for fixing low absorbance tiles of maximum size:

Tile size	Use
Up to 10.000 cm ² (e.g.100cm x 100cm)	Internal floor substrates
Up to 3.600 cm ² (e.g.60cm x 60cm)	External floor substrates
Up to 2.100 cm ² (e.g.30cm x 60cm)	Internal and external wall substrates

To lay tiles of total surface of 900 cm² and larger (e.g. 30x30 cm), the double-spreading (buttering) technique of adhesive is always recommended.

CLEANING OF EQUIPMENT

Removal of fresh remnants from tools and application equipment can be carried out using water immediately after use. Hardened / cured material can only be mechanically removed.

IMPORTANT CONSIDERATIONS

- Gypsum plaster substrates must have a minimum thickness of 10 mm and a maximum moisture content of 0.5%.
- If waterproofing layer under tiles is required, the following products can be used: SikaTop® Seal-107 FL-X, Sikalastic®-152, Sikalastic®-1K, Sika® SealTape-S.
- For demanding applications (e.g. external surfaces) use under the adhesive a product according to EN 14891 (e.g. Sikalastic®-1K class CMO1P)
- Protect freshly applied material from freezing conditions and rain
- Apply the adhesive on a test area prior to carrying out any work with natural stones tiles.
- It is not necessary to pre-dampen the tiles.

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 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.

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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