

PRODUCT DATA SHEET

SikaCeram[®]-4

(formerly MTile 4)

Cementitious tile adhesive with special additive for ceramic tiles

DESCRIPTION

SikaCeram[®]-4 is onepack, special additive containing, water resistant, premixed adhesive for a wide range of applications.

Suitable for use in hot and tropical climatic conditions.

USES

- Suitable for indoor floor and wall applications
- Suitable for application above concrete, mortar, bricks and plaster
- Suitable for bonding of tiles in wet areas (kitchens, bathrooms, wet process areas, etc.)
- Suitable to be used in institutional or high traffic conditions

PRODUCT INFORMATION

Chemical Base	Blend of portland cement, graded sand and special additives
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 / Colour	Grey and white powder

CHARACTERISTICS / ADVANTAGES

- Water resistant
- Easy mix and to use
- Economical
- For walls and floors
- High adhesive bond strength
- Internal application only

APPROVALS / STANDARDS

- EN 12004 - Initial Tensile Adhesion Strength and Tensile Adhesion Strength after water immersion, Slip-resistant (T), Cementitious (C) adhesive of class C1T
- ANSI 118.1 - Tile Shear Adhesion Strength

TECHNICAL INFORMATION

Tensile Adhesion Strength	Value:	Requirements EN 12004-1, class C1	(EN 12004-2)
	Initial	$\geq 0.5 \text{ N/mm}^2$	$\geq 0.5 \text{ N/mm}^2$
	After water immersion	$\geq 0.5 \text{ N/mm}^2$	$\geq 0.5 \text{ N/mm}^2$
Slip Resistance	Value:	Requirements EN 12004-1, class T	(EN 12004-2)
	$\leq 0.5 \text{ mm}$	$\leq 0.5 \text{ mm}$	

SYSTEM INFORMATION

System Structure	In normal conditions on cement-based substrate, no primer is required. However, for very high absorbent substrates (e.g. drywalls) 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 m² area, approximately 1.5 kg of only powder is required. For small sized tiles (side $\leq 30 \text{ cm}$), use small squared notch size trowel (4 - 6 mm) and progressively increase for medium tiles (side $\leq 45 \text{ cm}$, trowel 6 - 8 mm) or large tiles (side $\leq 60 \text{ cm}$, trowel 8 - 10 mm). These figures are theoretical and do 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>	
Layer Thickness	Min. 3 mm Max. 6 mm	
Ambient Air Temperature	+5°C min. / +35°C max.	
Mixing Ratio	3.6 to 4.0 L of water per 20 kg bag	
Substrate Temperature	+5°C min. / +35°C max.	
Maturing time	~5 min (Slake time)	
Pot Life	~30 min	
Applied Product Ready for Use	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 \pm 2°C, R.H. 50 % \pm 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 Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.
- Internal Reference - Version: MBCC_CC-UAE/Tile_4_08_95/v5/04_17

FURTHER DOCUMENTS

- General Method Statement (GMS)

LIMITATIONS

- Protect from adverse weather conditions, such as extremely high or low temperatures, rain, direct exposure to sun, wind, etc. for at least 24 hours 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 at least 3 months old (at +23°C and 50% relative humidity).
- Never add water or dry powder to reconstitute a SikaCeram®-4 mix, which has already begun to set.

SikaCeram®-4 shall not be applied on the following cases:

- On painted or metal surfaces
- Existing glazed tiled surfaces
- Glass mosaic
- In water immersed areas, for example swimming pools
- For stone tiles
- In external areas
- On gypsum plaster and plaster boards which are not primed
- For large sized tiles (side > 60 cm)

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 single or double paddle mixer (300–400 rpm) with a spiral mixing paddle.

Application equipment:

- Notched trowel, various seizures

SUBSTRATE QUALITY

Minimum age of the substrate:

- 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 28d 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

All surfaces must be clean, dimensionally stable, sound and free from all traces of oil, grease, mould release agent and curing compound. It should be ensured that tiles are dry and free of contaminants that could impair adhesion.

Concrete, screeds, renders, and blockwork should be cured sufficiently, with shrinkage already occurred. Prime very absorbent cement based substrates, plasterboards, cement boards, calcium silicate boards and aerated concrete.

MIXING

- Mix a bag with the necessary, above mentioned, amount of water, using an electric blender with a suitable 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. 5 minutes for SikaCeram®-4 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 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

Apply SikaCeram®-4 to a uniform thickness of 3 to 6 mm or sufficient to cover the studs or keys on the tile back; on a working area of not more than 1m². Solid bed fixing is recommended for all horizontal applications and for ceramic tiles. If preferred, SikaCeram®-4 can additionally be buttered on the backs of the tiles to ensure full adhesive contact. For all other vertical applications, the adhesive bed should be combed horizontally with a notched trowel to remove excess.

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 TOOLS

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

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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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