BUILDING TRUST

PRODUCT DATA SHEET

SikaCeram®-669

C2TE single component polymer modified cement-based tile adhesive

DESCRIPTION

Formerly Davcoflex® 669.
SikaCeram®-669 is a single-component, polymer-modified cementitious tile adhesive formulated for superior bonding strength. It is designed for the installation of homogeneous vitrified tiles and ceramic glazed tiles in internal applications, including semi-exposed areas that are sheltered from direct weathering.

USES

SikaCeram®-669 is a cementitious tile adhesive used for bonding ceramic tiles in continuous thin layers up to 10 mm thickness. Due to its excellent adhesion properties, it can be used in situations where conventional tile adhesives may not be suitable because of the tile type, substrate condition, or specific application requirements.
SikaCeram®-669 is suitable for bonding the following types of tiles:
- Ceramic glazed tiles
- Porcelain and homogeneous vitrified tiles
- Tiles with both low and high-water absorption
- Natural stone

SikaCeram®-669 can be applied on the following substrates:
- Concrete
- Cement-sand screed and render
- Brickwork
- Lightweight concrete blocks (to be primed with Sika® Primer-11 W MY)
- Fibre-cement boards (subject to board manufacturer's recommendations)
- Existing tiled surfaces (walls and floors)

SikaCeram®-669 is suitable for installation on walls and floors in internal areas and sheltered external areas.

CHARACTERISTICS / ADVANTAGES

- Good workability
- Enhanced adhesion of low-porosity tiles
- No mixing error-just add water
- Excellent workability with thixotropic consistency
- Strong bonding to existing tiles

CERTIFICATES AND TEST REPORTS

SikaCeram®-669 is classified as C2TE in compliance with EN 12004.
SikaCeram®-669 is a cementitious adhesive (C) with improved adhesion (2), slip resistance (T), and extended open time (E).

PRODUCT INFORMATION

Packaging	25 kg bag
Appearance / Colour	Grey powder
Shelf Life	9 months from date of production
Storage Conditions	Store properly in dry conditions, in undamaged and unopened, original sealed packaging. Keep away from direct sunlight, rain, water and moisture.

TECHNICAL INFORMATION

Tensile Adhesion Strength	Standard Condition	≥ 1.0 N/mm²	(EN 12004–2:2017,8.3)
	Heat Ageing	≥ 1.0 N/mm²	
	Water Immersion	≥ 1.0 N/mm²	
Slip Resistance	≤ 0.5 mm		(EN 12004–2:2017,8.2)

APPLICATION INFORMATION

Mixing Ratio

5.75–6.5 L of water per 25 kg bag

Consumption

This depends on the level, profile and surface roughness of the substrate, the size of the tiles and the technique of placing (simple placing or "back"-buttering).
As a guide, in kilogram of powder per m² on flat surfaces:

Tiles size	Coverage	Trowel size
Mosaics and small tiles	~2.0–3.0 kg/m²	3 mm × 3 mm notched trowel
Normal size tiles (30 cm × 30 cm)	~5.0–5.5 kg/m²	6 mm × 6 mm notched trowel
Large size tiles up to 30 cm x 60 cm (walls) and 60 cm x 60 cm (floors)	~10.0–11.0 kg/m²	12 mm × 12 mm notched trowel

The consumption above may only serve as a guide. It is highly recommended to carry-out trials on site to determine the actual coverage.

Layer Thickness

3 mm min. / 10 mm max.

Ambient Air Temperature

+5 °C min. / +40 °C max.

Substrate Temperature

+5 °C min. / +40 °C max.

Pot Life

~1 hour

Open Time

≥ 0.5 N/mm² at 30 minutes (at 23 °C) (EN 12004–2:2017, 8.1)

Under unfavourable conditions (direct sun, high ambient temperature and strong wind), the open time may be shorter.

Applied Product Ready for Use

At +25 °C

Before jointing works	Min. 24 hours
Before opening to light foot traffic	Min. 24 hours
Before opening to full traffic	Min. 7 days

Adjustability Time

Once the tiles are placed into the mortar, they can be adjusted for ~30 minutes (at +20 °C).

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.

IMPORTANT CONSIDERATIONS

- Results shown here are based on laboratory test. Actual field performance will depend on the type of tile/stone used, installation methods and site conditions.
- For area with high movement or vibration, C2 type of tile adhesive with additional S1 or S2 properties is recommended to absorb the stresses between the tile and substrate with no loss or minimum loss of adhesion.
- Follow the recommended water dosage when mixing SikaCeram®-669. Do not exceed the maximum recommended water dosage or go below the minimum recommended water dosage.
- Apply only to sound, prepared substrates. Do not exceed the maximum layer thickness or go below the minimum layer thickness.
- Protect freshly applied material from freezing conditions, rain, etc.
- Do not attempt to dampen the applied adhesive to extend the open time as this interferes with the bond performance.
- Movement joints (width of 6–10 mm) must be provided to allow for movement between adjacent building components, over existing joints in the substrate, around fixed elements in the floor (e.g.

columns), at internal vertical corners, around floor perimeters, in internal floors (every 6–9 m), in external floors (every 4.5 m), on wall surfaces at storey heights horizontally (3–4.5 m apart vertically). Movement joints should go right through the tile adhesive bed to the background and be kept free from dirt and adhesive droppings.

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

SUBSTRATE QUALITY / PRE-TREATMENT

- All surfaces must be structurally sound, dry, clean and free from movement, oil, grease, wax, curing compound and any other loose or contaminating materials.
- Dusty concrete or masonry should be swept clean and dampened with water prior to the application of the adhesive.
- Weak concrete and/or cement laitance must be removed. Repairs to the substrate, filing of blowholes / voids, etc. must be carried out using SikaTop® or Sika® MonoTop® range of products.
- If the substrate is very porous, and/or if the temperature is high and the relative humidity is low, it is advisable to pre-dampen the surface (do not leave any standing water) or apply Sika® Primer-11 W MY. Please contact Sika local representative for further information on about the recommended primer for the specific substrate.
- The maximum variation in the plane of the concrete must not exceed 5 mm in 3 m for floors and 4 mm in 2 m for walls.
- Painted surface must be scabbled / abraded to expose the original substrate. Newly rendered / screeded surface must be thoroughly cleaned prior to tilling and have a wood float finish.
- Old rendered / screeded surface must be thoroughly cleaned prior to tilling and have a wood float finish.
- New concrete must be allowed to cure for at least 1 month and have a wood float finish. Steel trowel finished concrete must be mechanically abraded prior to tilling.
- Old concrete surface must be thoroughly cleaned prior to tilling. Make sure all release agents are removed from concrete surfaces, especially on tilt-up slabs.
- Newly rendered / screeded surfaces must be allowed to dry out as slowly as practicable after curing to reduce the risk of curling and shrinkage. Cement-sand and fine concrete levelling screeds should be cured for at least 7 days and be subjected to continuous air drying after curing for at least 2 weeks before the tiles are laid. Please refer to BS 5385 or MS 1294.
- To ensure the render/screed level is plumb to achieve optimum adhesive bed thickness.
- Wash and remove the release powders at the back of porcelain tiles.

MIXING

Mix thoroughly with the recommended amount of clean water for a minimum of 3 minutes until a homogeneous, lump-free consistency is achieved. Allow the mixture to stand in the container for approximately 5 minutes, then remix for about 15 seconds before use. SikaCeram®-669 must be mechanically mixed using a forced-action mixer or in a clean container using a low-speed electric drill fitted with a suitable mortar mixing paddle (< 500 rpm).

APPLICATION

SikaCeram®-669 is spread onto the substrate using a proper and suitable notched trowel. The choice of trowel should be governed by the size of the tiles, depth of knobs, grooves or ridges on the back of the tiles and the evenness of the substrate.
Use the flat side of the notched trowel to spread the mix onto the receiving surface at approximately 1 m² at a time. Then, use the notched side of the trowel to apply the required amount of the mix in one direction. Press the tile in a perpendicular motion and tapped into position to ensure positive contact with the adhesive and adjust within 30 minutes.
For tile with grooves or ridges, it is necessary to skim a layer of adhesive / butter coat the back of the tiles. This is to ensure adequate material and good bonding between the adhesive and tile.
Ensure that the adhesive is wet when the tiles are laid. Do not allow the adhesive to skin-over prior to tilling. Should skinning occur, break the skin by re-trowelling the adhesive in the opposite direction.
Do not spread more than 1 m² at any one time. Fix tiles within 15 minutes of applying the adhesive and check the contact by occasionally lifting the tiles. Ensure there are no voids under the tiles and the edges between the tiles are even (lippage) with a consistent joint width.
The final adhesive bed thickness of SikaCeram®-669 should be minimum 3 mm and maximum 10 mm.
After completion of tiling works, do not disturb the tiled surface for at least 6–8 hours at +20 °C.
As a guide:
SikaCeram®-669 is suitable for fixing absorbent tiles up to a maximum size of 10 000 cm² (e.g. 60 × 120 cm) for internal floors, and up to 1800 cm² (e.g. 30 × 60 cm) for internal walls and external floor applications.
For external areas, protect from direct sunlight and rain by means of a shelter. It is the user's responsibility to determine the condition and suitability of all surfaces prior to application.

GROUTING

Tile joint grouting should preferably be carried-out at least 24 hours after completion of tiling or until the adhesive has set and dry sufficiently. Setting may be delayed on dense or impervious surface.

CLEANING OF TOOLS

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

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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