

# PRODUCT DATA SHEET

## SikaCeram<sup>®</sup>-666

C2TE single component polymer modified cement-based tile adhesive

### DESCRIPTION

SikaCeram<sup>®</sup>-666 is a single component polymer modified cement-based tile adhesive specially designed to meet the challenging requirements of modern tiling. Specially formulated for large format fully vitrified tiles, marble and granite.

### USES

SikaCeram<sup>®</sup>-666 is suitable to bond the following type of tiles:

- Ceramic tiles, vitrified tiles, marble and granites
- Quarry and natural stone surfaces
- Large format tiles

SikaCeram<sup>®</sup>-666 can be used on substrates such as:

- Concrete, cement-sand screed & render
- Light weight concrete blocks (to be primed with Davco Bonding Agent)
- Plastered walls

### CHARACTERISTICS / ADVANTAGES

- Enhanced adhesion of low-porosity tiles to dense impervious substrates
- Easy to mix, just add water
- Extensive range of applications for interior and exterior wall and floor installation

### PRODUCT INFORMATION

<b>Packaging</b>	25 kg bag
<b>Appearance / Colour</b>	<ul style="list-style-type: none"> <li>▪ Grey powder</li> <li>▪ White powder</li> </ul>
<b>Shelf Life</b>	6 months from date of production
<b>Storage Conditions</b>	Store properly in dry conditions, in undamaged and unopened, original sealed packaging. Keep away from direct sunlight, rain, water and moisture.

### TECHNICAL INFORMATION

<b>Tensile Adhesion Strength</b>	Standard condition	$\geq 1.0 \text{ N/mm}^2$	(EN 12004-2: 2017, 8.3)
	Heat ageing	$\geq 1.0 \text{ N/mm}^2$	
	Water immersion	$\geq 1.0 \text{ N/mm}^2$	
<b>Slip Resistance</b>	$\leq 0.5 \text{ mm}$		(EN 12004-2: 2017, 8.2)

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	6.0–7.0 L of water per 25 kg bag													
<b>Consumption</b>	<p>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).</p> <p>As a guide, in kilogram of powder per m<sup>2</sup> on flat surfaces:</p> <table border="1"> <thead> <tr> <th>Tiles size</th> <th>Coverage</th> <th>Trowel size</th> </tr> </thead> <tbody> <tr> <td>Mosaics and small tiles</td> <td>~2.0–3.0 kg/m<sup>2</sup></td> <td>3 mm × 3 mm notched trowel</td> </tr> <tr> <td>Normal size tiles (20 cm × 20 cm)</td> <td>~5.0–5.5 kg/m<sup>2</sup></td> <td>6 mm × 6 mm notched trowel</td> </tr> <tr> <td>Large size tiles up to 3600 cm<sup>2</sup> (internal floors) and 2100 cm<sup>2</sup> (external floors)</td> <td>~10.0–11.0 kg/m<sup>2</sup></td> <td>12 mm × 12 mm notched trowel</td> </tr> </tbody> </table> <p>The consumption above may only serve as a guide. It is highly recommended to carry-out trials on site to determine the actual coverage.</p>		Tiles size	Coverage	Trowel size	Mosaics and small tiles	~2.0–3.0 kg/m <sup>2</sup>	3 mm × 3 mm notched trowel	Normal size tiles (20 cm × 20 cm)	~5.0–5.5 kg/m <sup>2</sup>	6 mm × 6 mm notched trowel	Large size tiles up to 3600 cm <sup>2</sup> (internal floors) and 2100 cm <sup>2</sup> (external floors)	~10.0–11.0 kg/m <sup>2</sup>	12 mm × 12 mm notched trowel
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<b>Open Time</b>	≥ 0.5 N/mm <sup>2</sup> at 30 minutes	(EN 12004-2: 2017, 8.1)												
	Open time is approximately 30 minutes under normal temperature and humidity conditions. Under unfavourable conditions, the open time might be shorter.													
<b>Applied Product Ready for Use</b>	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												
<b>Adjustability Time</b>	Once the tiles are placed onto the adhesive, they should be adjusted within the open time limit, ~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

- For areas with high movement or vibration, C2 type of tile adhesive with additional S1 or S2 properties is recommended to absorb vibration, shrinkage and deflection of substrates.
- Expansion joints coinciding with joints in the substrate should be incorporated at the design stage at a maximum of 5 m spacing and must be tiled over.
- Movement joints must be incorporated where necessary in accordance with the general principles stated in BS 5385: Part 1-4.
- In extreme ambient conditions, the skin-over of the adhesive may occur after 5–10 minutes. Therefore special precaution have to be taken, such as applying the adhesive in small areas that can be covered with tiles within this time limit.
- Skin-over can be checked by placing the tip of your index finger lightly to the adhesive bed surface. If the adhesive does not stick to your finger, skin-over has already occurred. To break the skin, re-trowel in the opposite direction. Fix or lay ceramic glazed tiles, ceramic vitrified tiles, stones and mosaic within 15

minutes of applying the adhesive and check the coverage by occasionally lifting the tiles.

## 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 adhesive.

Weak concrete and/or cement laitance must be removed. Repairs to the substrate, filling of blowholes / voids, etc. must be carried out using appropriate repair material from the SikaTop® or Sika® MonoTop® range of products.

Painted surface must be scabbled/abraded to expose

the original substrate. Newly rendered/screeded surface must be thoroughly cleaned prior to tiling and have a wood float finish.

Old rendered/screeded surface must be thoroughly cleaned prior to tiling 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 tiling.

Old concrete surface must be thoroughly cleaned prior to tiling. Make sure all release agents are removed from concrete surfaces, especially on tilt-up slabs. Screeds should be allowed to dry out as slowly as practicable after curing to reduce the risk of curling. 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 tiles are laid. Please refer to BS 5385 or MS 1294.

Ensure screed/render level is plumb to achieve optimum adhesive bed thickness.

Non-absorbent surfaces can be easily prepared for tiling using Davco Bonding Agent. Refer to Davco Bonding Agent product data sheet for more details. Release powders at back of porcelain tiles must be removed by washing with clean water.

## MIXING

Pour clean water into a mixing container. Then, slowly add SikaCeram®-666 while mixing continuously in a circular motion using a low-speed mechanical mixer until a lump-free, creamy consistency and uniform paste is achieved.

Allow the mix to stand for 5 minutes. Re-mix for another 15 to 30 seconds. SikaCeram®-666 is ready to be applied.

## APPLICATION

SikaCeram®-666 is spread onto the substrate using a proper and suitable notched trowel. The choice of trowel shall 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 m<sup>2</sup>. Then, use the notched side of the trowel to determine the required amount of the mix in one direction. Press the tile in a perpendicular motion and tapped into position to ensure full contact with the adhesive. Adjust within the open time limit, ~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 good bonding and complete coverage between the adhesive and tile so that proper adhesion and support takes place.

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### Product Data Sheet

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Ensure that the adhesive is wet when the tiles are laid. Do not allow the adhesive to skin-over prior to tiling. Should skinning occur, break the skin by re-trowelling the adhesive in the opposite direction.

Do not spread more than 1 m<sup>2</sup> of the adhesive at any one time. Fix the tiles within 15 minutes of applying the adhesive and check the contact by occasionally lifting the tiles.

Ensure there are no excessive voids under the tiles. At the perimeters, leave adequate wall and floor joints. For external tiling, 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 equipments with clean water immediately after use. Hardened or 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.

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