

PRODUCT DATA SHEET

SikaCeram[®]-51

GENERAL PURPOSE, CEMENTITIOUS TILE ADHESIVE FOR CERAMIC TILES

DESCRIPTION

SikaCeram[®]-51 is one-pack premixed adhesive consisting of high resistance cements, selected silicon/quartz mineral charges and specific additives, used as thin bed tile adhesive for permanent fixing of ceramic tiles. It is ready to use with the addition of water. Suitable for use in hot and tropical climatic conditions.

USES

- Suitable for bonding high absorption ceramic tiles
- Indoor application without primer over concrete, cement mortars, bricks
- Suitable for floor and wall applications

CHARACTERISTICS / ADVANTAGES

- Very good adhesion to most substrates (concrete, cementitious mortar, stone, bricks)
- Easy to mix and use
- Excellent workability and thixotropic consistency
- Excellent bond strengths
- Single component system

ENVIRONMENTAL INFORMATION

SikaCeram[®]-51 is certified according "Low Emitting Materials as per Al Sa'fat - Dubai Green Building Evaluation System" by Dubai Central Laboratory (DCL) certificate No. CL17020432

APPROVALS / STANDARDS

SikaCeram[®]-51 follows the main requirements of EN 12004 class C1.

PRODUCT INFORMATION

Chemical Base	Portland cement, selected aggregates.
Packaging	Grey color - 25 kg bag White color - 20 kg bag
Appearance / Colour	Grey or white powder
Shelf Life	12 months minimum 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.

TECHNICAL INFORMATION

Tensile Adhesion Strength	grey w/p = 0.21, white w/p = 0.22	Value	Requirement EN 12004, class C1	(EN 12004-2)
	Initial	≥ 0.7 N/mm ²	≥ 0.5 N/mm ²	
	After water immersion	≥ 0.5 N/mm ²	≥ 0.5 N/mm ²	
	After heat ageing	≥ 0.5 N/mm ²	≥ 0.5 N/mm ²	

APPLICATION INFORMATION

Mixing Ratio	4.0 to 4.4 L of clean water per 20 kg bag of white powder 5.0 to 5.5 L of clean water per 25 kg bag of grey powder
Fresh mortar density	~1.70 kg/l (+25 °C)
Consumption	The consumption depends on the surface profile and roughness of the substrate and on the size of the tiles and the placing technique (simple placing "floating" or back to back "buttering-floating"). As a guide: For 1 mm thickness over 1m ² area approximately 1.7 kg of material. One 25 kg bag will cover approximately 4.9 - 7.3 m ² at 3 - 2 mm thickness. One 20 kg bag will cover approximately 3.9 - 5.8 m ² at 3 - 2 mm thickness.
Layer Thickness	Min. 2 mm Max. 5 mm (locally up to 12 mm thickness possible, for leveling purpose)
Ambient Air Temperature	+5 °C min. / +35 °C max.
Substrate Temperature	+5 °C min. / +35 °C max.
Pot Life	~4 h (23 °C)
Open Time	~20 min. (+23 °C) (EN 12004-2)
Adjustability Time	~30 min. (+23 °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.

LIMITATIONS

- For wet areas a water resistant SikaCeram® tile adhesive should be used.
- Protect freshly applied material from rain, etc.
- Make a test area prior to carrying out any work with natural stone tiles.
- For gypsum board substrate, primer needs to be applied, please contact Sika Technical Department.
- It is usually not necessary to pre-dampen the tiles. SikaCeram®-51 shall not be applied on the following cases:
 - On metal surfaces and wood
 - On old ceramic tiles
 - On water immersed areas (e.g. swimming pools)
 - For stone tiles and porcelain tiles
 - In external areas
 - For large size tiles (size >60cm)

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.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The substrate must be cement laitance free, clean and free from dirt, oil, grease or other contaminants and loose or friable particles.

Absorbent surfaces should be saturated thoroughly with clean water.

The substrate must be perfectly flat, tight and free from parts easily removable, non-deformable and correctly aged. For any repairs of the substrate materials of SikaRep®, Sika MonoTop® or Sikafloor® Level range should be used, applied at least 24 hours before laying the ceramic coating.

MIXING

Mix a bag with the necessary, above mentioned,

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amount of water, using an electric blender with a suitable mixing spiral at low speed, in a clean bucket, and up 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.

After blending, leave the product curing for 5 minutes in the mixing container and then briefly stir the mix prior to application. The obtained mix results very creamy, easily spreadable and thixotropic.

APPLICATION

SikaCeram®-51 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, it is necessary to wipe the trowel on the adhesive layer previously applied. Avoid wetting with water the adhesive already applied, it damages the adhesive.

CLEANING OF TOOLS

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

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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