BUILDING TRUST

PRODUCT DATA SHEET

SikaCeram®-288 Flex S1

Cementitious high performance deformable adhesive with no vertical slip and extended open time for thin tiles, large tiles and demanding applications (Formerly SikaCeram®-288 H)

DESCRIPTION

SikaCeram®-288 Flex S1 is a cementitious, deformable, high performance floor and wall tile adhesive with reduced slip and extended open time. For residential, industrial and commercial wet and dry environments up to 15 mm thickness. Suitable for bonding all types of ceramic, porcelain, marble and natural stone tiles to all types of absorbent construction material substrates. Particularly suitable for façades, heated floors, swimming pools and industrial floors. Indoor and outdoor use. EN 12004: Classification C2TES1*and IS 15477: 2019,Type 4 Adhesive

USES

Bonding the following types of tiles:
- Ceramic
- Vitrified
- Earthenware
- Glazed
- Porcelain
- Stoneware
- Terrazzo
- Unglazed
- Thin and large tiles
- Marble and natural stone

Bonding tiles for the following applications:
- Wall and floor
- Balconies
- Bathrooms
- Commercial / Residential environments
- Heated floors (water and electric systems)
- Kitchens
- Leisure centres
- Storage areas
- Terraces
- Wet areas
- Overlaying existing interior ceramic tiles
- High demanding areas such as swimming pools, industrial and heavy trafficked floors, façades
- Interior and exterior use

CHARACTERISTICS / ADVANTAGES

- Layer thickness: 3mm(Minimum)
- Deformable
- Extended open time
- Reduced vertical slip
- Smooth application
- Typical bonding substrates: Cementitious screed, concrete, plaster, ceramic tiles, calcium sulphate screed, gypsum fibre boards

PRODUCT INFORMATION

Chemical base	Portland cement, selected aggregates, water retention additives, re-dispersible polymer
Packaging	25 kg bag
Appearance / Colour	Grey or White powder
Shelf life	12 months from date of production
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +35 °C.

Product declaration	C2TES1* according to EN 12004-1 C2TES1* according to ISO 13007-1 IS 15477: 2019,Type 4 Adhesive *Tensile adhesion strength test after freeze-thaw cycles not conducted due to tropical climatic conditions

TECHNICAL INFORMATION

Tensile adhesion strength	Initial / dry condition	≥ 1.0 N/mm²	(EN 12004-2 / ISO 13007-2)
	After water immersion / wet condition	≥ 1.0 N/mm²	
	After heat ageing	≥ 1.0 N/mm²	
	After > 30 minutes, open time	≥ 0.5 N/mm²	
Slip resistance	≤ 0.5 mm		(EN 12004-2 / ISO 13007-2)
Transverse deformation	≥ 2.5 mm and < 5 mm		(EN 12004-2 / ISO 13007-2)

SYSTEM INFORMATION

System structure

For the following substrates, a primer must be used:

Substrate	Primer
Calcium sulphate substrate (gypsum, gypsum fibre boards, calcium sulphate screed)	SikaCeram®-935 Floor Leveler Primer diluted with water in ratio 1:1

APPLICATION INFORMATION

Fresh mortar density	Grey	1.55 ± 0.20 kg/L (+27 °C)	(EN ISO 2811-1)
	White	1.60 ± 0.20 kg/L (+27 °C)	

Consumption

Consumption is dependent on the substrate, surface profile, roughness, size of the tiles, the joints between them and application technique (i.e. single spreading / floating method or double spreading / buttering method). Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application.

As a guide for a single adhesive layer:

Size of tiles	Bed thickness	Consumption (Grey) dry powder	Consumption (White) dry powder
Small	3 mm	2.25–2.75 kg/m²	2.25–2.75 kg/m²
Medium	4 mm	2.75–3.25 kg/m²	2.75–3.25 kg/m²
Large	5 mm	3.50–4.00 kg/m²	3.50–4.00 kg/m²

Ambient air temperature

+5 °C min. / +35 °C max.

Mixing ratio

Packing	Water to powder ratio by weight	Quantity of water per bag
25 kg, Grey	0.26–0.30	6.50–7.50 L
25 kg, White	0.33–0.35	8.25–8.75 L

Substrate temperature

+5 °C min. / +35 °C max.

Maturing time

~5 minutes

Pot life

≥ 180 minutes (100 g mass, +27 °C)

Open time

> 30 min (EN 12004-2 / ISO 13007-2)

Adjustability time

~40 min (+27 °C)

Applied product ready for use

Use	Waiting time
Grouting floors / walkability	24–36 hours
Grouting walls	4–6 hours
Water immersion	~21 days

Values determined in laboratory conditions: +23 °C ± 2 °C, R.H. 50 % ± 5 %. Higher temperatures will reduce the indicated waiting time, lower temperatures increase 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.

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

Important: Do not apply on metal surfaces, wood and old ceramic tiles outdoor.
Important: Gypsum plaster and anhydrite screed substrates must have a maximum moisture content of 0.5 %.

- The substrate can be one of the following materials: Cementitious screed, concrete, plaster, ceramic tiles, cement lime mortars, calcium sulphate screed, gypsum fibre boards.
- Cementitious substrates must be sufficiently cured and dried (2–6 weeks).
- All substrates must be structurally sound, able to support the weight of the new tiling and provide a firm and securely fixed background.
- Substrates must be clean, dry, free of any loose or friable particles, contaminants such as dust, dirt, oil, wax polish, grease, cement laitance or efflorescence.
- Use adequate mechanical preparation techniques to remove from the substrate, all traces of any materials that could reduce the product's adhesion to the substrate.
- Smooth surfaces must be roughened lightly to improve adhesion.
- To confirm adequate surface preparation and adhesion, carry out a small trial before full application.
- Any small surface defects and variations in level, profile, or around exposed aggregates, prefill and level with an additional layer of SikaCeram®-288 Flex S1 to a maximum thickness of 5 mm, applied at least 24 hours before full adhesive application.
- For larger and thicker areas of substrate re-profiling and making good, use suitable mortars from the Sika MonoTop® or SikaCeram® Floor Leveler range.
- Identify cracks in the substrate and seal appropriately with Sikadur® epoxy resins.
- When laying tiles on non-absorbent or substrates with limited absorbency, such as existing ceramic tiles, painted surfaces etc., check these surfaces are all sound, firm and securely bonded. Use suitable degreasing / descaling products to thoroughly and completely clean the substrate.
- For applications in hot climates / environments, or on absorbent substrates, thoroughly pre-dampen the substrate immediately before product application. Avoid any ponding / standing water on the substrate. Surface must not be damp to touch.
- If a waterproofing layer is required under the tiles, cement-based and acrylic-based Sika® waterproofing product / systems must be applied to the substrate before tiling.

MIXING

Important: Avoid over-mixing to minimise air entrainment.
Requirement: Use a low speed electric single paddle mixer (< 500 rpm) with spiral paddle for mixing.

1. Pour the minimum recommended quantity of clean cold water into a clean mixing container.
2. Gradually add SikaCeram®-288 Flex S1 powder to the water while mixing.
3. Mix thoroughly for ~5 minutes until a uniformly coloured, smooth mix is achieved. Add additional water, if necessary, to the maximum specified amount.
4. Do not mix for ~5 minutes to allow mixed product to 'mature'.
5. Remix for ~15 seconds.

APPLICATION

Important: Apply sufficient adhesive to ensure adequate 'wetting' of the backs of the tiles.
Important: Coverage on the back of the tiles must be 100 %.
Important: Tiling must be carried out on freshly applied adhesive. Exert adequate pressure to ensure 100 % complete and uniform contact with the adhesive to achieve optimum adhesion.
Important: If a skin forms on the surface of the adhesive, immediately remove the adhesive layer with a trowel, discard material and apply a fresh layer of SikaCeram®-288 Flex S1 adhesive.
Important: Protect freshly applied material from freezing conditions and rain, etc.
Important: For natural stone tiles, always carry out a preliminary test application first.

Note: On cementitious substrates, SikaCeram®-288 Flex S1 can be used for laying non-absorbent tiles on non-heated floors in outdoor and indoor applications up to 32 ft² (e.g. 4 ft × 8 ft). On walls indoor up to 8 ft height up to 32 ft² (e.g. 4 ft × 8 ft) and outdoor up to

20 ft height up to 8 ft² (e.g. 2 ft × 4 ft).
Note: For tiles > 900 cm² (e.g. 30 × 30 cm), the double-spreading (buttering) technique is always recommended.

1. Apply sufficient adhesive to the prepared fixing surfaces with the flat side of trowel.
2. Comb additional adhesive with appropriate square notched trowel to the required bed thickness.
3. Wherever needed (for large tiles), back butter the tiles for full bedding.
4. Place tiles into wet, sticky adhesive and use rubber mallet to fully embed the tiles.
5. Adjust tiles if required. Provide support wherever needed.
6. 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 material can only be mechanically removed.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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.

Sika India Pvt. Ltd.
620, Diamond Harbour Road
Commercial Complex II
Kolkata - 700 034
West Bengal, India

Contact:
Phone: +91 33 2447 2448
Fax: +91 33 2397 8688
info.india@in.sika.com
www.sika.in