

PRODUCT DATA SHEET

SikaCeram[®]-255 StarFlex LD White

WHITE CEMENTITIOUS DEFORMABLE LOW DUST FLOOR AND WALL TILE ADHESIVE

DESCRIPTION

SikaCeram[®]-255 StarFlex LD White is a white polymer modified cementitious powder, floor and wall tile adhesive. It is normal setting, deformable, frost resistant with reduced slip and extended open time. For small, medium, large sized ceramic tiles in residential, industrial, commercial and wet and dry environments. Suitable for bonding all types of ceramic, marble, natural stone and mosaic tiles to all types of absorbent / non – absorbent construction material substrates. Layer thickness ≤15,0 mm. Indoor and outdoor use. EN 12004: Classification - C2 TE S1. Product can also be used for spot-fixing indoor insulating panels.

USES

Bonding the following types of tiles:

- All kinds of medium, large-sized tiles
- Grès porcelain
- Ceramic
- Earthenware
- Mosaic
- Glazed
- Marble and other natural stones
- Porcelain
- Stoneware
- Terrazzo
- Unglazed

Bonding tiles for the following applications:

- Swimming pools
- Heated floors (Water and electric systems)
- Industrial and heavily trafficked floors
- Facades
- Balconies and terraces
- Overlaying existing indoor sound PVC sheet, linoleum and vinyl tiled floors

CHARACTERISTICS / ADVANTAGES

- Deformable
- No vertical slip, high slump resistance and grab
- Extended open time
- Low dust emission
- Frost resistant
- Smooth application
- White
- Typical bonding substrates: Anhydrite, cementitious, ceramic, gypsum, painted, PVC sheet, linoleum, vinyl tile/sheet, stone

APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to EN 12004 – Adhesives for Tiles

PRODUCT INFORMATION

Composition	Portland cement, selected aggregates, water retention additives, re-dispersible polymer
Packaging	25 kg bag
Appearance / Colour	White powder.
Shelf life	12 months from date of production.
Storage conditions	Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to packaging.
Maximum Grain Size	Dmax: 0,63 mm
Product Declaration	EN 12004: C2 TE S1

TECHNICAL INFORMATION

Tensile Adhesion Strength	Initial	≥ 1,5 N/mm ²	(EN 1348)
	Water immersion	≥ 1,0 N/mm ²	
	Heat ageing	≥ 1,0 N/mm ²	
	Freeze-Thaw cycles	≥ 1,0 N/mm ²	
Transverse deformation	≥ 2,5 mm	(EN 12002)	
Slip Resistance	≤ 0,5 mm	(EN 1308)	

SYSTEMS

System Structure	For the following substrates, a primer shall be used:	
	Substrate	Primer
	Calcium sulphate substrates (gypsum, plaster or anhydrite screed)	Sika® Primer-11 W+ (1:1) Sikafloor®-01 Primer (1:1) Sikafloor®-03 Primer
	Non and low absorbent substrate (existing ceramic tiles, linoleum, existing vinyl tiled floors)	Sika® Primer-21 W Sikafloor®-02 Primer
	Tile Adhesive	SikaCeram®-255 StarFlex LD White

APPLICATION INFORMATION

Mixing Ratio	7,25 litres of water per 25 kg bag. (29 % ± 1 %)		
Fresh Mortar Density	~1,6 kg/l.		
Consumption	Consumption is dependent on the substrate, surface profile, roughness, size of the tiles, the joints between them and application technique. As a guide for a single adhesive layer:		
	Size of tiles	Notched trowel size	Consumption
	Small	6 mm	~2,5 kg/m ²
	Medium	8 mm	~3,5 kg/m ²
Large	10 mm	~6 kg/m ²	
Layer Thickness	15 mm max.		
Ambient Air Temperature	+5 °C min. / +35 °C max.		
Substrate Temperature	+5 °C min. / +35 °C max.		
Maturing Time	~3 minutes		
Pot Life	~6 hours		

Open Time	≥ 0,5 N/mm ² after 30 minutes	(EN 1346)
Adjustability Time	~50 minutes	
Curing Treatment	Protect from negative effecting weather conditions, such as extremely high or freezing temperatures, rain, direct exposure to sun, for 12–24 hours from application, at least.	
Applied Product Ready for Use	Use	Waiting time
	Grouting - floors including foot traffic	24–36 hours
	Grouting - walls	4–6 hours
	Full traffic	~14 days
	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 them.	

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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 stable and securely fixed background. Surfaces shall be clean, dry, free of any loose or friable particles, contaminants such as dust, dirt, oil, wax, polish grease, cement laitance or efflorescence.

Depending on the substrate condition and contaminants to be removed from the surface, use adequate preparation techniques to remove all traces of any materials that could reduce the product's adhesion to the substrate. Smooth surfaces should 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 can be prefilled and levelled with an additional layer of SikaCeram®-255 StarFlex LD White to a maximum thickness of 8 mm, applied at least 24 hours before full adhesive application. For larger and thicker areas of surface re-profiling and making good, use appropriate mortars from the Sika MonoTop® or Sikafloor® Level range. Cracks in substrates must be identified and sealed appropriately e.g. with Sikadur® epoxy resins.

When laying tiles on non-absorbent or substrates with limited absorbency, such as existing ceramic tiles, painted surfaces etc. check to confirm these surfaces are all stable, firmly and securely bonded. Then use suitable degreasing/descaling products to thoroughly and completely clean the surface.

For applications in hot climates / environments, or on absorbent substrates, thoroughly pre-dampen the surface immediately prior to product application. Avoid any ponding / standing water on the surface. Surface must not be damp to touch.

For tiling in constantly damp or wet rooms, a suitable Sika® waterproofing product / systems should be applied to the substrate before tiling.

MIXING

Pour the recommended amount of clean cold water into a suitable, clean mixing container.

Slowly add SikaCeram®-255 StarFlex LD White powder to the water while mixing using a low speed (~500 rpm) drill mixer. Then mix thoroughly until the material is fully mixed and lump free. Avoid entraining air into the mix by over mixing.

Allow the mixed product to 'mature' for 2–3 minutes before remixing for 30 seconds.

The finished mix should have a creamy consistency, uniformly coloured and is easy to apply and spread.

APPLICATION

SikaCeram®-255 StarFlex LD White is applied using a suitable notched trowel.

Apply sufficient adhesive to the prepared fixing surface with the appropriate trowel and comb to the required bed thickness. Apply sufficient product to ensure adequate 'wetting' of the backs of the tiles. Coverage on the back of the tiles should be 100 %.

Tiling must to be carried out on freshly applied adhesive, exerting adequate pressure to ensure complete and uniform contact with the adhesive achieve optimum adhesion.

If a skin forms on the surface of the adhesive, immediately remove the adhesive layer with the trowel, discard material and apply a fresh layer of SikaCeram®-255 StarFlex LD White adhesive.

Adjust tiles if required.

Clean off surplus adhesive from tile face and between tile joints before the adhesive has dried.

After the required waiting time apply the appropriate grout into the tile joints.

SikaCeram®-255 StarFlex LD White is suitable for laying absorbent and non-absorbent tiles indoors without any size or support limits.

On cementitious substrates, SikaCeram®-255 StarFlex LD White is ideal for laying non-absorbent tiles outdoors up to 10000 cm² (e.g. 60 × 120 cm). On non-heated floors and up to 7000 cm² (e.g. 80 × 80 cm) on walls.

Large tiles > 900 cm² (e.g. 30 × 30 cm), the double-spreading (buttering) technique is always recommended.

CLEANING OF EQUIPMENT

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

IMPORTANT CONSIDERATIONS

- Gypsum plaster and anhydrite screed substrates must have a maximum moisture content of 0,5 %.
- For application and consumption details of other system products, refer to the respective Product Data Sheets
- For natural stone tiles always carry out a preliminary test application first.
- Avoid application in direct sunlight and/or strong wind / draughts.
- Do not apply on metal or wood surfaces
- Do not apply on existing ceramic tiles outdoors.
- Do not add anything to the product that is not specified in this Product Data Sheet.
- Do not use for any applications not explicitly described in this Product Data Sheet.
- Do not use on marble or natural stone tiles if they are sensitive to water.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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 the exact product data and uses.

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.

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 Services AG

Tüffenwies 16

8048 Zürich

Tel: +41 58 436 4040

www.sika.com



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