

BUILDING PRODUCT INFORMATION SHEET

SikaCeram[®]-255 StarFlex LD

Cementitious deformable low dust floor and wall tile adhesive

DESCRIPTION

SikaCeram[®]-255 StarFlex LD is a polymer modified cementitious powder, floor and wall tile adhesive. It is normal setting, deformable, frost resistant with reduced slip and extended open time.

USES

Bonding the following types of tiles:

- All types 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

PRODUCT INFORMATION

Product identifier	SikaCeram [®] -255 StarFlex LD
Place of manufacture	Aotearoa New Zealand
Product declaration	EN 12004: C2 TE S1.
Composition	Portland cement, selected aggregates, water retention additives, re-dispersible polymer
Packaging	20 kg bag
Shelf life	12 months from date of production

- Balconies and terraces
- Overlaying existing indoor sound PVC sheet, linoleum and vinyl tiled floors
- Interior and exterior use

LIMITATIONS OF USE

The product is not a substitute for any mechanical fixings that are specified by the manufacturer of the element being bonded

FEATURES

- Layer thickness: < 15 mm
- Deformable
- No vertical slip, high slump resistance and grab
- Extended open time
- Low dust emission
- Frost resistant
- Smooth application

SUSTAINABILITY

VOC emission classification according to French regulation classification A+.

APPROVALS / CERTIFICATES

CE Marking and Declaration of Performance to EN 12004 - Adhesives for Tiles. Classification: C2 TE S1.

Storage conditions	Product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to packaging.	
Appearance and colour	Available in Grey or White	
Maximum grain size	D _{max} : 0,63 mm	

TECHNICAL INFORMATION

Transverse deformation	≥ 2,5 mm	(EN 12002)
Tensile adhesion strength	Initial	≥ 1,5 N/mm ²
	Water immersion	≥ 1,0 N/mm ²
	Heat ageing	≥ 1,0 N/mm ²
	Freeze-thaw cycles	≥ 1,0 N/mm ²

SYSTEM INFORMATION

System structure	For the following substrates, a primer must be used:	
	Substrate	Primer
	Calcium sulphate substrates (gypsum, plaster or anhydrite screed)	Sika® Primer-11 W+ (1:1) Sikafloor®-01 Primer (1:1)
	Non and low absorbent substrate (existing ceramic tiles, linoleum, existing vinyl tiles floors)	Sika® Primer-21 W Sikafloor®-14 Prep N Prime
	Tile Adhesive: SikaCeram®-255 StarFlex LD	

APPLICATION INFORMATION

Mixing ratio	5.8 Litres of water per 20kg 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	Approximate coverage per bag
	Small	6 mm	10m ²
	Medium	8 mm	7.75m ²
Large	10 mm	5.5m ²	
	* Square notched		
Layer thickness	15 mm max.		
Slip resistance	≤ 0,5 mm	(EN 1308)	
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)	
Curing time	24-36 hours.		
Adjustability time	~50 minutes		
Applied product ready for use	Use	Waiting time	
	Grouting - floors including foot traffic	24-36 hours	
	Grouting - walls	4-6 hours	

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Full traffic ~14 days

Water immersion ~21 days

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

MANUFACTURER AND IMPORTER INFORMATION

Manufacturer information

Address

Sika (NZ) Limited
85-91 Patiki Road
Avondale, Auckland 1026
New Zealand

Phone number

0800 745 269

Website

<https://nzl.sika.com/>

Email address

info@nz.sika.com

NZBN

9429000018791

BUILDING CODE INFORMATION

Building Code clauses

Note: This product, on its own, is not within the scope of the NZ Building Code. However, when it is used as part of an impervious floor or wall lining system (E3/AS1) or with other building elements that must comply with the NZ Building Code, and it is used in accordance with that material supplier's specification and Sika's technical literature, it will contribute to meeting the requirements of the following clauses:

B1 Structure: Performance clauses B1.3.1, B1.3.2, B1.3.3 (a, b, j, q), B1.3.4

B2 Durability: Performance clause B2.3.1 - (b) 15 years

E3 Internal Moisture: Performance Clauses E3.3.3, E3.3.4, E3.3.5, E3.3.6

F2 Hazardous Building Materials: Performance clause F2.3.1

Building Code compliance statements

Performance B1.3.1, B1.3.2, B1.3.3 (a, b, j, q) B1.3.4: When used as an adhesive this product contributes to meeting the loading requirements that bonded lining elements are subjected to, as a result of self-weight, imposed in-use gravity loading, impact, and the effects of creep and shrinkage over time.

Performance B2.3.1 (b) 15 years: This product has been evaluated in accordance with B2/VM1. It meets this durability requirement and will remain serviceable for 15 years, or more, when installed and maintained in accordance with the relevant Sika technical literature. nzl.sika.com. According to Sika's "Service Improvement" records, maintained within its ISO9001:2015 Quality Management System, this product has performed successfully since it was introduced in 2012.

Performance E3.3.3, E3.3.4, E3.3.5, E3.3.6: When this product is used as an adhesive to bond ceramic or stone tiles, with a maximum moisture content of 6%, onto a Sika liquid applied membrane, or as a grout between the tile joints, it contributes to meeting the Clause E3 Internal Moisture requirements for impervious linings, in accordance with E3/AS1

Performance F2.3.1: This product meets this requirement when used and applied in accordance with Sika's installation instructions and does not present a health hazard to people occupying or using the building. Refer to the Sika Product Technical Data sheet and product Safety Data Sheet nzl.sika.com for further information if required

BASIS OF PRODUCT DATA

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

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.

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- Avoid application in direct sunlight and/or strong wind / draughts.
- Do not apply on metal or wood surfaces.
- Do not apply on existing exterior ceramic tiles.
- 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.
- If a waterproofing layer is required under the tiles, cement-based and acrylic-based products are suitable for use under SikaCeram®-255 StarFlex LD.

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

DESIGN REQUIREMENTS

If the building elements to be bonded are within the scope of the NZ Building Code then the bonding instructions of the manufacturer / supplier of those elements must be followed

In accordance with NZBC E3 Internal Moisture and with reference to E3/AS1 impervious linings and floor coverings, the adhesive for ceramic or stone tiles must be specified by the tile manufacturer (supplier) as part of their system deemed to be suitable for the required application.

SUBSTRATE QUALITY

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 must 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 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 can be prefilled and levelled with an additional layer of SikaCeram®-255 StarFlex LD to a maximum thickness of 15 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 must 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 powder to the water while mixing using an electric single paddle mixer (~500 rpm) with spiral paddle. 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 must have a creamy consistency, be uniformly coloured and is easy to apply and spread.

APPLICATION

SikaCeram®-255 StarFlex LD 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. Also apply sufficient adhesive to ensure adequate 'wetting' of the backs of the tiles. Coverage on the back of the tiles must be 100%.

Tiling must to be carried out on freshly applied adhesive, exerting adequate pressure to ensure 100% complete and uniform contact with the adhesive to 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 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 is suitable for laying absorbent and non-absorbent tiles indoors without any size or support limits.

On cementitious substrates, SikaCeram®-255 StarFlex LD can be used for laying tiles up to 2'100 cm² (e.g. 45 x 45) on outside walls, up to 3600 cm² (e.g. 60 x 60 cm) outside on floors or inside on walls and up to 10'000cm² (e.g. 100 x 100 cm) on inside floors.

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

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CLEANING OF EQUIPMENT

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

MAINTENANCE REQUIREMENTS

The building element being bonded, and the bonding substrate must both be maintained in accordance with each of their manufacturers instructions

For maintenance of impervious wall and floor lining systems that have been installed to enable compliance with Clause E3/AS1, refer to the supplier of the system installed

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.

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.

The building product/building product line is not subject to warning or ban under section 26 of the Building Act 2004.

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