

PRODUCT DATA SHEET

SikaTile®-455 Universal

Flexible high performance polymer modified low dust floor and wall tile adhesive

DESCRIPTION

SikaTile®-455 Universal is a premium polymer modified cementitious tile adhesive manufactured from high quality inorganic raw materials. Designed for both floor and wall tile installations, it is particularly suitable for ceramic, porcelain and other low water absorption tiles.

USES

SikaTile®-455 Universal is used to bond the following types of tiles:

- All sizes of tiles
- Grès porcelain
- Ceramic
- Earthenware
- Mosaic
- Glazed
- Non moisture sensitive natural stones
- Porcelain
- Stoneware
- Terrazzo
- Unglazed

SikaTile®-455 Universal can also be used for bonding tiles for the following applications:

- Facades
- Balconies and terraces
- Interior and exterior use

CHARACTERISTICS / ADVANTAGES

- Polymer modified, high performance cement based adhesive
- Suitable for ceramic, porcelain, and low water absorption tiles
- Deformable S1 classification for enhanced flexibility
- Reduced slip for improved vertical tile installations
- Extended open time for easier application
- Frost resistant and suitable for demanding environments
- Excellent workability and tile adjustability
- Thin-bed application reduces material usage and saves space
- Strong, durable and reliable bond performance

PRODUCT INFORMATION

Packaging	20 kg bag	
Colour	Grey powder	
Shelf Life	12 months from date of production when stored per the "Storage Conditions" section.	
Storage Conditions	SikaTile®-455 Universal must be stored in original, unopened and undamaged packaging in dry temperatures between +5°C and +35°C.	
Tensile Adhesion Strength	Initial:	≥ 1.00 N/mm ²
	Water immersion:	≥ 1.00 N/mm ²
	Heat aging:	≥ 1.00 N/mm ²
	Freeze/thaw cycles:	≥ 1.00 N/mm ²

Slip Resistance ≤ 0.5 mm

Transverse deformation ≥ 2.5 mm

APPLICATION INFORMATION

Mixing Ratio 4.6-5.0 litres per 20 kg bag

Consumption The material consumption depends on the nature of the substrate, type of ceramic covering, the consistency setting and application method. Effective consumption may therefore differ slightly from the following values:

Notched Trowel Size	Consumption
4 mm	~ 1.3 kg/m ²
6 mm	~ 1.9 kg/m ²
8 mm	~ 2.4 kg/m ²
10 mm	~ 4.0 kg/m ²

Product Temperature +5°C min. / +35°C max.

Ambient Air Temperature +5°C min. / +35°C max.

Pot Life ~ 3 hours (+20°C, 50 % r.h.)

Open Time ~ 30 minutes (+23°C, 50 % r.h.)

Applied Product Ready for Use

- Walkability: ~ 12 hours
- Grouting inside: ~ 12 hours
- Grouting outside: ~ 48 hours
- Full traffic: ~ 7 days

Protect the applied area from adverse weather conditions, including high or low temperatures, rain, and direct sunlight, for at least 24 to 48 hours - during and after application.

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.

USES

- Gypsum plaster and anhydrite screed substrate 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 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 SikaTile®-455 Universal. E.g. SikaTile®-111 Rapid Proof, Sikalastic®-220 W, Sikalastic®-152.

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

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 SikaTile®-455 Universal 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 substrates 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 wet to touch. For tiling in constantly damp or wet rooms, a suitable Sika® under-tile waterproofing product/system 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 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.

APPLICATION

SikaTile®-455 Universal is applied using a suitable notched trowel. Do not moisten the mortar bed with water. 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 per Industry Standard AS 3958:2023.

Tiling must 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 SikaTile®-455 Universal 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 an appropriate tile grout such as SikaCeram®-690 Elite/SikaCeram®-880 Easy Epoxy into the tile joints. SikaTile®-455 Universal is suitable for laying absorbent and non-absorbent tiles indoors without any size or support limits. On cementitious substrates, SikaTile®-455 Universal can be used for laying tiles up to 2,100 cm² (e.g. 45 x 45 cm tiles) on outside walls, up to 3,600 cm² (e.g. 60 x 60 cm tiles) outside on floors or inside on walls and up to 10,000 cm² (e.g. 100 x 100 cm tiles) on inside floors. For large tiles ≥ 900 cm² (e.g. 30 x 30 cm tiles), the doublespreading (buttering) technique is always recommended.

CLEANING OF TOOLS

Clean tools with water immediately after use. Hardened material can only be removed mechanically. Sika Wonder Wipes can also be used to remove uncured product from hands, tools and surfaces.

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.

Sika (NZ) Limited
85-91 Patiki Road
Avondale, Auckland 1026
New Zealand
0800 745 269
www.sika.co.nz



Product Data Sheet
SikaTile®-455 Universal
September 2026, Version 01.02
021710102000266169

SikaTile-455Universal-en-NZ-(09-2026)-1-2.pdf

