



Technical Data Sheet

UNIFIX®-S3 Highly flexible thin bed adhesive

Art.-No. 2 04276

CE	
SCHOMBURG GmbH & Co. KG Aquafinstraße 2-8 D-32760 Detmold 07 2 04276	
EN 12004 UNIFIX-S3 Cement-based adhesive for the installation of tiles in interior and exterior areas	
C1	
Reaction to fire:	Class E
Bond strength, as	
tensile adhesion strength after	
dry storage:	≥ 0.5 N/mm ²
Durability, as	
tensile adhesion strength after	
water immersion:	≥ 0.5 N/mm ²
tensile adhesion strength after	
warm storage:	≥ 0.5 N/mm ²
Tensile adhesion strength after	
freeze/thaw cycles:	≥ 0.5 N/mm ²



Properties:

- Highly flexible
- For interior and exterior use
- For critical substrates and heavy duty use
- Conforms to DIN EN 12004, C1 TE S2
- Also for use on 'green' substrates
- Vapour permeable
- Water impermeable
- Water and frost resistant
- Deformable to DIN EN 12002 ≥ 30 mm

Areas of application:

UNIFIX-S3 is used as a thin bed adhesive especially for the installation of vitrified tiles with lower water absorption ≤ 0.5% (fully vitrified), vitrified tiles, clinker and mosaic onto 'green' cement-based substrates. The high deformability of UNIFIX-S3 can largely compensate for the damaging shear stresses in the tiled finish and is therefore also especially suitable for the installation of large format tiles. UNIFIX-S3 is used primarily in floor areas. UNIFIX-S3 is especially suitable for use on balconies and terraces, in swimming pools and containers, on heated constructions, on 'green' heavier duty cement-based substrates and for the installation of tiles with lower water absorption.

Due to its high elasticity high stresses are also reliably accommodated with UNIFIX-S3 (deflection in

accordance with DIN EN 12002 > 30 mm without breakage of the test piece), such as those that arise e.g. between substrate and tiled finish in exterior areas or when installing on 'green', trafficked cement-based screeds (approx. 3 days after laying) and heated screeds.

The vapour permeability of UNIFIX-S3 guarantees that cement-based substrates, which are still damp, will dry out even when installing tiles early. The mandatory commissioning of heated screeds before the installation of ceramic materials can be omitted.

When installing natural stone materials make allowances for the specific product properties of the natural stone, sensitivity to discolouration and curling. Dependent on the natural stone and where it is to be installed, we recommend the CRISTALLIT series or UNIFIX-S3-Fast as the bedding mortar on balconies and terraces.

UNIFIX-S3 is a system component of the bonded tiled waterproof system AQUAFIN-2K/M + UNIFIX-S3.

UNIFIX-S3 is suitable for use on mineral-based and dispersion-based SCHOMBURG bonded waterproof systems.

Technical Data:

Powder component	Liquid component	
Basis:	aggregate, cement, additives	liquid polymer
Colour:	grey	white
Mixing ratio:	3 parts by weight	1 part by weight
Packaging:	15 kg bag	5 kg bucket
Storage:	dry, 12 months	frost free, 12 months in the original unopened container

UNIFIX-S3 (combined product)

Mixing ratio: 15 kg powder component : 5 kg liquid component : up to 1.6 litres water

Application/
substrate

temperature: + 5 °C to + 25 °C

Pot life *): approx. 2 hours

Open time *): approx. 30 minutes

Grout after *): 2 days at the earliest dependent on the porosity of the substrate

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Foot traffic after *):	2 days at the earliest dependent on the porosity of the substrate
Fully serviceable after *):	14 days at the earliest dependent on the porosity of the substrate
Cleaning:	with water immediately after use
Deformation:	30.9 mm to DIN 12002 – without breakage of the test piece
Testing:	DIN EN 12004 DIN EN 12002
Consumption:	approx. 2.80 kg/m ² with a 6 mm notched trowel approx. 3.70 kg/m ² with an 8 mm notched trowel approx. 4.70 kg/m ² with a 10 mm notched trowel

*) These values relate to +20° C and 65% relative humidity, higher temperatures shorten and lower temperatures lengthen these given times.

Substrate preparation:

The substrate must be dry, load bearing, adequately flat, free from penetrating cracks and free from separating substances such as e.g. oil, paint, laitance layers and loose constituents. It must possess a largely closed surface with a surface condition and strength in accordance with its type. DIN 18157, part 1 and the divergent application specifications of UNIFIX-S3 prevail when installing tiles regarding the substrate, substrate preparation and product application. Prime porous substrates with ASO-Unigrund. Calcium sulphate screeds must be mechanically abraded, vacuumed and as with all substrates based on calcium sulphate binders, primed with ASO-Unigrund-K diluted 1:3 with water. Heated screeds must be commissioned in accordance with recognised technical regulations before installing floor finishes. To determine a substrate's readiness to receive finishes carry out a moisture test with a carbide hygrometer (CM device). The CM moisture readings may not exceed:

- CA without underfloor heating $\leq 0.5\%$
- CA with underfloor heating $\leq 0.3\%$

Tiles can be installed with UNIFIX-S3 on cement-based screeds as soon as they will take foot traffic, concrete substrates after 28 days, independent of the moisture content.

The CM readings are to be carried out in accordance with current FBH-AD work instructions taken from the technical information for the "coordination of cut out points in heated floor constructions". Unevenness in the substrate that is ready to receive tiles can be levelled out beforehand with SOLOPLAN-30.

Product preparation:

UNIFIX-S3 is a combination product and is supplied at a predetermined mix ratio. Firstly add the liquid component B to a clean mixing bucket. Then add the powder component whilst stirring and continue to mix until a homogenous consistency is achieved. For ease of application up to a maximum of 8% (approx. 1.6 litres) of water can be subsequently added. After a short standing time, stir the thin bed adhesive once again. Do not mix more UNIFIX-S3 than can be used within the pot life of approx. 2 hours.

Mixing ratio:

1.5 kg UNIFIX-S3 : 5 kg UNIFLEX-B : dependent on desired consistency up to 1.6 litres water

Trowel UNIFIX-S3 onto the surface of the substrate and comb through with a notched trowel suitable for the tile size/material. Install tiles within the open time (finger test). In exterior areas and continuously wet areas ensure that as far as possible a void free bedding of the tiles is achieved. Special trowels (e.g. HFV notch, Flowline) have proved successful for this purpose.

A waterproofing function is achieved when UNIFIX-S3 is trowelled out at a uniform 2 mm thickness. Apply ASO-Joint-Tape-2000/preformed pieces at wall/floor junctions or over movement joints, free from voids or folds, with UNIFIX-S3. Joints are to be carried out by overlapping a minimum 5 to 10 cm. Once the

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membrane has hardened then the tiles can be installed using the previously mentioned application technique.

Advice:

- The relevant regulations (DIN, ZDB data sheets) still insist on keeping to a 28 day waiting time for cement-based substrates to receive finishes. Longstanding experience with the elastic thin bed adhesive UNIFIX-S3 has shown that it is possible to safely achieve a damage free installation even on 'green' substrates. We agree to recommend this special construction method by contract.
- When combining 'green' substrates and the installation of large format tiles, the tile size is to be restricted to a maximum of 50 cm x 50 cm. A minimum joint width of 3 mm is to be planned. When installing tiles greater than 50 cm x 50 cm the moisture content of the screed is to be additionally tested with a carbide hygrometer. Keep to a moisture content of ≤ 2 CM% for unbonded or floating cement-based screeds.
- It is a prerequisite that the following criteria are followed:
The positioning of movement joints must conform to relevant regulations. Use a minimum trowel notch of 8 mm in order to be able to absorb minimal deformation within the substrate. Undertake the commissioning (heating up) of screeds from the 21st day after installation in conformance with relevant regulations (ZDB data sheet). The tile installation begins as early as possible depending on the ability to traffic the screed; as a rule after a minimum of 3 to 8 days. The screed must have achieved at least 70% of its final strength (normally after 7 days). Carry out grouting with hydraulically setting grouts e.g. ASO-Flexfuge or HF05-Brillantfuge.
- When working on 'green' cement-based substrates (screeds, heated screeds) be aware of the diminished trafficking capacity of the screed construction. Do not store heavy tools, flooring materials etc. on the screed, especially at fragile locations – implement load spreading measures.
- When installing natural and synthetic stone the specific properties of these products (tendency to discolour, risk of curling etc.) and the installation recommendations of the manufacturer are to be observed. In cases of doubt carry out a fixing trial.
- To avoid curling effects due to water absorption we recommend the use of ASODUR-EK98 with agglomerate/synthetic stone.
- Direct sunlight and draughts can lead to the early formation of a skin or to a shortened open time.
- UNIFIX-S3 is a hydraulically setting adhesive with a dispersion component that until fully hardened is to be protected from water and frost penetration, which can take a few days under inclement weather influences/ climatic conditions.
- The filling of pools, containers etc. may only be implemented after a minimum of 28 days.
- Areas not being treated are to be protected from the effects of UNIFIX-S3.
- Avoid contact with the eyes and skin.
- Prime calcium sulphate based substrates with ASO-Unigrund-GE or ASO-Unigrund-K (mix ratio 1:3 with water). To avoid the formation of ettringite with calcium sulphate based substrates UNIFIX-AEK is suited for the installation on these substrates up to residual moisture values of 1.0% with heated and 1.5% with unheated constructions, measured with a carbide hygrometer.
- Do not re-life adhesive that has already started to stiffen by adding more water or fresh adhesive as there is a risk of inadequate strength development.
- The direct contact between cement-based adhesives and magnesium screeds leads to the destruction of the magnesium screed via a chemical reaction. Moisture pressure from the rear of the substrate must be eliminated with appropriate measures. Mechanically abrade the magnesium substrate and prime with the epoxy resin ASODUR-V360W with the addition of max. 5% water as necessary (approx. 250 g/m²). Wait for approx. 12-24 hours at +20° C then apply a second coat of ASODUR-V360W (approx. 300-350 g/m²). Broadcast quartz sand of particle size 0.5-1.0 mm to excess into the wet second coat. After waiting for a further 12-16 hours, installation may be commenced.

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- In continuously wet areas (swimming pools, containers etc.) ensure that, as far as possible, the tiles are bedded free from voids. For this purpose special trowels (e.g. HFV notch, Flowline) have proved successful. The spreading of adhesive on the rear of tiles can be omitted with suitable installation techniques, in so far as the Floating-Buttering method has not been explicitly specified from a planning aspect. It is recommended to continually monitor the results of workmanship.

Please observe a valid EU Health & Safety Data Sheet.

GISCODE: ZP1 (component A)

GISCODE: D1 (component B)

