



Technical Data Sheet

MONOFLEX-FB

Flexible flow-bed S1 tile adhesive

Art.-No. 2 04306

CE	
SCHOMBURG GmbH & Co. KG Aquafinstraße 2-8 D-32760 Detmold 14 2 04306	
EN 12004 MONOFLEX-FB Normal setting, cement-based adhesive with increased performance for the installation of tiles in interior and exterior areas	
C2	
Reaction to Fire:	Class E
Bond strength, as	
Tensile adhesion after dry ageing:	≥ 1 N/mm ²
Durability, as	
Tensile adhesion strength after water immersion:	≥ 1 N/mm ²
Tensile adhesion strength after heat ageing:	≥ 1 N/mm ²
Tensile adhesion strength after freeze/thaw cycles:	≥ 1 N/mm ²



substrates, or those with a slight fall, in accordance with DIN 18157 part 1 e.g. concrete, aerated concrete, cement and calcium sulphate based screeds/heated screeds etc. It is additionally suitable as a bedding mortar for lightweight building panels e.g. in extruded polystyrene and for bonding tiles to SCHOMBURG mineral-based or dispersion-based waterproof coatings. MONOFLEX-FB can be used to install tiles to difficult substrates (e.g. balconies and terraces) with the addition of the highly flexible UNIFLEX-B.

- Economic and smooth application
- Rapid setting
- Thixotropic, no sagging with large, heavy tiles
- Conforms DIN EN 12004, C2 E
- S1 deformable adhesive to DIN EN 12002
- For interior and exterior use
- Fulfils the criteria required for the guideline "flexible adhesive"

Areas of application:

MONOFLEX-FB is used as an adhesive up to 10 mm for the void free installation of tiles, as far as possible, also when under time pressures and especially with profiled and large format tiles in heavy duty areas. Combing adhesive on the backs of tiles can be omitted, when using a suitable installation technique and with tiles up to 40 x 40 cm.

MONOFLEX-FB is used as a thin-bed adhesive for vitrified and earthenware tiles, ceramic tiles with low water absorption ≤ 0.5% (fully vitrified), clinker, mosaic and natural stone materials not sensitive to discolouration or those which are non-translucent.

MONOFLEX-FB is suitable for secure fixing on horizontal

Technical Data:

Basis:	aggregates, cement, high qualitative additives
Colour:	cement grey
Filler configuration:	fine sand
Bulk density:	1.25 kg/dm ³
Application temperature:	+5 °C to +25 °C
Pot life*):	45 to 50 mins.
Open time*):	approx. 30 mins.
Foot traffic after*):	approx. 4 hrs
Grout after*):	approx. 6 hrs
Full loading/service*):	after approx. 5 days (depending on tile format)
Cleaning:	clean with water immediately after use
Testing:	conforms to DIN EN 12004 and 12002
Consumption:	approx. 3.4 kg/m ² with an 8 mm notched trowel approx. 4.2 kg/m ² with a 10 mm notched trowel
Packaging:	25 kg plastic bag
Storage:	dry, 9 months in the original unopened packaging. Use opened packaging promptly

*) These values are valid at + 23 °C and 50% relative humidity. Higher temperatures shorten, lower temperatures lengthen the declared times.

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Substrate preparation:

MONOFLEX-FB is suitable for a secure bond to all floor substrates e.g. concrete, cement-based and calcium sulphate based screeds / heated screeds. The substrate must have a virtually closed surface and a surface condition and strength appropriate for its type. The substrate must be dry, clean, load bearing, and be free from separating substances and penetrating cracks. Remove coatings, paint, oil, laitance and loose parts. Abrade smooth concrete surfaces and prime porous substrates with ASO-Unigrund before tiling. Anhydrite screeds must be mechanically abraded, vacuumed and as with all calcium sulphate bound substrates thoroughly primed with ASO-Unigrund. With tile formats, which have edges longer than 60 x 60 cm, we recommend treating moisture sensitive substrates, such as e.g. calcium sulphate screeds, with a reaction resin primer.

When installing tiles, the substrate, substrate preparation and product application must conform to DIN 18157, part 1.

The readiness of a substrate to receive tiled finishes is to be determined through moisture measurements with a carbide hygrometer (CM device). The CM moisture content may not exceed:

- $CT \leq 2.0$ CM% for screeds on insulation or separating layers
- CA without underfloor heating ≤ 0.5 CM%
- CA with underfloor heating ≤ 0.3 CM %.

The CM measurements are to be carried out to the current FBH-AD work instructions from the technical information "Coordination of cut out points with heated floor constructions."

Product preparation:

Mix MONOFLEX-FB with clean water in a clean mixing bucket until homogenous.

Mixing ratio:

6 to 6.4 litres water : 25 kg MONOFLEX-FB

On external horizontal surfaces e.g. balconies and terraces MONOFLEX-FB can be modified with UNIFLEX-B. For improved workability with MONOFLEX-FB and UNIFLEX-B add water after mixing the two materials.

Mixing ratio:

8.33 kg UNIFLEX-B : 25 kg MONOFLEX-FB : 2.5 l water.

The addition of UNIFLEX-B lengthens the adhesive open time and pot life somewhat. The deformability to DIN EN 12002 is considerably increased.

After allowing to stand for 3 minutes, remix the adhesive. Do not prepare more adhesive than can be used within the pot life.

Spread the MONOFLEX-FB on to the substrate and comb through with a suitable notched trowel dependent on tile format – special trowels have been proven (e.g. HFV notches, flowline). Lay finishing materials within the adhesive open time (finger test approx. 30 minutes). Always clean the mixing bucket as setting MONOFLEX-FB acts as an accelerator. Do not mix with other cement-based adhesives.

Important advice:

- When installing large format tiles in heavy duty areas we recommend that they are vibrated e.g. with a vibration device. Due to its thixotropic properties the MONOFLEX-FB is encouraged to flow through vibration. Voids in the adhesive bed are closed.
- To assist in the best possible void free bedding of tiles we recommend that the adhesive bed is combed in one direction so that the air under the tiles can escape via the vent spaces (free space between the ribs).
- When installing suitable natural stone observe the specific properties of the material (tendency to discolour, risk of curling etc.) and the installation recommendations of the stone/tile producer. In cases of doubt carry out a trial area.

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- Perimeter, bay and movement joints are to be reflected through and sealed with a suitable material e.g. edging strip RD-SK50.
- To avoid curling effects due to water absorption we recommend the use of ASODUR-EK98 with agglomerate/synthetic stone.
- Please heed the current ZDB information sheets distributed by the German tile association, especially when fixing to calcium sulphate based substrates and heated constructions.
- Prime calcium sulphate based substrates with ASO-Unigrund-GE or ASO-Unigrund-K (mixing ratio 1:3 with water). In order to avoid the formation of ettringite with calcium sulphate based substrates UNIFIX-AEK is suited for the installation onto these substrates up to residual moisture contents of 1.0% on heated screeds or 1.5% with unheated constructions, measured with a carbide hygrometer.
- Do not add more water or fresh mortar to a thin bed adhesive that has started to set in order to re-life it. There is a risk of inadequate strength development.
- Direct contact between cement-based tile mortars and magnesite screeds leads to the destruction of the magnesite screed through a chemical reaction. Moisture penetration from the rear must be eliminated with appropriate measures. Mechanically roughen the magnesite screed and prime with the epoxy resin ASODUR-V360W (approx. 250 g/m²) with a maximum of 5% water as necessary. After waiting from 12 to 24 hours at +20° C, apply a second coat of ASODUR-V360W (approx. 300 - 350 g/m²). Blind the fresh second coat with 0.5-1.0 mm quartz sand. After waiting for a further 12-16 hours continue with the tile installation.
- For waterproofing external surfaces (balconies and terraces) use the elastic waterproofing systems AQUAFIN-2K, AQUAFIN-2K/M or AQUAFIN-RS300.
- MONOFLEX-FB is a hydraulically setting adhesive and until fully cured, which may take a few days in unfavourable conditions, protect against water and frost.
- Protect areas not be treated with MONOFLEX-FB.
- Heed the relevant current regulations.
E.g.
DIN 18157 DIN 18352
DIN 18560 DIN 18202
EN 13813 DIN 1055
The BEB information sheets, distributed by the Bundesverband Estrich und Belag e.V.
The technical information "coordination of cut out points in heated floor constructions".
The ZDB information sheets, distributed by the professional association of the German tile industry:
[*1] „Bonded waterproof membranes“
[*2] „Finishes on calcium sulphate screeds“
[*3] „Movement joints in wall and floor tile finishes“
[*4] „Ceramic floor finishes in heavy duty areas“
[*5] „Ceramic tiles and slabs, natural and concrete stone/slabs on cement-based floor constructions with insulation“
[*6] „Exterior locations“
[*7] „Swimming pool construction“

Please observe a valid EU safety data sheet.

GISCODE: ZP1