



Technical Data Sheet

MONOFLEX-XL

High yield flexible S1 tile adhesive

Art.-No 2 04302



- very high yield
- for large format tiles
- high slump resistance yet the best application properties
- very low emission
- for heated substrates
- for interior and exterior use
- walls and floors
- normal hardening
- fulfills the required criteria for the information sheet "Flexible adhesive"
- tested in accordance with DIN EN 12004, C2 TE S1

Areas of application:

C2 TE S1 for the installation of large format fully vitrified tiles, vitrified and earthenware tiles etc. MONOFLEX-XL is used as a thin-bed adhesive for vitrified and earthenware tiles, ceramic tiles with low water absorption $\leq 0.5\%$ (fully vitrified), clinker, mosaic and natural stone materials not sensitive to discolouration or those which are translucent. Due to its deformability MONOFLEX-XL is suitable for fixing large format tiles. MONOFLEX-XL is suited for the assured installation on all substrates conforming to DIN 18157, part 1 e.g. concrete, aerated concrete, render/plaster, cement-based and calcium sulphate

based screeds/heated screeds, masonry work, moisture resistant plasterboard etc. as well as on old well bonded tiled finishes. It is additionally suitable as a bonding material for lightweight construction boards, e.g. extruded polystyrene (tilebacker boards) and for tiling onto mineral-based and dispersion-based SCHOMBURG waterproof membranes e.g. in wet duty areas, communal showers, swimming pool surrounds etc.

MONOFLEX-XL is suitable for use in interior rooms in accordance with the AgBB evaluation scheme (Committee for Health-related Evaluation of Building Products), the French VOC by-law and the Belgian Royal Decree C-2014/24239. Very low emissions in accordance with GEV-EMICODE, which as a rule leads to positive evaluations within the framework of building certification systems according to DGNB, LEED, BREEAM and HQE. Highest quality level 4, row 8 in accordance with the DGNB criterion "ENV 1.2 Local environmental impact".

Technical Data:

Basis:	sand, cement, additives (polymer modified)
Colour:	cement grey
Application temperature:	+5° C to +25° C
Pot life *):	approx. 2 hrs
Open time *):	> 30 mins
Grout *):	after approx. 12 hrs **)
Foot traffic *):	after approx. 12 hrs **)
Full service conditions *):	after approx. 7 days
Testing:	· DIN EN12004 and DIN EN 12002, KIWA Bautest DD 4149/01/2011 · very low emission in accordance with GEV EMICODE, AgBB scheme and French VOC by-law
Cleaning:	clean with water immediately after use

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Consumption:	approx. 1.6 kg/m ² with a 6 mm notched trowel approx. 2.1 kg/m ² with an 8 mm notched trowel approx. 2.6 kg/m ² with a 10 mm notched trowel
Packaging:	25 kg bag
Storage:	dry, 12 months in the original unopened packaging. Use opened packaging promptly

*) These values relate to +23° C and 50% relative humidity.

***) At a gauging water addition of 9.5 l/25 kg MONOFLEX-XL.

Substrate preparation:

The substrate must be dry, load-bearing, adequately flat, free from penetrating cracks and free from separating substances such as oil, paint, laitance and loose parts. They must have a largely closed surface with a surface strength and condition commensurate with their type. When installing tiles, the substrate, substrate preparation and product application must conform to DIN 18157, part 1. Prime porous substrates with ASO-Unigrund. Calcium sulphate screeds must be abraded, vacuumed and as with all calcium sulphate based substrates primed with ASO-Unigrund. If large format tiles are to be installed on calcium sulphate based screeds, we recommend priming with ASODUR-V360W due to its greater barrier effect. Heated screeds must be commissioned prior to the installation of tiled flooring in accordance with recognized technical regulations. 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:

- Cement-based screeds (CT) 2.0 CM% for unbonded or floating screeds
- Calcium sulphate based screeds (CA) without underfloor heating 0.5 CM%
- Calcium sulphate based screeds (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 and application:

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

Mix ratio:

9.25 - 11.00 litres water : 25 kg MONOFLEX-XL.

Allow to stand for approx. 3 minutes then remix. Do not prepare more adhesive than can be used within the pot life. Spread the mixed adhesive over the substrate surface and comb through with a notched trowel suitable for the tile format. Install tiles within the adhesive open time.

When installing large format tiles greater than 60 x 60 cm, we recommend that MONOFLEX-XL is modified with UNIFLEX-B. Modifying with UNIFLEX-B elastifier increases the deformability and adhesion strength of MONOFLEX-XL. Dependent on the modification, deformability class S2 can be achieved, which is particularly recommended for tiles larger than 60 x 60 cm. This considerably compensates for shear stresses, which can lead to delamination in unfavourable exterior conditions.

UNIFLEX-B is mixed with water for improved application and then mixed with MONOFLEX-XL until homogenous.

Mixing ratio: highly deformable (relates to class C2 S2, deformation > 5 mm):

4.17 kg UNIFLEX-B : approx. 5.0 litres water : 25 kg MONOFLEX-XL

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Important advice:

- When installing tiles in heavy duty areas in exterior locations (balconies and terraces) the highly elastic bonded waterproof membrane system AQUAFIN-2K/M and UNIFIX-S3 or UNIFIX-2K should be used.
- When installing natural and synthetic stone tiles pay particular attention to the specific product properties of the material to be fixed (tendency to discolour, risk of curling etc) and follow the manufacturer's installation recommendations. We recommend that a trial area is carried out.
- To avoid curling effects due to water absorption when installing agglomerate/synthetic stone tiles we recommend the use of ASODUR-EK98 or ASODUR-Design.
- When installing large format tiles greater than 50 x 50 cm, in order to improve the adhesion, a scratch coat should be applied to the rear of the tile or they should be fixed in the buttering-floating method.
- Prime calcium sulphate based substrates with ASO-Unigrund-S (mix ratio 1:1 with water).
- To avoid the formation of ettringite with calcium sulphate based substrates, UNIFIX-AEK is a suitable adhesive for installing tiles to these substrates up to residual moisture levels of 1.0% for heated and 1.5% for unheated constructions (CM% - carbide hygrometer).
- Do not attempt to re-life thin-bed adhesive that has already stiffened by adding water or fresh mortar, there is a risk of inadequate strength development.
- In continuously immersed areas (swimming pools, containers etc.) we recommend the use of the system based thin bed adhesive UNIFIX-2K/6 onto the SCHOMBURG waterproof membrane appropriate for the particular application.
- 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

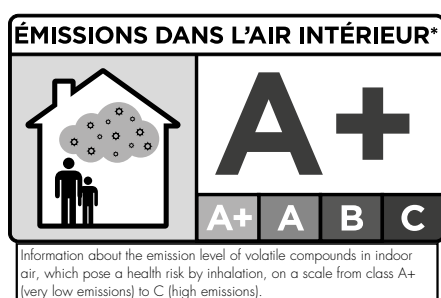
with appropriate measures. Mechanically roughen the magnesite screed and prime with the epoxy resin ASODUR-V360W (approx. 250 g/m²) with a maximum of 5% water as necessary. After waiting from 12 to 24 hours at +20° C, apply a second coat of ASODUR-V360W (approx. 300 - 350 g/m²). Blind the fresh second coat with 0.5-1.0 mm quartz sand. After waiting for a further 12-16 hours continue with the tile installation.

- MONOFLEX-XL is a hydraulic hardening mortar that needs to be protected against water and frost penetration until fully cured, which may take a few days in bad weather conditions.
- Protect areas not be treated with MONOFLEX-XL.
- 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] "Large format tiles"
[*5] "Ceramic tiles, natural stone and cement-bound composite slabs on cement-based floor constructions with insulation"
[*6] "Ceramic tiles, natural stone and cement-bound composite slabs on heated cement-based floor constructions"
[*7] "Finishes in exterior areas"
[*8] "Finishes on poured asphalt"
[*9] "Tolerances in level"
[*10] "Tolerances"
[*11] "Cleaning, protecting, maintenance"
[*12] "Swimming pool construction"

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Please use a current valid EU Safety data sheet.

GISCODE: ZP1



This technical data sheet does not consider local building codes or legal requirements. It shall be used as general reference for the product, based on our current knowledge and experience. Legally binding is only the latest Data Sheet from one of our foreign subsidiaries inside their sales territory. In any case of uncertainty please consult our technical department for further information.