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## Technical Data Sheet

# LIGHTFLEX

Art.-No. 2 01005

Universal flexible adhesive - especially light with high yield

<b>CE</b>	
SCHOMBURG GmbH & Co. KG Aquafinstraße 2-8 D-32760 Detmold	
04 2 01005	
EN 12004 <b>LIGHTFLEX</b>	
Cement-based adhesive with increased performance for the installation of tiles in interior and exterior areas	
C2	
Reaction to fire:	class A1/A1 <sub>f</sub>
<b>Bond strength, as</b>	
Tensile adhesion after dry ageing:	≥ 1 N/mm <sup>2</sup>
<b>Durability, as</b>	
Tensile adhesion strength after water immersion:	≥ 1 N/mm <sup>2</sup>
Tensile adhesion strength after heat ageing:	≥ 1 N/mm <sup>2</sup>
Tensile adhesion strength after freeze/thaw cycles:	≥ 1 N/mm <sup>2</sup>



or dispersion-based bonded SCHOMBURG waterproof systems in e.g. wet duty environments, communal showers, swimming pool surrounds and swimming pools. Uneven wall or floor substrates can be levelled out with LIGHTFLEX up to a thickness of 15 mm before starting tiling. Due to the low weight, transportation to the building site is considerably easier. LIGHTFLEX is suitable for use in interior rooms in accordance with the AgBB assessment scheme (panel for the health related assessment of construction products), the French VOC regulation and GEV EMICODE.

### Properties:

- Tested to DIN EN 12004, C2 TE S1
- High yield
- For interior and exterior use
- Easy and smooth application
- High initial grab
- Good sag resistance
- Variable, use also as a flow-bed adhesive
- Fulfils the required criteria for a "flexible adhesive"
- Reduced dust
- Very low emissions

### Areas of application:

LIGHTFLEX is used as a thin bed adhesive and flow-bed adhesive with a high yield for fixing vitrified and earthenware tiles, ceramic tiles with low water absorption  $\leq 0.5\%$  (fully vitrified), clinker, mosaic and natural stone that is neither translucent nor sensitive to discolouration. LIGHTFLEX is suitable for secure fixing to all substrates in accordance with DIN 18157, part 1, e.g. concrete, aerated concrete, render, cement-based (CT) and calcium sulphate based (CA) screeds and heated screeds, brickwork, plasterboard etc. as well as to existing well bonded tiled finishes. Furthermore it is suitable as an adhesive for lightweight construction boards e.g. composed of extruded polystyrene (tilebacker boards) and for fixing tiles to mineral-based

### Technical Data:

Basis:	lightweight fillers, cement, additives (polymer modified) cement grey
Colour:	approx. 0.8 kg/l
Bulk density:	
Application/ substrate temperature:	+5°C to +25 °C
Pot life *):	approx. 2 hrs
Open time *):	approx. 30 mins
Grout after *):	approx. 24 hrs
Foot traffic after *):	approx. 24 hrs
Full service conditions *):	after 7 days
Cleaning:	clean with water immediately after use
Reaction to fire:	A1/A1 <sub>f</sub>
Testing:	<ul style="list-style-type: none"> <li>• DIN EN 12004, MPA-NRW Test certificate 220003005-04</li> <li>• DIN EN 12002</li> <li>• Guidelines for flexible adhesives by the German Construction Industry and the Association of the German Tile Industry</li> <li>• Reaction to fire to EN 13501-1</li> <li>• Low emissions to the AgBB scheme, French VOC by-law and EC1R Plus to GEV EMICODE</li> </ul>

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## Consumption:

- approx. 1.3 kg/m<sup>2</sup> with a 6 mm notched trowel
- approx. 1.8 kg/m<sup>2</sup> with an 8 mm notched trowel
- approx. 2.2 kg/m<sup>2</sup> with a 10 mm notched trowel
- approx. 1.9 kg/m<sup>2</sup> with an 8 mm Flowline trowel
- approx. 2.7 kg/m<sup>2</sup> with a 10 mm Flowline trowel
- approx. 3.2 kg/m<sup>2</sup> with a 12/20 mm medium bed trowel

Packaging: 15 kg plastic bag

Storage: Dry, 12 months in the original unopened packaging. Use opened packaging promptly.

\*) These values relate to +20 °C and 65% relative humidity.

## Substrate preparation:

The substrate must be dry, load bearing sufficiently flat and free from penetrating cracks and separating substances such as oil, paint, laitance and loose components. The substrate surface must have a largely closed texture and its condition must be appropriate for its type. For tiling, the substrate, its preparation and product application must conform to DIN 18157, part 1. Prime absorbent substrates with ASO-Unigrund-GE or ASO-Unigrund-K (diluted 1:3 with water). Calcium sulphate screeds must be abraded, vacuumed and thoroughly primed as with all substrates based on calcium sulphate binders. If large format tiles are to be installed and/or medium bed adhesives are used, then due to the formation of a greater barrier, we recommend priming with INDUFLOOR-IB2360. Heated screeds must be commissioned in accordance with technical regulations before applying finishes. To determine whether the substrate is ready for tiling carry out a moisture measurement with a carbide hygrometer (CM device). The CM moisture measurement may not exceed

- CT 2.0 CM% for screeds on insulation or separating layers in interiors
- CA without underfloor heating 0.5 CM%
- CA with underfloor heating 0.3 CM%

The CM measurements are to be carried out in accordance with current FBH-AD work instructions from the technical information "coordination of cut out areas for heated floor constructions".

## Product preparation:

Mix LIGHTFLEX with clean water in a clean mixing bucket until homogenous.

### Mixing ratio:

as a thin-bed adhesive:

7.5 – 8.1 litres water: 15 kg LIGHTFLEX

as a smoothing mortar:

7.4 – 7.9 litres water: 15 kg LIGHTFLEX

as a flow-bed adhesive:

10.2 – 10.8 litres water: 15 kg LIGHTFLEX

Allow to stand for 4 minutes, then mix thoroughly through once again. When using as a flow-bed adhesive firstly mix LIGHTFLEX with approx. 8 litres of water and subsequently mix in the remaining water until a pourable consistency is achieved. Do not mix more material than can be used within the pot life. Spread the mixed adhesive over the substrate and dependent on the tile format comb through with the appropriate notched trowel. Fix the finishing material within the adhesive open time. When installing large format tiles larger than 60 x 60 cm, we recommend that LIGHTFLEX is modified with UNIFLEX-B. Modification with this elastifier improves the deformability and tensile adhesion of LIGHTFLEX. Dependent on the level of modification, S2 deformation class 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 LIGHTFLEX until homogenous.

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

4.17 kg UNIFLEX-B : approx. 4.0 litres water : 15 kg LIGHTFLEX.

## Important advice:

- For fixing tiles in heavy duty areas in exterior locations (balconies and terraces) install the highly elastic bonded waterproofing system AQUAFIN-2K/M and UNIFIX-2K.
- Levelling layers produced with LIGHTFLEX can be tiled over after approx. 8 – 24 hours dependent on thickness applied \*):
- Where LIGHTFLEX is used as a flow-bed adhesive,

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tiles are generally ready for foot traffic and grouting after 48 hours.

- When fixing natural and synthetic stone refer to the specific product properties (tendency to discolour, risk of curling etc.) and the manufacturer's recommendations. In cases of doubt carry out a trial area.
- To avoid curling effects through water absorption, we recommend the use of ASODUR-EK98 or ASODUR-Design with agglomerate/synthetic stone.
- When installing large format tiles larger 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-GE or ASO-Unigrund (mix ratio 1:3 with water).
- To avoid the formation of ettringite with calcium sulphate based substrates UNIFIX-AEK is suitable for fixing tiles on to these substrates up to a residual moisture content of 1.0% when heated and 1.5% when unheated, measure with a carbide hygrometer.
- Adhesive that has already started to set should not be re-lifted by adding more water or fresh adhesive. There is a risk of inadequate strength development.
- In continuously wet areas (swimming pools, containers etc) we recommend the use of the system based thin-bed adhesive UNIFIX-2K/6 onto the SCHOMBURG waterproof membrane suitable for the particular application.
- Direct contact between cement-based tile mortars and magnesium-based screeds leads to the destruction of the magnesite screed through a chemical reaction. Negative moisture penetration from the rear must be prevented through appropriate measures. Mechanically abrade the magnesite substrate and prime with the epoxy resin INDUFLOOR-IB2360 (approx. 250 g/m<sup>2</sup>) with a maximum of 5% water as necessary. After waiting between 12-24 hours at +20° C, then apply a second coat of INDUFLOOR-IB2360 (approx. 300-350 g/m<sup>2</sup>). Broadcast the wet second coat with 0.5-1.0 mm quartz sand to excess. After waiting for a further 12-16 hours continue with the tile installation.
- LIGHTFLEX is a hydraulically setting adhesive and should be protected from the influences of water and

frost until fully cured, which may take a few days under unfavourable weather conditions.

- Protect areas not to be treated from the effects of LIGHTFLEX.
- The relevant current regulations are to be observed. E.g.  
DIN 18157  
DIN 18352  
DIN 18560  
EN 13813  
DIN 1055

The BEB data sheets distributed by the National Association for screeds and finishes. The technical information "coordination of cut out areas with heated floor construction".

The ZDB data sheets distributed by the Technical 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"
- [\*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"

Please use a current valid European Health & Safety data sheet. Low chromate.

GISCODE: ZP1

