LIGHTFLEX

Universal flexible adhesive - especially light with high yield

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”.

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 ≤ 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, and for fixing tiles to mineral-based or dispersion-based bonded SCHOMBURG waterproof systems. Uneven wall or floor substrates can be leveled out with LIGHTFLEX up to a thickness of 15 mm before tiling commences. Due to the low weight, transportation to the building site is considerably easier.

Technical Data:
*) The values relate to +20˚C and 65% relative humidity.

Basis:	Lightweight fillers, cement, additives (polymer modified)
Colour:	Cement grey
Bulk density:	Approx. 0.81 kg/l
Application/substrate temperature:	+5˚C to +25˚C
Pot life *):	Approx 2 hours
Open time *):	Approx 30 minutes
Grout after *):	Approx 24 hours
Traffic after *):	Approx 24 hours
Fully cured *):	After 7 days
Cleaning:	Clean immediately with water after use.
Testing:	DIN EN 12004, MPA-NRW Test Certificate 220003005-04 DIN EN 12002 Guidelines for flexible adhesives by the German Construction Industry and the Association of the German Tile Industry.
Coverage:	Approx. 1.3 kg/m^2 with a 6 mm notched trowel. Approx. 1.8 kg/m^2 with an 8 mm notched trowel. Approx. 2.2 kg/m^2 with a 10 mm notched trowel. Approx. 1.9 kg/m^2 with an 8 mm Flow-line trowel. Approx. 2.7 kg/m^2 with a 10 mm Flow-line trowel. Approx 3.2 kg/m^2 with a 12/20 mm medium bed trowel.
Packaging:	15 kg PE lined bags
Storage:	Dry, 12 months in the original unopened packaging. Use opened packaging promptly.

Surface Preparation:

The substrate must be dry, load bearing, sufficiently flat and free from continuous cracks and separating substances such as oil, paint, sinter layers and loose components. The substrate surface condition must be relevant for its type and be largely close pored. For tiling, the substrate preparation and application must conform to DIN 18157, part 1. Prime absorbent substrates with ASO -Unigrund. Calcium sulphate screeds must be abraded, vacuumed and thoroughly primed with ASO-Unigrund as with all substrates based on calcium sulphate binders. 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 working instructions from FBH-AD 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 : 15kg LIGHTFLEX

Allow to mature for 4 minutes, then mix 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 the 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.

Important Advice:

- For fixing tiles in heavy duty exterior locations (balconies and terraces) install the highly elastic bonded waterproofing system AQUAFIN-2K/M and UNIFIX-2K.
- Leveling coats 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, tiles can generally be trafficked and grouted 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 uptake, we recommend the use of ASODUR-EK98 with conglomerate/synthetic stone.
- Prime calcium sulphate 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 on to these substrates up to a residual moisture content of 1.0% when heated and 1.5% when unheated, measured with a carbide hygrometre.
- Adhesive that has already started to set should not be re-lifed by adding more water or fresh adhesive. There is a risk of inadequate strength development.
- In continually wet areas (swimming pools, containers etc.) we recommend the use of the system thin bed adhesive UNIFIX-2K/6 on to the SCHOMBURG waterproofing compound suitable for the particular installation.
- Direct contact between cement-based adhesives and magnesium-based screeds leads to the destruction of the screed through chemical reaction. Negative moisture pressure from the substrate must be prevented with appropriate measures. Mechanically abrade the magnesite substrate and prime with the epoxy resin ASODUR-V-360-W with a maximum addition of 5% water (approx. 250 g/m^2). Leave for between 12 and 24 hours at +20°C, then apply a second coat of ASODUR-V-360-W (approx. 300-350 g/m^2). Broadcast the wet second coat with quartz sand of particle size 0.5-1.0mm to excess. After waiting for a further 12-16 hours carry out the floor finish.
- 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 favourable 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
  DIN 18202
  DIN 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]Advice for the installation of waterproofing combined with ceramic tiles in interior and exterior areas (January 2005).
[*2]Finishes on calcium sulphate screeds (October 2005).
[*3]Movement joints in tiles finishes.
[*5]Ceramic tiles, slabs, natural stone and concrete blocks on cement-based floor construction with insulation.
[*6]Ceramic tiles, slabs, natural stone and concrete blocks on heated cement-based floor construction.
[*7]Tiled finishes on the exterior of buildings.

Please observe a valid European safety data sheet.

Low chromate in accordance with TRGS 613

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