



Technical Data Sheet

CRISTALLIT®-MBK-flex

Art.-No. 2 05400

Natural stone adhesive, white, rapid, thin bed or medium bed

Properties:

- Rapid crystalline water binding
- Polymer modified
- Rapid setting
- White
- Up to 15mm bed thickness
- For interior and exterior areas
- Conforms to DIN EN 12004, C1F
- Especially smooth

Areas of application:

CRISTALLIT-MBK-flex is suitable as a medium or thin bed adhesive for the installation of natural and synthetic stone tiles as well as vitrified or earthenware ceramic finishes with highly profiled backs, with variations in thickness, with high and low water absorption. Preferred for installations under time pressure and for fixing light, translucent materials prone to discolouration such as e.g. crystalline marble, limestone, granite, porphyry, quartzite, sandstone etc. The efficient binding of the water in CRISTALLIT-MBK-flex offers additional protection against discolouration from the stone's own residue. CRISTALLIT-MBK-flex is suitable for a secure bond to even and uneven, load bearing substrates. Furthermore CRISTALLIT-MBK-flex is suitable for levelling out irregularities up to 15mm.

It is additionally suitable as an adhesive for lightweight building panels e.g. in extruded polystyrene and for bonding tiles to SCHOMBURG waterproof coatings. In continuously wet areas such as e.g. swimming pool decks and public showers we recommend the addition of 2.0 kg UNIFLEX-B per 25 kg.

On horizontal exterior surfaces such as balconies and terraces modify CRISTALLIT-MBK-flex with 8.33 kg UNIFLEX-B per 25 kg.

Typical Properties:

Basis: cement, sand and additives
(polymer modified)
Colour: white

Bulk density:	approx. 1.5 kg/dm ³
Application/ substrate temperature:	min. +5 °C to max. +30 °C Higher temperatures shorten/lower temperatures increase the pot life and curing time.
Pot life:	approx. 30-45 mins.*
Open time:	approx. 10-20 mins.*
Foot traffic after:	approx. 4 hrs.*
Grout after:	approx. 12 hrs.*
Full loading/service:	after approx. 7 days*
Testing:	DIN EN 12004, C1F MPA NRW Test certificate 220002641-03

*) at +20 °C, 65% RH

Substrate preparation:

CRISTALLIT-MBK-flex is suitable for a secure bond to all substrates conforming to DIN 18157, part 1, e.g. concrete, aerated concrete, render/plaster, asphalt of hardness class IC10 and IC15, CT and CA screeds, heated screeds, masonry work, plasterboard etc. The substrate must be dry, load bearing, adequately flat and free from penetrating cracks and separating substances such as oil, paint, laitance and loose parts. It must have a largely closed finish with a surface condition and strength appropriate for its type. When fixing tiles the substrate preparation and application must follow DIN 18157, part 1. Abrade smooth concrete surfaces and prime porous substrates with ASO-Unigrund. Mechanically abrade anhydrite screeds followed by vacuuming and as with all calcium sulphate bound substrates prime with ASO-Unigrund. Heated screeds must be heated up prior to laying finishes in accordance with recognised technical regulations. The suitability of substrates to take coverings is to be determined through moisture measurements with a CM-device (carbide hygrometer).

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The CM-moisture content may not exceed:

- CT 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 carbide hygrometer measurement is to be carried out in accordance with current operating instructions FBH-AD from the technical information "Coordination of cut out areas with heated floor constructions".

Product preparation:

Mix CRISTALLIT-MBK-flex with clean water in a clean mixing bucket until homogenous.

Mixing ratio:

1.1 – 1.2 litres water : 5.0 kg CRISTALLIT-MBK-flex or

5.5 – 6.0 litres water : 25.0 kg CRISTALLIT-MBK-flex

Allow to stand for a short time, then remix. Do not prepare more adhesive than can be used within the pot life. Spread the mixed adhesive on to the substrate and comb through with a suitable notched trowel dependent on tile format. Lay finishing materials within the adhesive open time. It is advantageous to lay uncalibrated material using the floating-buttering method. Always clean the mixing bucket as CRISTALLIT-MBK-flex acts as an accelerator. Do not mix with other cement-based adhesives.

Estimating & Supply:

Packaging:

25 kg bag

Consumption:

- approx. 1.6 kg/m²/mm thickness

- 3.4 kg/m² with an 8mm notched trowel

- 7.2 kg/m² with a 20/15 medium bed trowel

Cleaning & Equipment Maintenance:

Clean tools with water immediately after use

Storage & Shelf Life:

6 months when stored cool and dry in the original unopened packaging. Use opened packaging promptly.

Important advice:

- When using ASOFLEX-AKB use ASODUR-EK98 to install the tiles.
 - Not suitable for areas to be fully submerged underwater.
 - Large irregularities in the substrate up to 15mm can be evened out by spreading a levelling layer of CRISTALLIT-MBK-flex. The levelling layer must be allowed to cure for a minimum of 6 hours at +20 °C, 65% RH.
 - To avoid curling effects due to water absorption we recommend that when installing serpentinite, schist, and with agglomerate/synthetic stones that contain these natural stones, to use ASODUR-EK98.
 - For the installation of agglomerate/synthetic stone we recommend our thin bed adhesive CRISTALLIT-flex modified with 2.0 kg UNIFLEX-B per 25 kg.
 - When installing natural or synthetic stone observe the specific properties of the material (tendency to discolour, risk of curling etc.) and the installation recommendations of the producer. In cases of doubt carry out a trial area.
 - Thoroughly prime calcium sulphate based substrates such as e.g. ASO-NM15 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.
 - When installing tiles or slabs in highly demanding external areas (balconies/terraces) use the highly elastic waterproofing system AQUAFIN-2K or AQUAFIN-2K/M.
 - In continuously wet areas (swimming pools, containers etc.) we recommend the use of the system thin bed adhesives UNIFIX-2K, UNIFIX-2K/6 onto the SCHOMBURG waterproofing product suitable for the
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particular area. Observe the specific properties of the covering material.

- Protect areas where CRISTALLIT-MBK-flex will not be applied, from exposure.
- The direct contact between cement-based tile adhesives and magnesium-based screeds leads to the destruction of the magnesite screed. Rear penetrating moisture from the substrate must be eliminated with suitable measures. The magnesite substrate is to be mechanically abraded and primed with the epoxy resin ASODUR-V360W with up to 5% water (approx. 250 g/m²). After waiting for approx. 12 hours up to 24 hours at +20 °C apply a second coat of ASODUR-V360W (approx. 300-350 g/m²). Blind the wet second coat with quartz sand of particle size 0.5-1.0 mm. Wait for a further 12-16 hours before further work.
- Observe the relevant current regulations. Therefore e.g. DIN 18157, DIN 18352, DIN 18560, DIN 13813, DIN 18202, DIN 1055
The BEB information sheets distributed by the "Bundesverband Estrich und Belag e.V."
The professional information for the coordination of cut out points for heated floor construction.
The ZDB information sheets distributed by the German professional tile association:
[*1] Advice for the installation of combined waterproofing with tile and slab cladding and finishes for interior and exterior areas. (January 2005).
[*3] Movement joints in tile and slab cladding and finishes.
[*4] Advice on the installation of bonded waterproofing coatings combined with tiles and slabs in interior and exterior areas.

[*5] Ceramic tiles and slabs, natural and concrete stone/slabs on cement-based floor constructions with insulation.

[*6] Ceramic tiles and slabs, natural and concrete stone/slabs on heated cement-based floor constructions.

[*7] Tiled finishes in exterior locations.

Please observe a valid EU safety data sheet.

GISCODE: ZP1