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SCHOMBURG

Technical Data Sheet

CRISTALLIT®-FLEX

Flexible natural stone adhesive

Art.-No. 2 05419

CE

SCHOMBURG GmbH & Co. KG
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D-32760 Detmold
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2 05419

EN 12004
CRISTALLIT-FLEX
Fast setting, cement-based adhesive with increased performance for the installation of tiles in interior and exterior areas

C2 F

Reaction to fire: class $A1/A1_{fl}$

Tensile adhesion strength after water immersion:	≥ 1 N/mm²
Tensile adhesion strength after heat ageing:	≥ 1 N/mm²
Tensile adhesion strength after dry ageing:	≥ 1 N/mm²
Tensile adhesion strength after freeze-thaw cycles:	≥ 1 N/mm²
Early tensile adhesion strength after 6 hrs:	≥ 0.5 N/mm²

CE
0799

SCHOMBURG GmbH & Co. KG
Aquafinstrasse 2–8
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204990

SANIFLEX-EU
Construction kit for producing waterproofing for walls and floors in wet rooms

0799-CPR-150

ETA-17/0469
ETAG 022-1

Reaction to fire	E
Release of dangerous substances	see SDS
Water vapour permeability	
with ASO-Unigrund-D	s_d ≈ 44m
with ASO-Unigrund-GE/K	s_d ≈ 9m
with ASO-Unigrund-S	s_d ≈ 6.8m
Water impermeability to EN 13967	waterproof
Crack bridging ability	category 1: 0.4 mm
Tensile strength	≥ 0.5 MPa
Joint bridging ability	category 2: waterproof
Watertightness at penetrations	category 2: waterproof
Water resistance	category 2: ≥ 0.5 MPa
Temperature resistance	category 2: Temperature resistant
Resistance to alkalis	category 2: Alkali resistant
Workability	applicable
Thickness	at least 0.5 mm

heated screeds. It is also suitable for bonding lightweight construction boards e.g. from extruded polystyrene.
CRISTALLIT-FLEX is a system component on mineral and dispersion-bonded SCHOMBURG bonded waterproof systems in wear classes A, A0, B0 and water influence classes W0-I, W1-I, W2-I, W3-I.
In continuously wet areas such as e.g. swimming pool surrounds and communal showers, we recommend that 25 kg of CRISTALLIT-FLEX is modified with 2.5 kg of UNIFLEX-F in floor areas. On horizontal external areas such as e.g. balconies and terraces, modify 25 kg CRISTALLIT-FLEX with 8.33 kg UNIFLEX-F.
Suitable for wet duty classes A0, B0 and A in accordance with the ZDB data sheet [*1].
The product is a component of the SANIFLEX-EU system in accordance with ETAG 022-part 1.

- Rapid crystalline binding of the mix water.
- Rapid hardening.
- White.
- Up to 10 mm bed thickness.
- For interior and exterior use.
- Fir walls and floors.
- Tested to DIN EN 12004 C2FTE.

CRISTALLIT-FLEX C2 FTE EN 12004

FAST TECHNOLOGY

Areas of application:

For the installation of natural and synthetic stone tiles with high or low water absorption as well as for earthenware and vitrified ceramic finishes. Preferred when work is under time constraints and for the installation of light coloured, translucent material and those prone to discoloration such as e.g. crystalline marble, limestone, granite, porphyry, quartzite, sandstone to name a few. With its ability to speedily bind the mix water, CRISTALLIT-FLEX offers additional protection against discoloration resultant from the stone's own constituents. CRISTALLIT-FLEX is suitable for a secure bond to concrete, render/plaster, masonry work, moisture resistant plasterboard etc., and for use on

Technical Data:

Basis:	sand, cement, additives (polymer modified)
Colour:	white
Filler base:	fine sand
Adhesive bed thickness:	2 – 10 mm
Application / substrate temp.:	+5° C to +25° C
Pot life *:	approx. 60 mins
Open time *:	approx. 15 – 20 mins
Grout after *:	approx. 4 hrs
Foot traffic after *:	approx. 4 hrs
Testing:	DIN EN 12004 C2 FTE, MPA Braunschweig, Test report (1200/897/17b) System component of ETA-17/0469
Cleaning:	immediately after use with water
Consumption:	2.6 kg/m² with a 6 mm notched trowel 3.5 kg/m² with an 8 mm notched trowel 4.3 kg/m² with a 10 mm notched trowel
Packaging:	6 kg bag, 25 kg bag

CRISTALLIT®-FLEX

Storage: dry, 12 months when stored in the original unopened packaging. Use opened packaging promptly.

Substrate preparation:
CRISTALLIT-FLEX is suitable for the assured installation to all substrates covered in DIN 18157, part 1 e.g. concrete, aerated concrete, render/plaster, poured asphalt of class IC10, cement-based and calcium sulphate based screeds, heated screeds, masonry work and moisture resistant plasterboard etc. The substrate must be dry, load-bearing, adequately flat, be free from penetrating cracks and separating substances such as oils, paints, laitance and loose areas. It must have a closed surface texture and exhibit surface characteristics and strength consistent with its type. When installing tiles, the substrate, its preparation and workmanship must conform to DIN 18157, part 1. Roughen smooth concrete surfaces, prime absorbent substrates with ASO-Unigrund. Calcium sulphate screeds must be abraded, vacuumed and as with all calcium sulphate based substrates, primed with ASO-Unigrund. When installing large format tiles on calcium sulphate screeds, we recommend priming with ASODUR-V360W due to its increased barrier effect. Prior to the installation of tiled finishes on to heated screeds, they must be commissioned to recognised technical regulations. The readiness of a substrate to receive finishes is to be determined by moisture measurements using a carbide hygrometer (CM devce). The moisture content should 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 moisture measurements are to be carried out in accordance with current FBH-AD work instructions taken from the technical information on the coordination of cut-out points with heated floor constructions.

Product preparation:
Mix CRISTALLIT-FLEX in a clean mixing bucket with clean water until homogenous.
Mixing ratio:
1.2 – 1.5 litres water : 6.0 kg CRISTALLIT-FLEX
5.0 – 6.0 litres of water : 25 kg CRISTALLIT-FLEX
Allow to stand for a short period, then re-mix.
Do not mix more adhesive than can be used within approx. 60 minutes*. Spread the mixed adhesive over the substrate surface and comb through with a notched trowel appropriate to the tile size. Install the tiles within the adhesive open time. Always clean mixing containers, as CRISTALLIT-FLEX, which is setting acts as an accelerator. Do not mix with cement-based adhesives.

On horizontal external surfaces, e.g. balconies and terraces, CRISTALLIT-FLEX is hardened with UNIFLEX-F in the following mix ratio:
8.33 kg UNIFLEX-F : 25 kg CRISTALLIT-FLEX :
approx. 2.25 l water

For laying ceramic tiles (large format) in highly thermally stressed and other highly stressed areas, the use of a tile adhesive with higher deformability class S2, e.g. UNIFIX-S3 or UNIFIX-S3-fast, is recommended. CRISTALLIT-FLEX can be used to produce a highly deformable adhesive mortar of class C2, deflection > 5 mm (corresponds to S2) with the following mix ratio when UNIFLEX-F is added:
Mixing ratio:
8.33 kg UNIFLEX-F : 25 kg CRISTALLIT-FLEX :
approx. 2.25 l Wasser

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

Advice:

- Not suitable for use in underwater areas.
- To avoid curling effects through water absorption, we recommend when fixing serpentinite, slate or agglomerate/synthetic stone which contain these

natural stones, that ASODUR-EK98 or ASODUR-DESIGN is used.
- When installing agglomerate/synthetic stone we recommend that 25 kg CRISTALLIT-FLEX is modified with 2.5 kg UNIFLEX-F.
- When CRISTALLIT-FLEX is modified with UNIFLEX-F the setting process is altered, delaying the time before grouting and foot traffic is permitted.
- When installing large format tiles greater than 50 x 50 cm, butter the backs of the tiles or use the buttering/floating technique to improve adhesion.
- When fixing natural and synthetic stone, take the specific properties of the product into consideration (tendency to discolour, risk of curling). We recommend that a trial area is fixed.
- Thoroughly prime calcium sulphate based substrates, such as e.g. ASO-NM15, with ASO-Unigrund-GE or ASO-Unigrund-K (mix ratio 1:3 with water). To avoid the formation of ettringite, UNIFIX-AEK is especially suited for installing tiles to calcium sulphate based substrates up to a residual moisture of 1.0% when heated and 1.5% when unheated (carbide hygrometer measurements). Take the specific properties of the product to be installed into consideration.
- Adhesive, which has started to stiffen, should not be re-lifed through the addition of water or fresh mortar as there is a risk of inadequate strength development.
- When installing tiles in more demanding conditions externally (balconies and terraces), we recommend waterproofing with the highly elastic membranes AQUAFIN-TBS.
- In continuously wet areas (swimming pools, water features etc.), we recommend the use of system thin-bed adhesives UNIFIX-S3 over the SCHOMBURG waterproof membrane, appropriate for the conditions. Consider the specific properties of the material to be installed.
- Protect areas not being treated from the effects of CRISTALLIT-FLEX.
- Direct contact between cement-based adhesives and magnesite screeds leads to the destruction of the magensite screed through chemical reaction. Prevent moisture ingress from the rear using suitable means. Mechanically abrade the magnesite substrate and prime with the epoxy resin ASODUR-V360W mixed with max. 5% water as necessary (approx. 250 g/m²). After waiting from between 12 to 24 hrs at +20° C, apply a second coat of ASODUR-V360W (approx. 300 – 350 g/m²). Blind the second coat, whilst still wet, with 0.5 – 1.0 mm quartz sand. Wait for a further 12 – 16 hours then continue with the installation.
- Observe the relevant current regulations. E.g.
  DIN 18157, DIN 18352, DIN 18534, DIN 18560
  EN 13813, DIN 18202, DIN 1055
  The BEB information sheets, distributed by the Bundesverband Estrich und Belag e.V.
  The technical information for natural stone from the German Natural Stone Association.
  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] "Heavy duty ceramic floor finishes"
  [*3] "Movement joints in wall and floor tile finishes"
  [*4] "Tiling to calcium sulphate screeds"
  [*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"

Please observe a current valid EU Safety Data Sheet.

GISCODE: ZP1