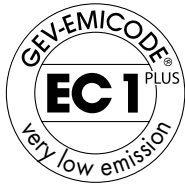


# CRISTALLFUGE-PLUS

**Art.-No. 2 04202**

## Mineral-based multi-function flexible grout



- Rapid crystalline binding of the mix water.
- Protects against bacterial attack and mould growth.
- Protects sensitive materials against discoloration from the stone's own constituents.
- Fulfills the requirements of CG2WA to DIN EN 13888.
- Rapid setting.
- Good application and wash-off properties.
- Smooth consistency.
- Vapour permeable.
- Pigmented.
- Polymer modified.
- Cures without cracks.
- For floor and wall heating systems.
- Colours matched to the ESCOSIL-2000-ST silicone system.

### Areas of application:

CRISTALLFUGE-PLUS is especially suitable for the discoloration free grouting of sensitive natural stone such as e.g. limestone, Jura marble, Sohlhofener stone, sensitive light crystalline marble, granite and others. The application, initial set in the joint, water retention and the wash-off performance are matched to these materials. The rapid crystalline binding of the mix water reliably prevents edge discoloration.

CRISTALLFUGE-PLUS can be used for joints up to 10 mm

in interior and exterior areas, on walls and floors, in dry, intermittently wet and wet areas. It is also possible to grout ceramic tiles such as earthenware, vitrified, fully vitrified tiles, glass mosaics and it is especially suitable for grouting finishes with low water absorption and narrow joints such as e.g. with fully vitrified tiles and glass tiles.

The addition of gold or silver glitter together with the large colour selection permits numerous decorative design possibilities to be achieved.

CRISTALLFUGE-PLUS is suitable for use in interiors in accordance with the AgBB evaluation scheme (Committee for health related evaluation of building products), the French VOC byelaw 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 in accordance with DGNB, LEED, BREEAM, HQE. Highest quality level 4, row 7, 8 in accordance with the DGNB criterion "ENV 1.2 local environmental impact".

### Technical Data:

Composition: special cement, mineral aggregates and high quality additives

Colours: white, silver grey, grey, jasmine, pergamon, beige, caramel, jura beige, brown, nut brown, medium grey, titan grey, graphite, bahama beige, sand grey

Joint widths: 1 to 10 mm

Pot life\*: approx. 30-45 mins

Application

temperature: +5 °C to +25 °C

Foot traffic after\*: approx. 2 hrs

Full service

conditions\*: 1 day at the earliest

Water demand: approx. 1.2 - 1.5 l/5 kg

Consumption: see consumption table

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# CRISTALLFUGE-PLUS

Cleaning: with water whilst in the fresh state  
Wet mix density: approx. 1.9 kg/dm<sup>3</sup>  
Packaging: 5 kg plastic bags  
Storage: minimum 18 months when stored dry in the original unopened packaging. Use opened packaging promptly.

\* The values relate to +23° C and 50% relative humidity.

## Consumption table:

Format (cm)	Joint width (mm)	Joint depth (mm)	Consumption (kg/m <sup>2</sup> )
2 × 2	1.5	2.0	0.6
2 × 2	1.5	10.0	2.9
10 × 10	3.0	6.0	0.7
20 × 30	3.0	8.0	0.4
30 × 30	3.0	10.0	0.4
30 × 40	3.0	10.0	0.5
30 × 60	3.0	10.0	0.3
30 × 60	3.0	20.0	0.6
30 × 90	3.0	20.0	0.6

## Substrate preparation and product application:

Adequately rake out tile joints once the adhesive has set sufficiently, then wash the tile surface with water. The adhesive must be fully set otherwise discolouration may appear on the grout joints. Evenly pre-wet very porous tiles. Joint edges must be clean and free from separating substances. The time at which grouting may commence where tiles have been laid in thin-bed adhesives is approx. 3 to 72 hours after installation. With sand:cement fixing methods, the mortar bed must be adequately solid and evenly dry. Do not grout surfaces with varying temperatures (e.g. from sunshine).

The consistency of the grout is to be adjusted to suit the absorbency of the tile and the substrate.

1. Mix CRISTALLFUGE-PLUS with clean water in a

clean mixing bucket. Place 1.2 - 1.5 litres of water in the bucket and add 5 kg CRISTALLFUGE-PLUS and mix until smooth and homogenous. Within this water addition range, the pot life and initial setting time tends to lengthen with higher or shorten with lower water addition levels.

We recommend mixing with a suitable mechanical mixer (speed approx. 300 - 500 rpm).

Subsequently one to three sachets of silver or gold glitter (based on a 5 kg bag) can be mixed into the grout dependent on the desired effect.

Allow to stand for 2 minutes, then re-mix the grout. In order to avoid colour variations, always keep the mix ratio constant. Do not mix more grout than can be used within 30 minutes \*).

2. Work CRISTALLFUGE-PLUS into wall or floor joints using a grout float and light pressure. Strike off cleanly and diagonally to the grout lines, so that a full joint is achieved. If necessary top up the joint after a short wait.
3. Once the grout has started to stiffen (finger test), wash the joint profile clean with a dampened sponge board. After a few minutes wash the tile face clean with the sponge board.
4. Keep movement joints empty in readiness for elastic sealing with ESCOSIL-2000-ST. Rake out any adhesive/grout residues after the initial set and wash with a lightly dampened sponge. Any mortar film remaining can be washed off after a few hours using a sponge board and clean water. When cleaning do not use dry cloths as there is a risk of discoloration due to rubbing dried grout into the grout joints, which are still damp. Protect the freshly grouted areas from conditions, which may affect the setting such as high temperatures, wind, rain or frost. In unfavourable weather conditions (low humidity, draught, wind) and with highly absorbent tile bodies, the grout curing process can be optimized by post-treating the joints with clean water (wetting with the sponge board). Frequently replace wash-off water with fresh water. When grouting tiles with profiled, rough, unglazed or porous surfaces as well as natural

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# CRISTALLFUGE-PLUS

stone with textured surfaces, polished porcelain with surface micro-pores of varying size, it is recommended that a test area is carried out (possibly lightly dampen the surface or impregnate with a suitable material before grouting). The time at which the grout should be washed off is dependent on the tile type and the prevailing climate. After waiting for a sufficient amount of time, smoothen the surface without washing out the joints.

## Important advice:

- Grout, which has started to stiffen, should not be re-lifted through the addition of water or fresh mortar as there is an increased risk of discoloration.
  - We recommend regular aftercare and cleaning for the grouted surface though the use of neutral or slightly alkaline cleaners at the prescribed application concentration. After cleaning, rinse the surface with clean water.
  - When using acid based cleaners observe the appropriate directions. Refer to the specific properties of the natural stone material installed. Pre-wet the joints, then apply the cleaner – at low concentrations. Keep the activity time of the cleaner to a minimum and follow by washing with plenty of water. When used incorrectly, e.g. dosage too high, extended contact with the grout or omitting pre-wetting, acid based cleaners can impair the strength or even completely destroy the grout matrix.
  - Pre-wet very absorbent stone or treat with a suitable sealer before grouting.
  - An increase in temperature of 10°C reduces the working life by approx. 50%!
  - Use only clean water and clean tools.
  - For grouting floors in external areas we recommend ASO-Flexfuge if the specific product properties of the natural stone material permit this and discoloration, e.g. from the stone's own constituent parts, can be precluded.
  - Thoroughly clean the substrate before starting grouting.
  - Note the setting times of adhesives and mortars. There is a risk of discoloration if grouting too early.
  - Assessments have shown that pore or bubble formation in the grout is not related to the grout. The following basic conditions are, as a rule, the cause:
    1. Very highly absorbent stone or ceramic
    2. High w/c ratio in the grout
    3. Air bubbles blended into the mix
- For 1+2: Do not pre-wet highly dense stone. Using a sponge board, wet low density stone, with consequently higher porosity and capillary action, to saturation and then grout.
- For 3: If too high a speed or an inappropriate paddle is used to mix then more air can be entrained. To eliminate it is advantageous to vibrate/bang until the entrained air visibly leaves. A rounded paddle or helical paddle has proven to be advantageous.
- In draughts or sunlight, protect the joints from drying out too quickly by possibly covering with polythene or by repeatedly dampening the joints.
  - Protect joints from rain and frost until set.
  - Form elastic joints between tile bays, interruptions and pipe penetrations as well as perimeter and connecting joints with ESCOSIL-2000-ST or ESCOSIL-2000
  - Irregular moisture penetration, resulting from the sub-base, mortar bed, temperature variations or the material installed, can lead to colour variation in the grout finish, which does not impair the quality of the grout and which may recede with favourable conditions. We cannot therefore guarantee that there will be no colour variation.
  - Unwashed aggregates from sand:cement bedding (e.g. with a loam content) or substances from other construction materials with the potential to discolour may lead to patchiness in the grout surface.
  - In the case of high mechanical loading e.g. from cleaning equipment or chemical exposure, we recommend that the highly durable grout ASODUR-EK98 or ASODUR-DESIGN is used, should the specific stone characteristics permit this.

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# CRISTALLFUGE-PLUS

- To secure against filling edge joints and movement joints with mortar, push in strips of polystyrene or foam profiles before grouting.
- Due to the tendency to show the dirt more, light colours should only be used in interiors or on walls.
- Use material from the same batch number within the same room.
- To achieve optimum cement hydration, ensure that there is adequate moisture available. This is especially important with non-absorbent stone or tiles as no deposit effect is to be expected.
- When grouting natural and synthetic stone, take the specific properties of the product into consideration (tendency to discolour). We recommend that a trial area is grouted.
- Protect areas not being treated from the effects of CRISTALLFUGE-PLUS.
- Keep out of the reach of children.

Please observe a current valid EU Safety Data Sheet.

**GISCODE: ZP 1**

