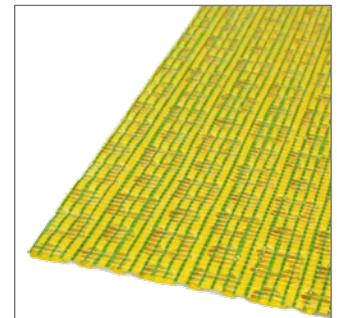
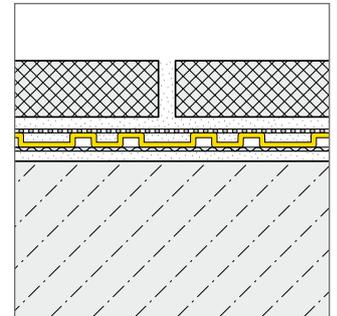
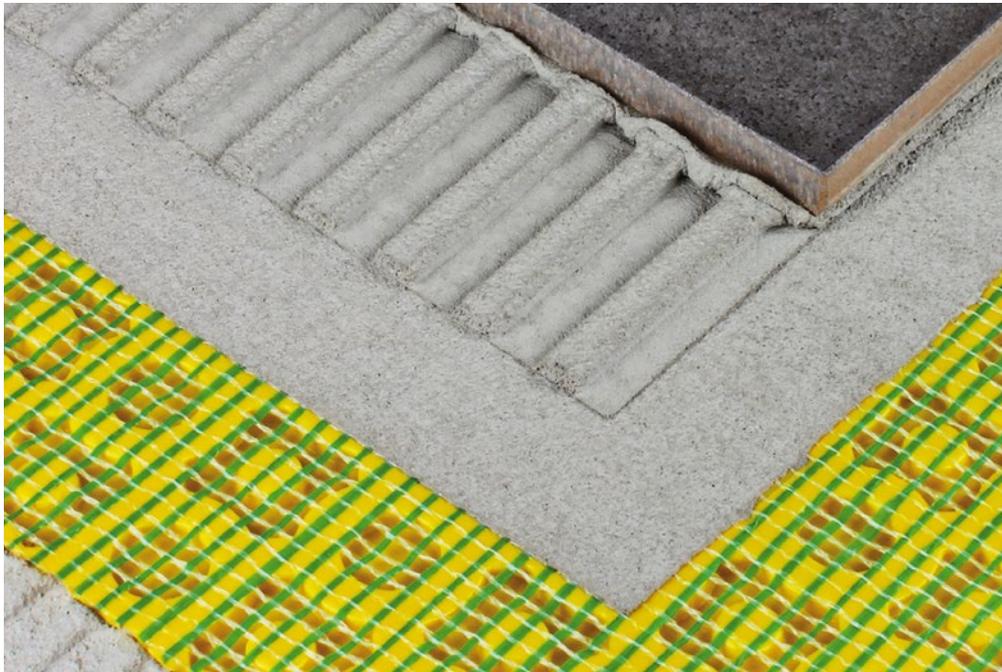


# DURABASE CI++

1/3

## Underlay mats for the decoupling and composite sealing of tiled surfaces

- Installation Instructions -



### GENERAL:

Please refer to our DURABASE CI++ Product Information leaflet. This leaflet is available online at [www.dural.de](http://www.dural.de).

The generally recognised rules of good engineering practice must always be observed!

The following applies to all products / materials: suitability with respect to mechanical and chemical stresses must be checked carefully prior to installation of the mats.

Protect the material from longer periods of exposure to sunlight.

### PREPARING THE SUBSURFACES:

The floor making up the foundation must be dry and free of any material that would impair adhesion. It must be level and able to bear weight. In outdoor areas, the underlay slope must be dimensioned sufficiently (approx. 2%). Any possible corrections must be carried out prior to installation of DURABASE CI++.

#### ■ Cement screed

In accordance with the applicable regulations, cement screeds must be at least 28 days old before tiles are laid and must have a residual moisture level of < 2 CM %. However, hot screeds and floating screeds are also prone to deformation and the formation of cracks later on.

With DURABASE CI++, tiles can be laid over cement screed as soon as it is possible to walk on the screed without causing damage (residual moisture approx. 4 %).

#### ■ Calcium sulphate screed (anhydrite screed)

In accordance with the applicable regulations, when laying tiles, calcium sulphate screed may have a residual moisture content of max. 0.5 CM % only. With DURABASE CI++, tiles can be laid over calcium sulphate screeds as soon as the residual moisture content of the screed is less than 2%. The screed surface must be retreated prior to installation (sanding, priming etc.).

Please follow the usual technical regulations and the manufacturer's specifications. To bond DURABASE CI++ matting, the use of hydraulically-setting thin bed screed to DIN EN 12004 C2 is recommended.



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#### ■ Hot screeds

DURABASE CI++ can also be installed using hot screeds according to the instructions provided above (cement, calcium sulphate). Functional heating must be carried out before laying the DURABASE CI++ matting. DURABASE CI++ is also ideal for the installation of electrical under-floor heating if the heat conductors are correctly shrouded with thin bed mortar.

#### ■ Mastic asphalt screeds

Prior to laying the DURABASE-CI++ matting on standard-compliant mastic asphalt screed in indoor or outdoor areas, the surface must be sanded down or prepared to ensure the adequate bonding of the thin-bed mortar for adhesion of the DURABASE-CI++ matting. Please refer to the ZDB (German Construction Federation) Information Sheet „Mastic asphalt screeds“. Corrective filling can only be performed on mastic asphalt using suitable fillers applied at limited layer densities.

#### ■ Concrete

Concrete is subject to long-term deformation due to shrinkage. Additional stresses can also occur in concrete due to creep. With DURABASE CI++, shrinkage stresses are absorbed between the concrete and the tiled surface, consequently, tile laying can begin as soon as the concrete has reached a sufficient hardness level according to the concrete class. When laying CI++ matting on fresh concrete, corresponding technical advice on our application technique will be required.

#### ■ Synthetic laminates and coatings

Surfaces must be able to bear weight and must be sufficiently bonded to the subsurface in such a way that a suitable adhesive can bond to it and is able to adhere to the DURABASE CI++ backing fabric. The compatibility of the adhesive with the subsurface and the CI++ matting must be checked prior to installation.

#### ■ Plywood and chipboard

These materials are highly prone to deformation due to material moisture content changes (also highly fluctuating air humidity levels). The plywood or chipboard used should be impregnated to prevent the ingress of moisture. The board thickness should be selected to ensure sufficient structural stability in combination with the appropriate supporting structure and loading dimensioned accordingly and the boards secured using screw fastenings at corresponding intervals. The joints must be produced using the tongue and groove connection technique and must be bonded. Edge joints of around 10 mm should be maintained from adjacent structural components. DURABASE CI++ reduces horizontal stresses and protects against damp and the ingress of water.

#### ■ Wooden floorboards

Provided that the screwed-in wooden floorboards are sufficiently load-bearing and are level, tiles can be laid directly in combination with DURABASE CI++. The equilibrium moisture content of approx. 15% should be guaranteed in the wooden subsurface before laying DURABASE CI++. If the floorboard construction is unstable, we recommend the installation of plywood or chipboard of a corresponding thickness. Any uneven areas must be corrected using a suitable filler product directly on the wooden subsurface.



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### INSTALLATION:

1. When cutting the matting to size, make sure that of the CI++ decoupling matting and the associated ceramic tiled surfaces are not force fitted due to the thermal-related stresses and footfall sound protection. Depending on the flooring construction and the specific site conditions, edge joints with a width of approx. 5–10 mm (or larger as required) must be produced.
2. Use a 4 x 4 mm serrated trowel to apply the thin-bed mortar to the subsurface.  
**N.B.:** Never use a larger notched trowel, otherwise the decoupling effect of the CI++ matting will be impaired. The adhesive should be selected according to the subsurface type. The adhesive must bond and mechanically join to the carrier fabric of the DURABASE CI++ matting. With most subsurfaces, it is possible to use a hydraulic-setting flexible mortar, or a quick-bonding flexible adhesive in accordance with DIN EN 12004 / C2.3.
3. It is essential that the entire surface of the backing fabric of the cut-to-size mats is embedded into the adhesive. Loose laying of the CI++ mats is not possible. Work in the matting using a pressure roller or other suitable tool. Here, pay attention to the adhesive bonding time. Always tape over mat joints using DURABASE WP or DURABASE WPFB tape. For inward and outward facing corners, use the prefabricated moulded parts. Work in expansion joints using loops of WP sealing tape to produce a waterproof seal.
4. For indoor applications, tiles can be laid immediately after adhesion of the DURABASE CI++ matting using the thin-bed procedure and thin-bed mortar which fulfils the requirements of the surface covering. Here it is advisable to smooth out any mat depressions and then apply the thin-bed mortar using the trowel in a single work step. The notching size of the trowel must correspond to the tile format for tile laying. The tiles must be embedded across their entire surface into the adhesive. The indicated available laying time of the thin-bed mortar must be taken into account. In terms of working procedure, it is also possible to wait for the filler to harden before laying the tiles.  
For outdoor flooring surfaces, highly frequented areas and large-format tiles, tile laying may not commence until the CI++ filler has hardened.  
Tiles in thin material thicknesses (slim tiles and slim / 4-tiles) are not suitable (risk of breakage). Furthermore, small format tiles measuring less than 50 x 50 mm may not be used. To prevent damage to the installed matting, protection from extreme mechanical stresses should be provided by the use of running boards.

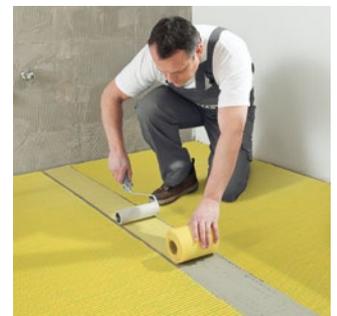
### N.B.:

During the installation of DURABASE CI++ matting on balconies and terraces under high summer temperatures, the matting should be protected using suitable measures in order to prevent any possible loosening or detachment of the mats and the formation of blisters during the adhesive hardening phase. In such cases it may be best to install the mats during the cooler hours of the evening and to lay the tiles the following morning. Protective measures may be necessary, e.g. against rain. Any water which may have accumulated (due to rain) in the dimple depressions must be removed before application of the thin-bed mortar.

For movement joints as field limitation, edge and connection joints, the generally recognised rules of good engineering practice must always be observed. The CI++ matting must also have a suitable expansion joint. For balcony and terrace flooring surfaces, field limitation joints must be provided at intervals of 2.50 m to max. 5.00 m.

With roof terraces, the corresponding applicable rules of the roofing trade must be observed. The necessary construction must be planned and executed accordingly with a vapour barrier, thermal insulation, waterproofing and surfacing.

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