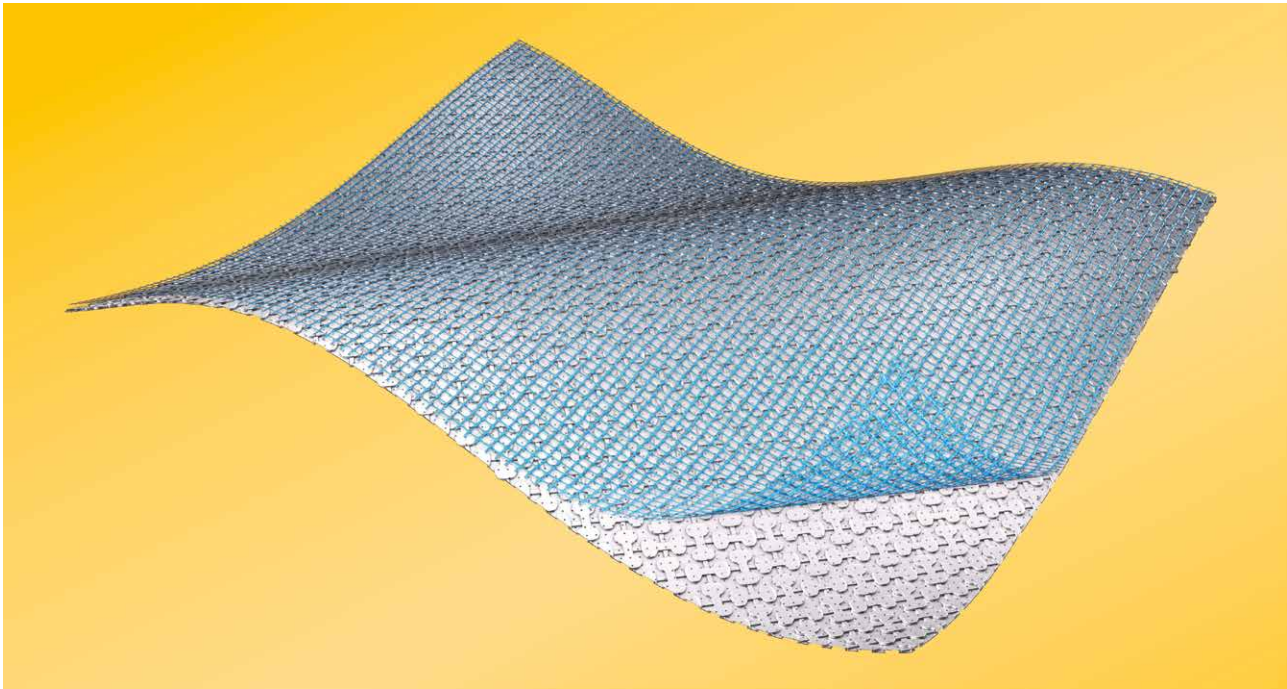


IndorTec[®] FLEXBONE-2E

The loose laid uncoupling mat for difficult substrates indoors



Technical data sheet with laying instructions

Product properties and areas of application

IndorTec[®] FLEXBONE-2E:

- Uncouples ceramic and natural stone coverings from difficult substrates
- Is laid floating, without bonding to the substrate, and can therefore be used for 100% uncoupling
- Is stress equalising
- Is vapour pressure equalising

Indoor use:

- On substrates with problem adhesion such as
 - PVC
 - linoleum
 - oil contaminated floors
 - old paintwork
 - mixed substrates
- On fresh, still damp cement screeds
- On fresh, still damp calcium sulphate screeds
- On cracked (heating) screeds
- On wooden substrates and dry screeds
- As an exchangeable covering that can be removed

Best be safe.

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Installation instructions

Substrates

Substrates must be load-bearing, pressure resistant, even and free of deflection. Any remaining uneven spots are to be levelled with a levelling compound appropriate to the substrate before laying IndorTec® FLEXBONE-2E.

Approved substrates

- Cement screeds, see Application Table/Matrix
- Calcium sulphate screeds, see Application Table/Matrix
- Concrete substrates, see Application Table/Matrix
- Wooden substructures and dry screeds must be rigid and free of deflection and vibration
- Mastic asphalt screeds must correspond to classification AS-IC 10 (GE 10)
- Substrates with problem adhesion such as coatings or hard plastic coverings, see Application Table/Matrix
- Load bearing mixed substrates made of different materials, also with cracks, if these have been secured against height offset

In wet areas where the uncoupling mat is to function simultaneously as a seal, the bonded uncoupling system IndorTec® FLEXBONE-VA should be used.

Substrate properties

Moisture-sensitive substrates must be protected against water damage by appropriate measures. Increased residual moisture in the substrate may influence adjoining parts of the structure.

Coverings

Suitable coverings

- Ceramic coverings and natural stone from 20 cm edge length (see Application Table/Matrix)

Unsuitable coverings

- Covering materials tending to deformation when affected by moisture are unsuitable.

Joints

Expansion joints/Connection joints in the upper covering

Connection and expansion joints must be arranged according to generally accepted codes of practice. Structural joints and expansion joints in the substrate must be transferred in IndorTec® FLEXBONE-2E and the upper layer congruently with the prescribed width. Not transferring the expansion joints congruently is only permissible if the substrate has been secured against height offset in this area. Deformation of fresh cement screeds through dishing and arching must be eliminated.

This can be achieved by inserting plastic-covered round steel plugs. However, the sideways displacement of an expansion joint may not exceed a maximum of 10 cm.

In door areas, passages and geometric surface offsets, field boundary/expansion joints are essential. Sunlit areas, for example areas in front of floor-length windows, are to be considered analogous to underfloor heating areas when it comes to the arrangement of field boundary joints.

Covering connections to rising parts of the structure/penetration of the covering

must not be friction fitted. The proper connection is carried out by using AquaDrain® RD edge insulation strips with self-adhesive foot.

Grouting

The usual grout appropriate for the relevant application and joint widths is to be used. Factory prepared dry grouts are preferable.

Installation instructions for loose laying

1. IndorTec® FLEXBONE-2E rolls/sheets are laid loosely on suitable substrates with the glass fibre mesh weave upwards.
2. The coverings must not be friction-fitted at any point, as otherwise thermally caused buckling may occur. Along rising parts of the structure and penetration of the covering, a connection joint through the entire covering thickness (including IndorTec® FLEXBONE-2E) of about 8–10 mm width is to be formed with the AquaDrain® RD edge insulation strip.
3. The joint areas of the individual lengths are secured by overlapping of the mesh weave at the sides. Joint areas at the top ends and cut part areas without overlapping are bonded using the self-adhesive Watec® ST joint reinforcement. If IndorTec® FLEXBONE-2E is also intended to function as removable flooring and the substrate is to be protected from the entry of adhesive mortar, a PE membrane is to be laid crease-free on the laying substrate to act as a separating layer.
4. The mat is filled and smoothed with low shrinkage, flexible thin bed mortars, flush with the upper surface. The mortar is then applied with a toothed trowel while still wet and subsequently the ceramic or natural stone covering is laid on directly on top.
5. To avoid height differences on the upper surface of the covering, IndorTec® FN levelling aids may be used.
6. Structural, expansion and field boundary joints are formed by dividing the IndorTec® FLEXBONE-2E to the required width. The mat joints are to be covered with self-adhesive AquaDrain® UB expansion waterstop to protect against the entry of mortar and grout. The arrangement of joints in the upper covering must be congruent with the divisions of the mats.
7. The thickness of the mortar between the upper edge of IndorTec® FLEXBONE-2E and underside of the tiles must not exceed 5 mm. Appropriate toothed trowels are to be used.
8. Because of the lack of absorbency of plastic membranes, a curing time for the mortar 3–4 times longer than for absorbent substrates must be allowed for.
9. Where the covering ends bordering lower lying covering surfaces, end rails are to be friction fitted to the load absorbing substrate. The covering surface including IndorTec® FLEXBONE-2E to be created is to be processed with a soft expansion joint. The end rails finish flush with the tile covering on IndorTec® FLEXBONE-2E.

Note: Construction site traffic is to be avoided on IndorTec® FLEXBONE-2E mats. During laying of the covering, IndorTec® FLEXBONE-2E is to be protected with boards in the vicinity of transport paths etc.



1 Testing the substrate for suitability and evenness. If necessary, levelling is to be carried out.



2 Cleaning the substrate. Priming is not required.



3 Along rising parts of the structure and penetration of the covering, AquaDrain® RD edge insulation strips with self-adhesive foot are to be used.



4 ... unroll the IndorTec® FLEXBONE-2E lengths already cut to size loosely on the substrate (or lay them out in the case of sheets).



5 The mats are butt joined, with the protruding edges of the mesh weave overlapping onto the neighbouring mats.



6 Mat joints at the head ends and cut part areas without overlapping are bonded using Watec® ST joint reinforcement with self-adhesive strip.



7 Existing expansion joints and field boundary joints for sub-dividing large area coverings are to be executed as follows. Divide the mats to form the prescribed width, min. 8 mm...



8 ..., the joint, to protect it from the entry of adhesive mortar, is to be masked with AquaDrain® UB joint expansion tape. The arrangement of joints in the upper covering must be congruent with the separations in the mats.



9 If the expansion joint in the uncoupling is formed after laying the covering, IndorTec FLEXBONE® 2E is to be cut out with a joint cutter to the entire width of the joint.

10



Subsequently, IndorTec® FLEXBONE-2E is filled with mortar and smoothed step by step and ...

11



... directly combed on by a suitably toothed trowel. Advice on suitable mortars will be found on page 2, item 4.

12



The covering is fully embedded in the bed of mortar. In the case of large format tiles in particular, laying in a combined procedure is appropriate. The thickness of the mortar should not exceed 5 mm.

13



To avoid height differences on the upper surface of the covering, IndorTec® FN levelling aids may be used.

14



Before jointing, please take into account a longer curing time for standard setting adhesive mortars, due to the non-absorbency of the substrate.

15



Forming of connection and expansion joints with suitable, soft joint filler.

16



Because it is laid floating, the system is particularly suitable for exchangeable coverings in rented apartments or shops.

17



If in the case of exchangeable coverings partial adhesive contact to the substrate is to be avoided, a PE membrane should be spread out before laying.

Application matrix

Properties of substrates/Covering materials/Areas of application

Format sizes and covering thicknesses	- Stoneware tiles from 200 x 200 x 10 mm - Porcelain tiles from 200 x 200 x 8 mm - Natural stone from 200 x 200 x 15 mm. Thinner coverings require approval by the covering manufacturer.
Laying on fresh calcium sulphate screeds	up to max. 1.5 CM% residual moisture. Higher CM% require prior consultation as regards application technology, giving the composition of the bonding agent, because of for example swelling and/or loss of firmness due to the effect of residual moisture.
Laying on fresh cement screeds	from walking firmness
Laying on wood substructures and dry screed slabs	Substrates deflection and vibration free, no format restrictions upwards. If the above features are not guaranteed, the format size of the cover tiles must be according to the conditions set by the relevant dry screed system
Substrates with problem adhesion/Separating layers (e.g. linoleum, PVC, paintwork)	with surface ready for laying
Cracked screeds	must be secured against height offset
Mastic asphalt	min. AS-IC 10 (GE 10)
Concrete, fresh concrete	with surface ready for laying. Connection joints to rising parts of the structure are to be sized according to the expected degree of shrinkage.

Load group 1 (according to ZDB information sheet "High Load Coverings") Residential and working areas

Residential buildings and floor coverings with comparable mechanical load	✓
Hotel bathrooms	✓
Health service rooms	✓
Minimum breaking load of the coverings	1500 N

Load group 2 (according to ZDB information sheet "High Load Coverings")

Administration, commercial and industrial (can be driven on with pneumatic tyre vehicles); in each case, without floor conveyor traffic (compression up to 2N/mm²)

Canteens	✓
Pedestrian zones, e.g. corridors in office buildings	✓
Car showrooms (cars pushed, rolled)	✓
Sales rooms	✓
Minimum breaking load of the coverings	3000 N

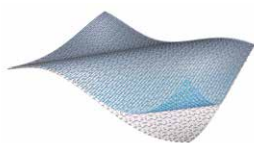
The complete system

IndorTec® FLEXBONE-2E uncoupling rolls, 20.00 x 1.00 m sheets, 2.00 x 1.00 m

Watec® ST joint reinforcement roll 10 or 50 m, width 100 mm

AquaDrain® RD edge insulation strips roll 20 m, 80 x 40 x 8 mm (H x W x D)

AquaDrain® UB – universal tape, roll 10.25 m, width 60 mm (2 x 30 mm)



Accessories

IndorTec® FN tile levelling system cap, 2-part

IndorTec® FN tile levelling system threaded strap for joints 1.5 mm (white), 2 mm (grey), 3 mm (beige)



Technical Data

Material

IndorTec® FLEXBONE-2E sheets and mats consist of perforated, specially shaped, rot-proof plastic film (PP), approx. 3 mm thick. With glass fibre mesh weave on the upper side.

Temperature resistance

-30° C up to +70° C (up to +80 °C for short periods)

Form of delivery

IndorTec® FLEXBONE-2E sheets, total thickness approx. 3 mm, 2.00 x 1.00 m;
IndorTec® FLEXBONE-2E rolls, total thickness approx. 3 mm, 1.00 x 20.00 m plus lengthwise overlap of 5 cm

Mortar consumption for filling and smoothing the mat

approx. 1.75 l/m² (depending on the type of mortar, will provide approx. 2.1 kg/m²)

Notes on transport and storage

Sheets horizontal only, rolls vertical only in original packaging. The products must be protected against sunlight and damp. The original packaging only offers short-term UV protection.

The information in this sheet is based on our careful research and on our experience. The many materials used in the complete construction and the different site and installation conditions cannot be checked in detail or influenced by us. Professional knowledge, professionally correct judgement and the proper use of the product form the foundation for long-term, functionally safe construction performance. In case of doubt, own trials should be carried out or technical advice sought on the application. Along with the information in this Technical Data Sheet, the relevant rules and standards and regulations of the competent organisations and professional associations should be observed, as should the applicable DIN standards for the performance to be provided. With the publication of this Technical Data Sheet, all previous data sheets no longer apply.

We accept no responsibility for typographical errors. We reserve the right to make changes.

The currently applicable versions of Technical Data Sheets plus the current laying instructions are available on the Internet at www.gutjahr.com.

Best be safe.

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