Indor Tec® FLEXBONE-VA

The composite decoupling and sealing mat

For coverings made of ceramic, natural and artificial stone, on walls and floors indoors. For all other floor coverings, please refer to the technical data sheet "IndorTeo® FLEXBONE-VA - For resilient and textile coverings as well as wood/laminate".



Product properties and a r e a of application

IndorTec® FLEXBONE-VA:

- Decouples coverings from critical substrates
- Proven to have the highest shear and adhesive tensile strength compared to comparable composite decoupling systems (tested by MPA Wiesbaden)
- Can be used as bonded waterproofing in wet rooms (with general building authority test certificate MPA NRW P-MPANRW-11393-15)
- With general building authority test certificate in conjunction with the IndoTec® FLEXDRAIN shower channel system
- Tension equalizing
- Vapor pressure equalizing

For indoor use:

- Ideal for large-format coverings
- On unheated and heated substrates
- On cracked screeds
- On wooden substrates and dry screeds
- On cavity floors
- On mixed substrates
- On mastic asphalt screeds
- On young, still too damp cement screeds
- On young, still too damp calcium sulphate screeds
- Can be used equally for floors and walls

Meets requirements/classifications the relevant standardization and data sheets:

- ZDB leaflet "Decoupling in interior areas" from the German Tile and Natural Stone Association Areas of application:
- EK-W: Residential and residential-like use
- EK-G: light traffic public buildings, offices, lounges, hotels, stores, etc.
- EK-M: Access car dealerships, workshops, areas with increased individual loads, etc.
- EK-H: Wooden substrates in living areas
- AIV: Composite waterproofing
- S: Sound improvement
- ZDB leaflet "Large formats indoors" from the German Tile and Natural Stone Association
- euro FEN leaflet no. 8 "Decoupling systems in indoor areas"
- DIN 18534-5 "Waterproofing of interior spaces Part 5: Waterproofing with sheet-type waterproofing materials in combination with tiles and boards (AIV-B)" (2017)
- "Determination of the impact sound reduction of 8 dB" based on DIN EN ISO 10140-1: 2016-12
- ZDB leaflet "Composite waterproofing -Composite waterproofing in sheet form (AIV-B)"









Substrates

Substrates must be level, pressure-resistant, load-bearing and free from deflection. Adhesion-reducing components on the surface must be removed. Any unevenness in the substrate or any levelling/leveling required due to covering formats can also be carried out after the IndorTex® FLEXBONE-VA has been laid using suitable levelling compounds matched to the decoupling. Moisture-sensitive substrates must be protected against the effects of moisture from the adhesive mortar system using suitable measures (primers). Increased residual moisture in the substrate can affect adjacent building components.

Permitted substrates

- Cement screeds
- Calcium sulphate screeds
- Concrete substrates
- Wooden substructures and dry screeds
- Mastic asphalt screeds
- Load-bearing mixed substrates made of different materials, but also with cracks, if these are secured against height displacement
- Heated and unheated substrates
- Substrates in wet areas; IndorTeo® FLEXBONE-VA is used here as a bonded waterproofing (see chapter Bonded waterproofing).

Further information under application matrix.

Heated substrates

The heating of the substructures can be omitted with the use of IndorTec® FLEXBONE-VA if the maximum permissible CM% residual moisture is observed.

General in formation

Filling

As a rule, the covering is laid directly with adhesive mortar

on IndoTec® FLEXBONE-VA. Deviations from standard formats require prior leveling/leveling.

- a) Small-format flooring tiles, minimum formats see application matrix.
- b) Large-format paving slabs require more even subfloors than required by DIN 18202 "Tolerances in building construction". See notes in ZDB leaflet "Large formats" from the German Tile and Natural
- Stone Association

The required leveling/evenness fillers are applied with low-shrinkage and low-stress floor and wall fillers on IndorTec® FLEXBONE-VA. Suitable products and system recommendations can be found in the construction recommendations at www.gutjahr.com.

Coverings

Suitable coverings

Suitable coverings are those advertised by the covering manufacturer for the respective area of application. The ZDB information sheets "Laying tiles and slabs on decoupling systems" and "Large formats", valid for indoor areas, provide guidance. As well as "Mechanically highly resilient ceramic coverings", which regulates suitability from the lowest stress group 1, "residential construction". For all other coverings, natural and cast stone, artificial stone slabs, etc., the ZDB data sheet can be used analogously.

Impact loads with hard objects should be avoided with low-fractureresistant coverings. The quality of the covering bedding has a direct influence on the mechanical load-bearing capacity. For minimum format sizes, see application matrix.

Unsuitable coverings

Flooring materials that tend to deform when exposed to moisture are unsuitable.

Joints

Movement joints/connection joints/building separation joints

- Building separation joints must always be congruent and of the specified width in IndorTec® FLEXBONE-VA and the top layer.
- Connection joints to rising building components/covering penetrations must not be force-fitted. The professional connection is achieved by using AquaDrain® RD edge insulation strips with self-adhesive base.
- Field boundary joints in the tile covering must be arranged in the top layer and in the IndorTec® FLEXBONE-VA in accordance with the recognized rules of technology.
 - In door areas, passageways and geometric surface projections
- Surfaces exposed to sunlight, e.g. areas of floor-to-ceiling window fronts, are to be assessed in the same way as underfloor heating surfaces
- Movement joints from the substrate must first be transferred to ^{IndorTeo®} FLEXBONE-VA and the top layer in the specified width. The following parameters describe the permissible revision of the expansion joints in the screed. The lateral displacement of the field boundary joint in the top layer is therefore possible by up to a whole tile width.

Permissible arrangement of the expansion joint in the covering



in screed

- Screeds must be unheated
- Cement screeds (CT) must have a minimum age of 5 years
- Calcium sulphate screeds (CA), without age restriction, max. permissible residual moisture ≤ 1.5 CM% or 2.0 CM% in combination with ^{IndorTec®} SE skirting profile. See application matrix.
- Movement joints must be secured by suitable measures against height displacement in accordance with the expected load, e.g. with movement joint plugs
- Expansion joints are formed using soft joint fillers. Movement joint profiles may be required for areas subject to higher loads. These must be suitable for the intended use without restriction.

Processing instructions

- 1. Substrates must be prepared in accordance with the adhesive manufacturer's guidelines, e.g. primed.
- 2. AquaDrain® RD edge insulation strips with self-adhesive base must be attached to rising components to create functionally safe edge joints of sufficient width.
- 3. Existing structural separation and expansion joints, as specified in the chapter on joints, must be executed as follows: Cut ^{IndorTec®} FLEXBONE-VA in the joint area, separate the mats to the specified width and cover these joint areas with the self-adhesive ^{AquaDrain®} UB universal tape. Field boundary joints for subdividing large flooring areas are formed during the course of laying the flooring on ^{IndorTec®} FLEXBONE-VA.
- Apply adhesive mortar to match the substrate using a 6 mm notched trowel and embed IndorTec® FLEXBONE-VA into the still fresh adhesive mortar layer and press down over the entire surface.

Adhesive mortars with fluidized bed properties should be used for optimum bond adhesion; fast-setting adhesive mortars shorten the waiting time for laying the covering.

5. Flooring installation on IndorTed® FLEXBONE-VA

a) directly with adhesive mortar:

- The mat is filled flush with the surface using low-shrinkage, flexible adhesive mortar. The "fresh-in-fresh" adhesive mortar is then applied and the covering tiles are professionally embedded.
- The adhesive mortar thickness between the upper edge of IndorTec® FLEXBONE-VA and the underside of the tile must not exceed 5 mm. Adhesive bed thicknesses of up to 10 mm are possible with shrinkage-compensated medium-bed adhesive mortars. Appropriate notched fillers must be used.
- The covering is grouted after the covering surface is ready for foot traffic. Due to the lack of absorbency of plastic films, the adhesive must be expected to harden 3-4 times longer than absorbent substrates.

- b) on previous leveling/leveling filler, see chapter "Leveling":
- the leveling/leveling filler is applied using suitable products from the system recommendations. The minimum layer thickness over IndorTec® FLEXBONE-VA is 3 mm.
- the flooring is laid professionally on a leveling/leveling compound, taking into account the requirements of the type of flooring and format size.
- At covering terminations with adjacencies to lower-lying covering surfaces, end rails must be installed flush with the load-bearing substrate in a force-fit manner. The covering surface to be created, including IndorTec® FLEXBONE-VA, must be finished with a soft expansion joint.

Note: After the IndorTec® FLEXBONE-VA has been laid, it must be protected against damage with suitable materials in the area of the transport and walkways.

Preparation and installation



Check the substrate for suitability and evenness. Leveling work must be carried out if necessary.



Clean and prime the substrate.



The AquaDrain® RD edge insulation strip must be placed along rising building components and covering penetrations.



Apply the adhesive mortar, matched to the substrate, with a 6 mm notched trowel and...



The IndorTec® FLEXBONE-VA is butt-jointed.



... embed the already cut IndorTed® FLEXBONE-VA with the fleece into the still fresh adhesive mortar layer...



Existing expansion joints in the substrate must be covered in the same way or as described in the chapter on joints and implemented as follows. The mats must be separated to the specified width, at least 8 mm...



... and press down evenly.



... this joint area is covered with the selfadhesive ^{AquaDrain®} UB universal tape. Field boundary joints for subdividing large areas of flooring are formed above the ^{IndorTec®} FLEXBONE-VA during the laying of the flooring.

instructions



After the FLEXBONE bonding has hardened, a flowable floor filler with a minimum overlap of 3 mm can be applied as an alternative ...



... or the tiling is laid "fresh in fresh" with adhesive mortar. For this purpose, the IndorTec® FLEXBONE-VA is filled step by step and ...



... directly serrated with suitable teeth.



The adhesive mortar thickness between the upper edge of ^{IndorTeo®} FLEXBONE-VA and the underside of the tile must not exceed 5 mm. Adhesive bed thicknesses of up to 10 mm are possible with shrinkage-compensated medium-bed adhesive mortars.



The covering is fully embedded in the adhesive bed. A combined installation method is particularly suitable for large-format tiles.



IndorTec® FN leveling aids can be used to prevent overtoothing on the top of the covering.



The covering is grouted after the covering surface has been walked on. Due to the lack of absorbency of plastic films, the adhesive must be expected to harden 3-4 times longer than on absorbent substrates.



Formation of connection and expansion joints with suitable soft joint fillers.

IndorTec® FLEXBONE-VA as bonded waterproofing

Bonded waterproofing is created with ^{IndorTec®} FLEXBONE-VA, sealing adhesive, sealing tapes and, if necessary, sleeves. The combination of the above system components results in a bonded waterproofing for water exposure classes in accordance with DIN 18534: W0-I, W1-I, W2-I and W3-I without chemical stress.



Sealing adhesive is applied to the joint areas of IndorTec® FLEXBONE-VA or to the connection areas of adjacent components in accordance with the manufacturer's instructions.



Corresponding system sealing tapes, sealing tape corners, sealing sleeves etc. are freshly embedded in the sealing adhesive and reworked.



For detailed information on the sealing adhesive system, please refer to the relevant manufacturer.

Application matrix

Properties of substrates/covering materials/application areas

Format sizes	 Stress group 1: For direct laying of flooring ≥ 5 x 5 cm permissible with flowable floor levelling compounds on ^{IndorTed®} FLEXBONE VA < 5 x 5 cm Stress group 2: For direct laying of flooring ≥ 10 x 10 cm permissible with flowable floor levelling compounds on the ^{IndorTed®} FLEXBONE VA < 10 x 10 cm Stress group 3: For direct laying of flooring ≥ 10 x 10 cm with flowable floor levelling compounds on the ^{IndorTed®} FLEXBONE VA < 10 x 10 cm
Laying on young calcium sulphate screeds (CA) heated/unheated in combination with IndorTec® SE plinth ventilation profile	≤ 1.5 CM% residual moisture ≤ 2.0 CM% residual moisture permissible
Laying on young cement screeds (CT) heated/unheated	from accessibility
Installation on wooden substructure	Substrates must be free from deflection and vibration
Dry screed elements heated/unheated	The format and thickness of the covering tiles depend on the specifications of the respective dry screed system
Heated/unheated cavity floors	Substrates must be free from deflection and vibration
Old substrates/other substrates	Surface firmly adhering, only possible with special adhesive/primer - consultation with adhesive mortar manufacturer may be necessary, alternatively IndorTeo® FLEXBONE-2E is available for loose decoupling
cracked screeds	must be secured against height offset
Mastic asphalt	at least AS-IC 10 (GE 10) with sanded/rough surface
Concrete, young concrete from 4 weeks	with ready-to-lay surface, surface dry, field boundary or movement joint spacing ≤ 6.00 m. Connection joints on upright components must be dimensioned according to the expected shrinkage rate

Stress group 1 (according to ZDB data sheet "Mechanically highly resilient ceramic floor coverings" living and working areas, or "decoupling" categories: EK-W and EK-H)

Residential construction and floor coverings with comparable mechanical loads	✓
Hotel bathroom	✓
Rooms of the health service	✓

Stress group 2 (according to ZDB leaflet "Mechanically highly loadable ceramic floor coverings") Administration, trade and industry (can be driven on by vehicles with pneumatic tires); in each case without industrial truck traffic (pressures up to 2 N/mm²) or according to ZDB leaflet "Decoupling" category: EK-G)

Canteens	✓
Traffic zones with foot traffic, e.g. corridors in office buildings	1
Vehicle showroom and vehicle reception (drive-on)	1
Salesrooms	1

Stress group 3 (according to ZDB leaflet "Mechanically highly resilient ceramic floor coverings" trade and industry; industrial truck traffic with superelastic, solid rubber and Vulkollan tires (pressures up to 6 ^{N/mm2}) or according to ZDB leaflet "Decoupling" category: EK-M)

Food - retail and wholesale	1
Nonfood - retail and wholesale	1
Shopping arcades	1

System accessories

IndorTec® FLEXBONE-VA decoupling AquaDrain® RD edge insulation strips with self-adhesive base ^{AquaDrain®}UB universal tape 60 mm width (2 x 30 mm) AquaDrain® drainage mat shears





IndorTec® FN

System components

IndorTec® FN pulling hood, 2-piece





Tile leveling system Threaded

tab for joints 1.5 mm (white), 2

Material

IndorTec® FLEXBONE-VA decoupling mats/slabs consist of a specially shaped, rot-proof plastic film (PP) with a thickness of approx. 3 mm and a factory-laminated claw fleece (PP) on the underside.

Temperature resistance - 30 °C to + 70 °C (briefly up to + 80 °C)

Delivery form Total thickness approx. 3 mm panels: 0.80 m², 0.80 x 1.00 m Rolls: 20 m², 20.00 x 1.00 m

Notes on transportation and s t o r a g e

Sheet goods only lying flat, roll goods only upright in their original packaging. The products must be stored protected from sunlight and moisture. The original packaging only offers short-term UV protection.

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The currently valid versions of the technical data sheets and the current installation instructions can be found at https://www.gutjahr.com/downloads/





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IndorTec® SE Plinth ventilation profile with covering support



Ceramics and natural

stone

Adhesive consumption for filling the mat approx. 1.75 l/m² for flush surface filling

Filler consumption for leveling/leveling filler on the mat approx. 1.75 l/m² for flush surface filling