

Schlüter®-DITRA

Installation membrane

Uncoupling, waterproofing, vapour pressure equalisation

6.1

Product data sheet

Application and function

Schlüter-DITRA is a polypropylene membrane with EasyCut gridlines as well as square, dovetailed EasyFill recesses and an anchoring fleece laminated to the underside. In conjunction with tile coverings, Schlüter-DITRA provides waterproofing, vapour pressure equalisation for underside moisture and uncoupling for problematic substrates. The substrate must be level and load-bearing. DITRA is installed in cementitious tile adhesive that is suitable for the substrate, using a notched trowel (recommended size: 3 x 3 mm or 4 x 4 mm). The anchoring fleece on the underside of DITRA is fully embedded and the fabric bonds with the adhesive. The curing time of the adhesive must be observed.

The tile covering is installed directly over DITRA in accordance with the applicable regulations, using the thin-bed method. The cementitious tile adhesive bonds with the square, dovetailed recesses of the DITRA membrane.

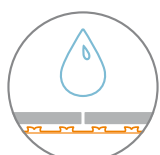
Summary of functions:



a) Uncoupling

Schlüter-DITRA uncouples the covering from the substrate and neutralises stresses between the substrate and the tile covering

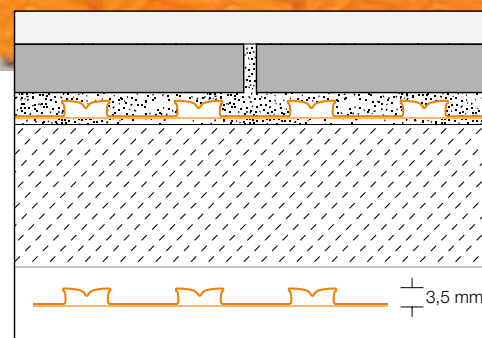
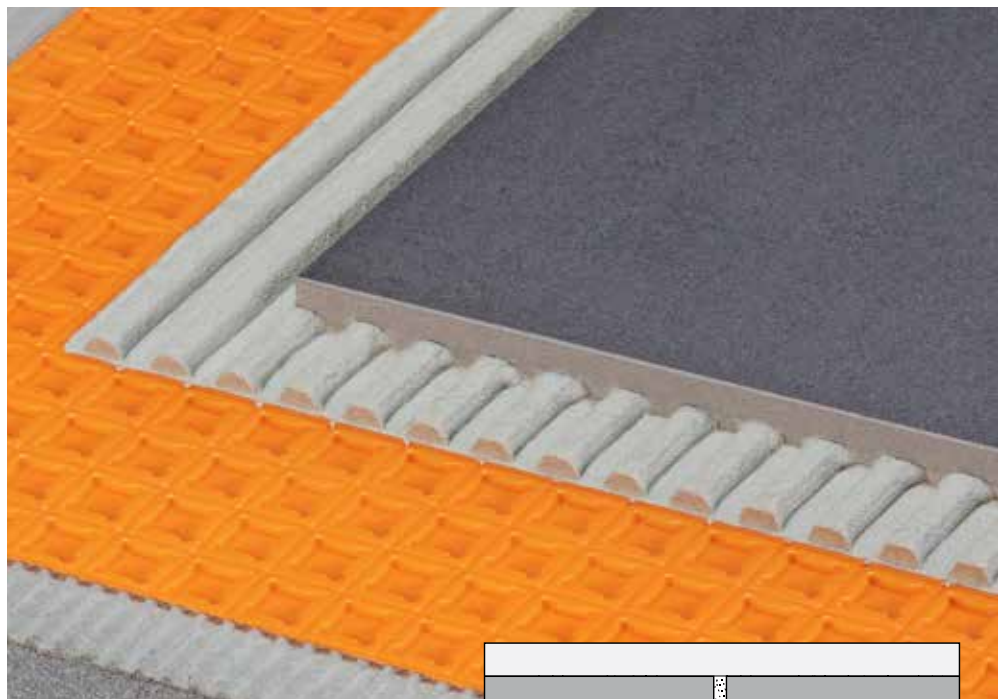
that result from various deformations. It also bridges tension cracks from the substrate and prevents them from affecting the tile covering.



b) Waterproofing

Schlüter-DITRA is a waterproof polypropylene membrane with a relatively high water vapour diffusion seal. With properly installed abut-

ting joints and carefully sealed transitions to walls and structural elements, DITRA creates a certified bonded waterproofing assembly with the tile covering.





The waterproofing system DITRA has a European Technical Assessment (ETA) in accordance with EAD 030436-00-0503, a certificate of technical approval for the German market (abP) and bears a CE mark. Schlüter-DITRA can be installed in accordance with the waterproofing standards DIN 18531-5* and DIN 18534 applicable in Germany. Water exposure classes: W0-I to W3-I*.

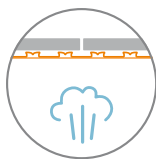
** With abP and/or based on ETA according to EAD 030436-00-0503.*

The Technical Department is available to provide information on use and installation on request.

DITRA has a European Technical Assessment (ETA) in accordance with EAD 030436-00-0503 and bears a CE mark.

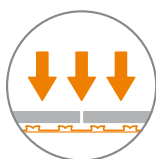
System-certified cementitious tile adhesive must be used in areas that require CE-compliance or assemblies according to abP (certificate of technical approval). Please contact us at the address listed in this data sheet for further information about cementitious tile adhesives and the corresponding certificates of technical approval.

The waterproofing system DITRA effectively protects the sub-structure from damage caused by permeating moisture or aggressive substances.



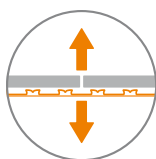
c) Vapour pressure equalisation

The air channels of Schlüter-DITRA, which remain open on the underside, also enable vapour pressure equalisation in case of moisture impact from below.



d) Load distribution (load induction)

Tiles installed over DITRA in floor areas should have a minimum size of 5 x 5 cm and a thickness of at least 5.5 mm. The adhesive-filled, square recesses of Schlüter-DITRA transfer mechanical stresses impacting the tile covering directly to the substrate. That makes tile coverings installed on DITRA especially durable. The tiles for the corresponding application area must be sufficiently thick and have adequate compressive stability to withstand high traffic loads (e.g. in commercial areas) or large point loads (such as concert pianos, forklifts, or shelf systems). The information and tile thicknesses specified in the ZDB information sheet "Ceramic floor coverings with high mechanical stress resistance", valid in Germany, must be observed. Tiles in high-stress areas must be solidly embedded in the tile adhesive. The impact of hard objects must be avoided on ceramic coverings.



e) Bonded assembly

Based on the fleece fabric bond in the cementitious tile adhesive on the substrate, and through mechanical anchoring of the cementitious tile adhesive in the square, dovetailed recesses, Schlüter-DITRA creates a strong bond between the tile assembly and the substrate. That makes Schlüter-DITRA suitable for wall and floor installation. Additional anchoring wall plugs may be used as needed for the attachment of wall coverings.

Material

Schlüter-DITRA is a polypropylene membrane with square dovetailed recesses in EasyFill design and imprinted EasyCut gridlines. A fleece fabric is laminated on the underside. The material thickness measured across the stud structure is approx. 3.5 mm. Polypropylene is not UV-stable in the long term; the product should not be stored in places with prolonged exposure to direct sunlight.

Material properties and areas of application

Schlüter-DITRA is non-rotting, stretchable and crack-bridging. In addition, it is largely resistant to the effects of aqueous solutions, salts, acids and alkalis, many organic solvents, alcohols and oils.

Product resistance to special local conditions must be verified separately based on the anticipated concentration, temperature and length of exposure. The product has a relatively high water vapour diffusion seal. The material is non toxic and physiologically harmless.

Schlüter-DITRA can be used in a wide variety of application areas. Product suitability must be verified in applications exposed to chemical or mechanical stresses. The information provided below is intended as a general guideline.

Depending on the system, stepping on coverings installed over DITRA with hard shoes or tapping them with a hard object may produce a hollow sound.

Note

The cementitious tile adhesive and the covering material used in conjunction with DITRA must be suitable for the respective application area and meet the corresponding requirements. In outdoor areas, these materials must be waterproof and resistant to frost and weather.

DITRA should be installed as a waterproofing assembly if the covering materials to be installed are sensitive to moisture (e.g. natural stone or resin-bonded pavers) or if moisture is present on the underside (e.g. from green screeds). Special protective measures such as shading against direct sunlight may be necessary for outdoor installations of DITRA.



The use of rapid setting tile adhesives may be an advantage for certain projects. It is recommended to set out running boards to protect DITRA from mechanical stresses caused by material transport.

Notes on movement joints:

Separate the Schlüter-DITRA membrane over existing movement joints. If DITRA is used for waterproofing, the abutting joints must be covered with Schlüter-KERDI-FLEX.

Continue the movement joints in the tile covering as specified by the applicable standards. Otherwise, divide large coverings installed over DITRA into sections, using movement joints according to the applicable regulations. The dimensions of such sections should not exceed a side length of 3 m in outdoor areas (balconies and terraces). Smaller sections may be required depending on the substructure. We recommend using the profiles of the Schlüter-DILEX family. Arrange profiles such as Schlüter-DILEX-BT or DILEX-KSBT over existing expansion joints depending on the anticipated structural movements.

It is important to prevent stress build-up at the edges of the covering, for instance at upright structural components or at floor-wall transitions. Perimeter movement joints and connection joints must be constructed according to the applicable technical regulations and have sufficient dimensions to prevent stress build-up. We recommend using the profiles of the Schlüter-DILEX family.

Substrates for Schlüter®-DITRA:

Always check the substrates on which DITRA is to be installed to make sure they are level, rigid, load-bearing, clean and compatible with the materials to be used. Remove all surface components that may weaken the bond. Any levelling, height adjustment or slope compensation must be carried out before installing DITRA.

Concrete

Concrete undergoes long-term structural deformation due to shrinkage. In addition, tension can build up in concrete and pre-stressed concrete due to deflection. Since DITRA absorbs the resulting tensions between the concrete and the tile covering (in wall and floor areas), tiles can be installed as soon as the concrete is ready to bear weight.

Cement screeds

In accordance with the applicable regulations, cement screeds must have cured for at least 28 days prior to tile installation and have a moisture content below 2 CM %. Floating and heated screeds have a particular tendency to buckle and crack even later, e.g. due to mechanical stresses and temperature fluctuations.

With DITRA, tiles can be installed on green cement screeds as soon as they are ready to bear weight.

DITRA will neutralise cracks and screed deformations developing later and will prevent them from affecting the tile covering.

Gypsum based screeds

According to the applicable rules, gypsum based (anhydrite) screed may not have a residual moisture level of more than 0.5 CM % at the time of tile installation. In contrast, tile installation is permissible from a residual moisture level of 2 CM % with DITRA.

If necessary, the screed surface must be treated (grinding, priming) as specified by the applicable technical regulations and manufacturer instructions. DITRA can be installed with dry-setting or other suitable cementitious tile adhesives. It protects the screed surface against permeating moisture. Because gypsum based screeds are susceptible to moisture, the screed must be protected against humidity, e.g. moisture seepage on the underside.

Heated screeds

DITRA can be used on heated screeds, provided the above notes (cement, gypsum based screeds) are followed. Covering assemblies created with DITRA are ready for heating only 7 days after completion. Starting from a temperature of 25 degrees C, the supply temperature can be increased by no more than 5 degrees C a day to a usage temperature of max. 40 degrees C. The interconnected air channels of the DITRA membrane quickly and evenly distribute the heat below the tiles.

Note:

For floor heating systems, please refer to our ceramic thermal comfort floor system Schlüter-BEKOTEC-THERM.

Schlüter-DITRA is also recommended for uncoupling floor heating systems comprising thin electric heating mats. In those cases, Schlüter-DITRA can be installed above or below the heating mat. However, an installation above the heating mat achieves better uncoupling effects. Please



Schlüter®-DILEX-BWB on Schlüter®-DITRA



Schlüter®-DILEX-EK on Schlüter®-DITRA



Schlüter®-DILEX-AKWS on Schlüter®-DITRA



note that the bedding above the mat should not exceed 10 mm.

Schlüter-DITRA-HEAT was developed specifically as an uncoupling mat designed to attach the matching system heating cables for electric floor/wall heating systems. Further details can be found in product data sheet 6.4.

Screed boards and composite panels

After the proper installation of dry screed elements according to manufacturer instructions, any tile format may be chosen to install with DITRA.

Masonry / mixed substrates

Masonry structures built with bricks, sand lime bricks, cement blocks, aerated concrete or similar materials is generally a suitable substrate for DITRA. The surface must be levelled in advance. In restoration and remodeling projects, substrates frequently consist of mixed materials, which have a tendency to crack at the interfaces with other materials due to different deformation rates. DITRA protects the tile covering from the resulting tensions and cracks.

Gypsum plaster / bricks

Gypsum substrates should be completely dry in accordance with the relevant regulations. The surface may need to be pre-treated with a primer. DITRA can be installed with dry-setting or other suitable thin-bed tile adhesives.

Balconies / terraces

As an uncoupling mat, Schlüter-DITRA neutralises the tensions between the substrate and tile covering that can be caused on balconies by frequent, significant temperature fluctuations. In addition, DITRA can serve as the sole waterproofing assembly in conjunction with the tile covering in cantilevered balconies and terraces built directly over the ground, which are only used for residential purposes (observe notes on waterproofing). In that case, the substrate (concrete, screed) must have a sufficient slope.

If previous coverings are sufficiently weight bearing and have the necessary slope, the existing assembly may be used as the substrate in renovation projects. Otherwise, loose or insufficiently bonded parts must be removed prior to installing DITRA and any flaws or inadequate slope must be corrected with a suitable ready-mix mortar.

The use of Schlüter-DITRA-DRAIN is recommended for coverings with dimensions

over 30 x 30 cm (see also product data sheet 6.2).

Roof terraces

Roof terraces situated above residential/utility spaces and other areas as well as the roof spaces must first be installed as a flat roof in accordance with the applicable building regulations for roof assemblies.

In case of heat-insulated residential or utility spaces (and rooms with anticipated temperature differences to the outdoor space), a standard-compliant vapour barrier and top waterproofing layer are required. The provisions of any applicable national standards and/or relevant codes must be observed. A drainage (Schlüter-TROBA or Schlüter-TROBA-PLUS) must be arranged over the top waterproofing assembly. This is topped with a screed as the load distribution layer. DITRA is installed on the screed surface to uncouple the tile covering and protect the screed from moisture. As an uncoupling mat, Schlüter-DITRA neutralises the tensions between the substrate and tile covering that can be caused on terraces by frequent, significant temperature fluctuations.

The use of DITRA-DRAIN is recommended for coverings with dimensions over 30 x 30 cm (see also product data sheet 6.2).

Vinyl coverings and coatings

All surfaces must be load bearing and pre-treated or suitable for bonding with an appropriate adhesive, in which the DITRA anchoring fleece can be embedded. The compatibility of the adhesive with the substrate and with DITRA must be verified in advance.

Plywood, Chipboard and compressed wood panels

These materials undergo significant deformation based on the influence of moisture (or fluctuations in humidity). It is therefore recommended to use chipboard and compressed wood panels with special water-repellent treatment. Such panels can generally be used as a floor and wall substrate in interior spaces. Refer to local regulations if these are acceptable. However, they have to be thick enough to be sufficiently stable in conjunction with a suitable support assembly. The structure should be fastened with closely spaced screws. Abutments must have a tongue and groove connection and be fully sealed. Perimeter movement joints of about 10 mm have to be maintained at



the transition to upright building structures. Schlüter-DITRA neutralises any tensions with the tile covering and also prevents permeating moisture.

Hardwood floors

In principle, ceramic coverings can be directly installed on sufficiently weight bearing, screw-fastened hardwood floors with tongue and groove connections. The wooden substrate should have balanced moisture levels before DITRA can be installed. It has proven beneficial to install an additional layer of chipboard or compressed wood panels. Uneven floor surfaces should be levelled with suitable measures beforehand.

Flooring grade asphalt (bitumen) screeds

Schlüter-DITRA enables the installation of ceramic coverings over weight bearing, unheated mastic asphalt screeds in indoor areas, provided they were installed in compliance with the relevant standards. Surfaces must be sanded or be suited for sufficient bonding of the thin-bed tile adhesive with DITRA.

Installation

1. The substrate must be free of components that may inhibit bonding, load bearing and levelling. Any necessary levelling work must be completed before installing DITRA.
2. The selection of the adhesive for installing DITRA depends on the substrate. The adhesive must bond with the substrate and mechanically attach to the DITRA anchoring fleece. A dry setting cementitious tile adhesive can be used for most substrates. The adhesive should preferably have a consistency suitable for fluid beds. Review any potential material incompatibilities beforehand.
3. The cementitious tile adhesives should be applied on the substrate with a notched trowel (recommended size: 3 x 3 mm or 4 x 4 mm; mortar requirement approx. 1.5 kg/m²).
4. Embed the DITRA membranes, which must have been cut to size beforehand, into the installed adhesive, the anchoring fleece facing down, and immediately press them in place with a floater or roller, working in a single direction. Orbital sanders can also be effective tools. The curing time of the adhesive must be observed.

For efficient installation, precisely align DITRA and keep the material tightly stretched with light tension when placing it on the substrate.

The EasyCut gridlines of the membrane assists with allowing the membrane to lie flat on the substrate.

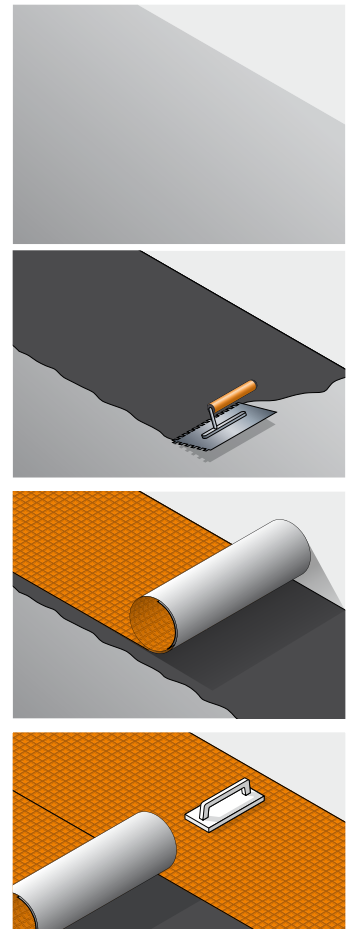
A second helper can make installation easier. The individual mats are installed with closely abutting joints.

Note: if Schlüter-DITRA is to be used for uncoupling and waterproofing, abutting joints and connections must be sealed with the relevant system components. Further details can be found in the notes on waterproofing.

The same applies for using Schlüter-DITRA on green substrates in conjunction with coverings that are susceptible to discoloration.

5. To prevent any damage to the installed DITRA-material or detachment from the substrate, it is recommended to protect the area from mechanical stresses, e.g. by setting out running boards (particularly in the centre areas used for material transport). Special protective measures may be necessary for outdoor installations, e.g. to shield against direct sunlight or precipitation. Remove any accumulated water in the recesses indentation before applying the cementitious tile adhesive.
6. Immediately after adhering the DITRA mat, tiles can be installed using a cementitious tile adhesive that meets the requirements of the respective covering. The notch size of the trowel must match the tile format. Observe the curing time of the adhesive. All tiles must be solidly embedded in the adhesive. Full contact according to the applicable professional regulations is especially relevant for coverings exposed to high mechanical stresses and in outdoor areas.

Note: Fill the square indentations with the smooth side of the notched trowel (mortar requirement approx. 2.0 kg/m²) and then notch the cementitious tile adhesive with the notched side of the trowel in a single action. Depending on the tile size or the conditions on site, it may be more efficient to first fill the indentation with the tile adhesive to be used for the installation. Tile installation can begin once the trowelled surface is ready to bear weight. Note that the substrate must be free for dust for the installation. If applicable vacuum the substrate prior to installation or apply a primer in case of doubt.





Review any potential material incompatibilities beforehand. If using covering materials with a side length over 30 cm, we recommend a quick-setting tile adhesive with crystalline water binding capacity for fast curing and drying of the mortar.

7. Follow the instructions in this data sheet and other relevant technical regulations to install movement joints for perimeter, edge and transition profiles.

Waterproofing with Schlüter®-DITRA

DITRA can be used to create certified waterproofing assemblies with tile coverings, provided the abutting membrane joints and the connections to installed components and upright building structures are carefully sealed. Schlüter-DITRA can be installed in accordance with the waterproofing standards 18531-5 or 18534 applicable in Germany. Water exposure classes: W0-I to W3-I. DITRA also features the national technical approval (abP) required in Germany. System-certified tile adhesives must be used in areas that require compliance with abP (certificate of technical approval). Please contact us at the address listed in this data sheet for further information about such tile adhesive products and the corresponding certificates of technical approval. We recommend the use of our waterproofing membrane Schlüter-KERDI (see product data sheet 8.1 Schlüter-KERDI) for load class B, "Swimming pools".

Schlüter-DITRA protects the substrate from damage caused by permeating moisture and aggressive substances. For joint sealing, trowel the sealing adhesive Schlüter-KERDI-COLL-L over the abutting joints and fully embed KERDI-KEBA in a minimum width of 12.5 cm over the joint.

To waterproof floor-wall transitions, adhere KERDI-KEBA over DITRA on the floor and directly on the substrate in wall areas in the corresponding width.

The sealing bands should have a coverage of at least 5 cm.

KERDI-KEBA can also be used to create functional connections to fixed structural components such as door and window frames as well as balcony edge profiles made of metal, wood or plastic. The first

step is to apply Schlüter-KERDI-FIX to the adhesive surfaces of the structural elements. The remaining width is then adhered to DITRA with KERDI-COLL-L.

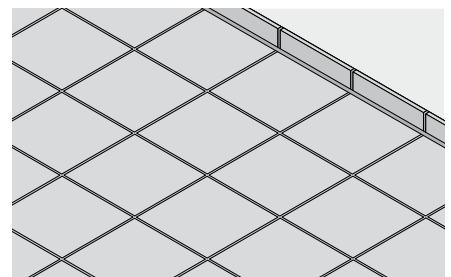
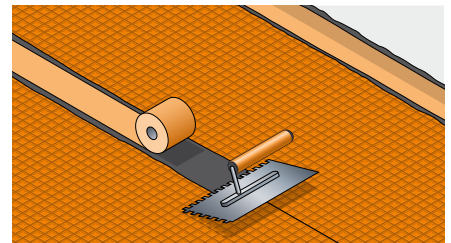
The suitability of KERDI-FIX for the respective materials of the structural elements must be verified in advance.

Separate DITRA at existing movement joints or expansion joints and seal the abutting joints with KERDI-FLEX.

KERDI-FLEX should also be used for flexible finishing edges. As an alternative, this can also be done with a sufficient loop of KERDI-KEBA.

Note on floor drains:

Schlüter-KERDI-DRAIN and Schlüter-KERDI-LINE are special drainage systems designed for connection to bonded waterproofing assemblies. Schlüter-DITRA can easily and quickly be combined with these components using pre-fabricated KERDI collars.





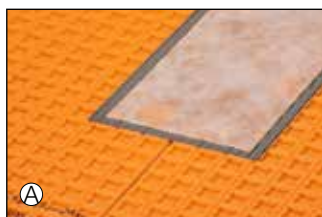
Schlüter-DITRA at a glance	
general product properties	
Material	polypropylene
Thickness	3.5 mm
Width	995 mm
Length	5,1 or 30,2 m
Weight	535 g/m ²
Storage conditions	not UV-stable in the long term; avoid prolonged exposure to direct sunlight in storage
Adhesive requirement (dry weight) *	
DITRA installation	approx. 1.5 kg/m ²
Trowelling over indentations	approx. 1.5 - 2.0 kg/m ²
technical properties	
Processing temperature	don't use at temperatures below +5 °C
Resistance to temperature	-30 °C to +70 °C (briefly to +80°C)
Thermal resistance	R= 0.048 m ² *k/W
sd value	>100 m
Fire resistance class acc. to EN 13501-1	E
Minimum dimensions	5 x 5 cm
Minimum tile thickness	5.5 mm
Certifications / approvals	
abP	approved
ETA	approved
VOC	A+

*estimated consumption values for standard thin-set mortars These amounts may vary depending on the utilised product and the conditions at the construction site

Areas of application for Schlüter®-DITRA					
	Load class *	Sample application areas	required breaking strength of covering (DIN EN ISO 10545-4)	maximum compression	Category **
✓	I	Apartment construction, hotel bathroom healthcare rooms	< 1,500 N		EK-W and EK-H
✓	II	Administration, commercial spaces, industrial kitchens, salesrooms, areas used by vehicles with pneumatic tyres	1,500 - 3,000 N	< 2 N/mm ²	EK-G
✓	III	Commercial and industrial use, whole- sale, shopping centres areas used by vehicles with super-elas- tic, solid rubber or Vulkollan tyres	3,000 - 5,000 N	2 - 6 N/mm ²	EK-M
✓	IV	see group III - areas used by vehicles with polyamide rollers	5,000 - 8,000 N	6 - 20 N/mm ²	
✓	V	commercial and industrial use, heavy duty areas, mechanical assembly and warehouses - areas used by vehicles with pneumatic tyres	> 8,000 N	> 20 N/mm ²	

* according to the ZDB information sheet "Ceramic floor coverings with high mechanical stress resistance"

** according to the ZDB information sheet "Installing tiles and pavers over uncoupling systems in indoor areas"



Product overview

A Schlüter®-DITRA

Length = m	5,1	30,2
Width = 0,995 m	•	•

A Schlüter®-KERDI-KEBA (Band)

Thickness: = 0.1 mm

Length = m	5	30
Width = 8.5 cm	•	•
Width = 12.5 cm	•	•
Width = 15.5 cm	•	•
Width = 18.5 cm	•	•
Width = 25.5 cm	•	•

B Schlüter®-KERDI-FLEX

Thickness = 0.3 mm

Length = m	5	30
Width = 12.5 cm	•	•
Width = 25.5 cm	•	•

C Schlüter®-KERDI-KM /-MV /-PAS (Pipe collars/set)

thickness = 0.1 mm

see product data sheet 8.1

D Schlüter®-KERDI-KERECK

thickness = 0,1 mm

Internal corner	2 pc.	10 pc.	50 pc.
pre-fabricated piece 90°	•	•	•
pre-fabricated piece 135°	•		
External corner	2 pc.	10 pc.	50 pc.
pre-fabricated piece	•	•	•

D Schlüter®-KERDI-KERECK

thickness = 0,1 mm

Internal corner	5 pc.
pre-cut section	•
External corner	5 pc.
pre-cut section	•

E Schlüter®-KERDI-COLL-L (sealing adhesive)

Container	4.25 kg
Container	1.85 kg

see product data sheet 8.4

F Schlüter®-KERDI-FIX (installation adhesive)

G = grey, BW = brilliant white

Colour	G	BW
Cartridge 290 ml	•	•

see product data sheet 8.3

Schlüter®-KERDI-DRAIN (floor drains)

G

see product data sheet 8.2

Schlüter®-KERDI-LINE (linear drainage)

H

see product data sheet 8.7

Schlüter®-KERDI-SHOWER (sloped trays)

I

see product data sheet 8.6 and 8.8

Schlüter®-KERDI-TS (tub seal)

J

see product data sheet 8.9



**Text template for tenders:**

____ m² Schlüter-DITRA as

- Uncoupling mat
- Waterproofing and uncoupling mat for tile coverings made from a polypropylene membrane with square dovetailed recesses in EasyFill design and imprinted EasyCut gridlines, with an anchoring fleece laminated on the underside, installed on an existing, level and load bearing substrate, on
- the floor, consisting of _____
- the wall, consisting of _____ using a suitable
- Tile adhesive, as selected by supplier
- Tile adhesive, type _____

to be professionally adhered according to manufacturer's specifications.

Connections to pipe penetrations and floor drains

- are to be included in the unit prices.
- are to be invoiced separately.

Material: _____ €/m²

Labour: _____ €/m²

Total: _____ €/m²

Text template for tenders:

____ linear metres Schlüter-KERDI-FLEX as a highly flexible sealing tape with anchoring fleece laminated on both sides for waterproofing

- flexible joints
- flexible floor/wall transitions
- flexible connections

upright building structures of the waterproofing membrane Schlüter-DITRA, to be professionally adhered according to manufacturer's specifications.

Width of KERDI-FLEX:

- 12.5 cm
- 25 cm

Material: _____ €/m

Labour: _____ €/m

Total: _____ €/m

Text template for tenders:

____ linear metres Schlüter-KERDI-KEBA as a sealing tape made of polyethylene foil with anchoring fleece laminated on both sides for waterproofing

- abutting joints
- flexible floor/wall transitions
- connections

fixed upright building structures of the waterproofing membrane Schlüter-DITRA, to be professionally adhered according to manufacturer's specifications.

internal and external corners

- are to be included in the unit prices.
- are to be invoiced separately.

Width of KERDI-KEBA:

- 8.5 cm
- 12.5 cm
- 15 cm
- 18.5 cm
- 25 cm

Material: _____ £/m

Labour: _____ £/m

Total: _____ £/m

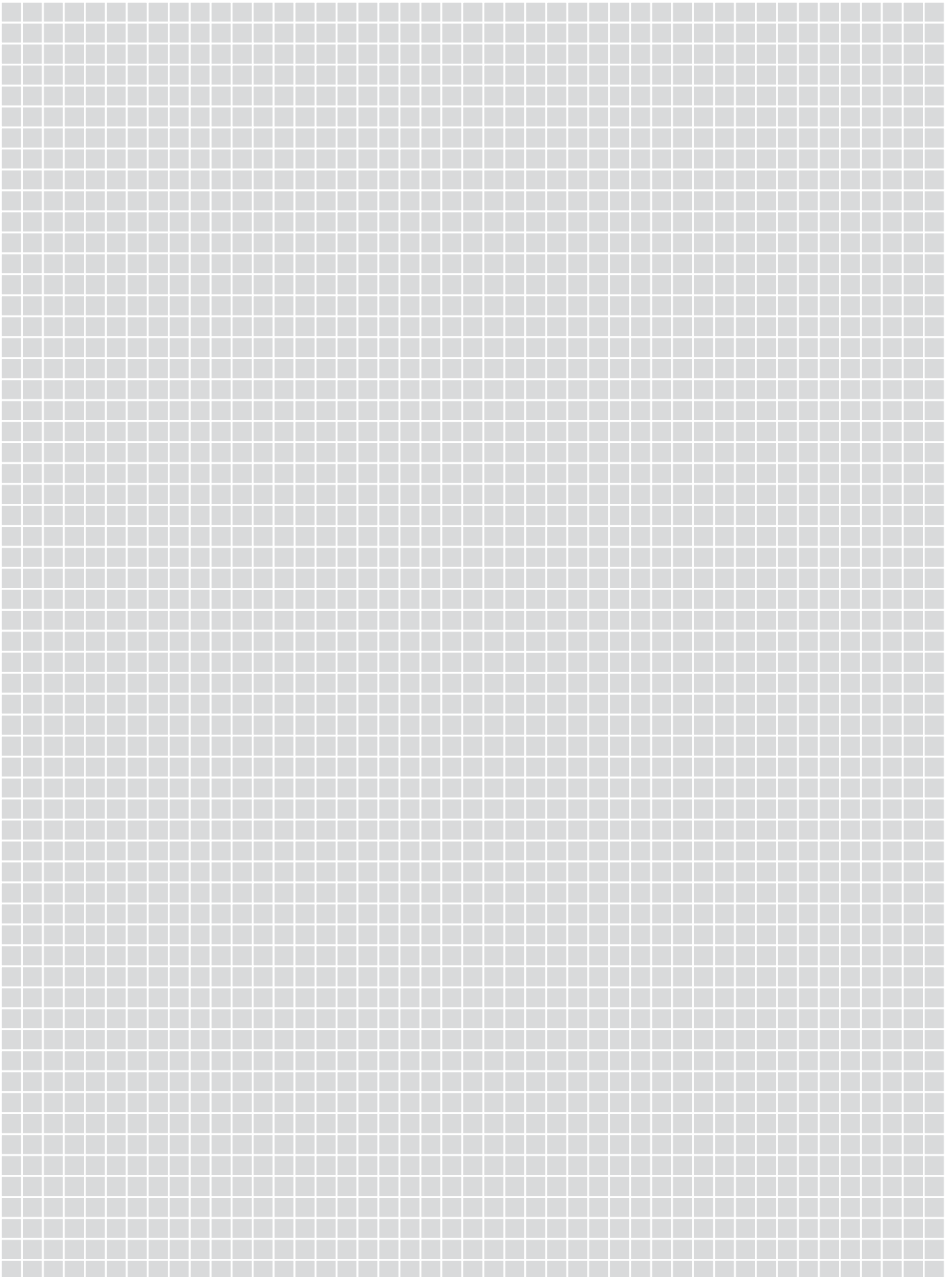
Text template for tenders:

____ pcs. Schlüter-KERDI-KM as a polyethylene pipe collar with an anchoring fleece laminated on both sides, to be supplied and professionally adhered according to the manufacturer's specifications.

Material: _____ £/unit

Labour: _____ £/unit

Total: _____ £/unit







Schlüter®-DITRA 25

Underlayment

Uncoupling, waterproofing and vapour pressure equalisation

6.1

Product data sheet

Application and Function

Schlüter®-DITRA 25 is a polyethylene membrane with a grid structure of square cavities, each cut back in a dovetail configuration and an anchoring fleece laminated to its underside. Designed for tile and natural stone installations, Schlüter®-DITRA 25 serves as a waterproofing membrane, a vapour pressure equalisation layer to accommodate construction moisture occurring within the substrate and an uncoupling layer for problematic substrates.

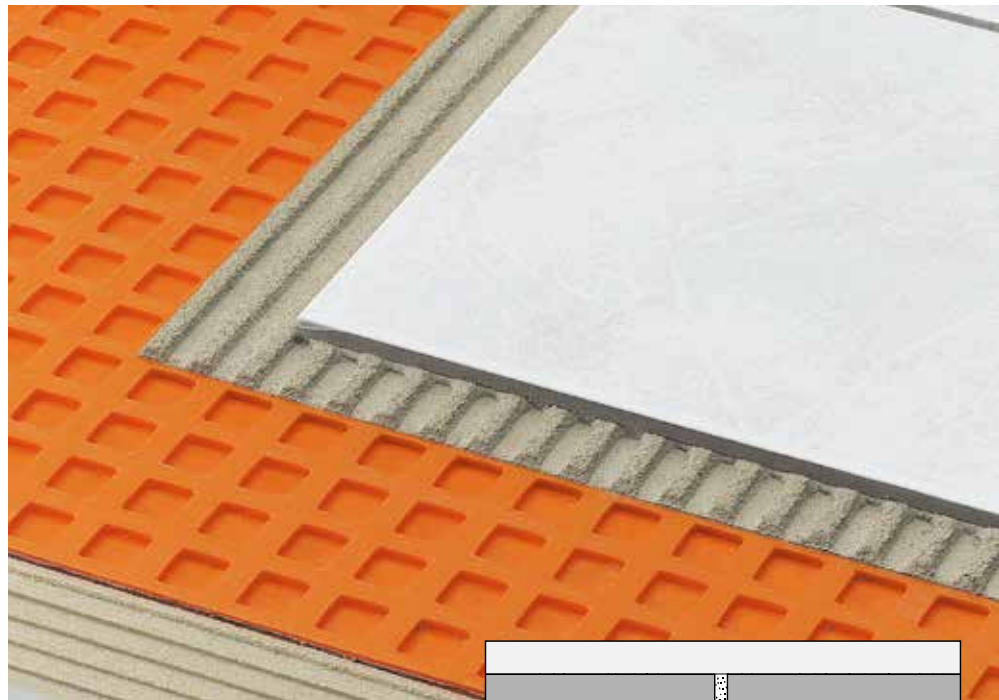
The substrate must be even and load bearing. To bond Schlüter®-DITRA 25, use a bonding adhesive that is appropriate for the substrate. Apply the adhesive using a 3 x 3 mm or 4 x 4 mm notched trowel. The anchoring fleece on the underside of Schlüter®-DITRA 25 must be fully engaged in the adhesive to provide a mechanical bond to the substrate. Please observe the open time of the bonding adhesive.

Using the thin-bed method and following all applicable industry standards, set the tile or stone covering directly on the Schlüter®-DITRA 25 in such a way that the tile adhesive becomes mechanically anchored in the square, cut back cavities of the Schlüter®-DITRA 25 matting.

Summary of functions

a) Uncoupling

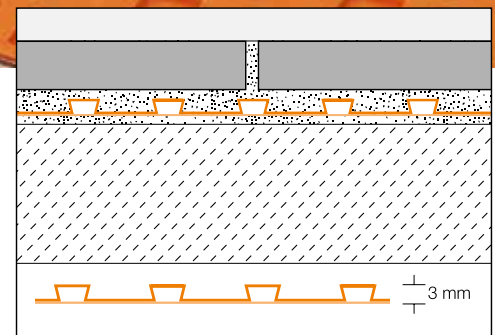
Schlüter®-DITRA 25 uncouples the floor covering from the substrate and neutralises the tensions between the substrate and the tile covering that result from the varying deformations of the materials. Likewise, stress cracks in the substrate are bridged and are, therefore, not transferred to the surface covering.



b) Waterproofing

Schlüter®-DITRA 25 is a waterproof polyethylene membrane with a relatively high vapour diffusion density. Provided the mat joints and the connections to walls and built-in elements are properly installed, Schlüter®-DITRA 25 can be used to create a certified bonded waterproofing assembly with the tile covering. Schlüter®-DITRA 25 features the national technical approval (abP) required in Germany and bears the Ü mark. Moisture exposure class according to abP: 0 - B0 as well as A and C.

Schlüter®-DITRA 25 has the required European Technical Assessment (ETA) as specified in ETAG 022 (bonded waterproofing assemblies) and bears CE marking. Exclusively use system-approved thin-bed adhesives for areas that require CE conform-





ity or compliance with the general certificate of national technical approval (abP). Please contact us at the address shown in this data sheet for further information about suitable thin-bed adhesives and the corresponding test certificates.

Therefore, Schlüter®-DITRA 25 protects the substrate against damage due to moisture penetration and aggressive substances.

c) Equalisation of vapour pressure

The interconnected air channels between the cavities on the underside of the Schlüter®-DITRA 25 matting remain open. This allows moisture in the substrate to evaporate, therefore neutralising vapour pressure.

d) Load distribution (load impact)

Tiles that are installed in floor coverings with Schlüter®-DITRA 25 should have a minimum size of 5 x 5 cm and be at least 5.5 mm thick. The bottom of the square cavities in Schlüter®-DITRA 25, which are filled with thin-bed adhesive, directly transfer the load impact on the tile covering to the substrate. As a consequence, tile coverings installed on top of Schlüter®-DITRA 25 are highly load resistant. If high traffic loads are expected (e.g. in industrial locations), the tiles selected for the installation must be of the corresponding thickness and pressure stability. The requirements of the mandatory guideline "Ceramic Floor Coverings With High Impact Resistance," published by the German Construction Industry Association (ZDB) must be followed.

In areas with high impact loads, the tiles must be fully embedded in the thin-bed adhesive. The contact surface of Schlüter®-DITRA 25 amounts to approximately 50% of the total surface. This can reduce the load bearing capacity in case of point loads. For high point loads, select a tile thickness that is capable of distributing the loads. Ceramic tile coverings should not be exposed to the direct impact of hard objects.

e) Adhesive properties

Due to the bonding of the anchoring fleece into the thin-bed adhesive on the underside and the mechanical anchoring of the adhesive in the cut back cavities, Schlüter®-DITRA 25 achieves a good adhesion of the tile covering to the substrate (laboratory test values: $\sim 0.2\text{N/mm}^2$). Consequently, Schlüter®-DITRA 25 can be used for wall and floor coverings. Anchor plugs may be used with wall coverings if necessary.

Material

Schlüter®-DITRA 25 is a polyethylene sheet with a grid structure of square cavities, each cut back in a dovetail configuration. An anchoring fleece is laminated to the underside. The rib height is approximately 3 mm. Polyethylene is not permanently UV stable. Prolonged exposure to intensive sunlight should be avoided when storing the material.

Material properties and areas of application

Schlüter®-DITRA 25 is flexible, bridges cracks and will not rot. In addition, it is highly resistant to watery solutions, salts, acids and alkalis, as well as many organic solvents, alcohols and oils.

Its resistance to specific stresses must be examined separately on the basis of the expected concentration, temperature and exposure time. The vapour diffusion density is relatively high. The material is physiologically safe.

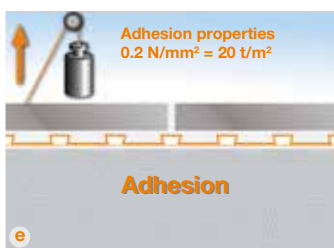
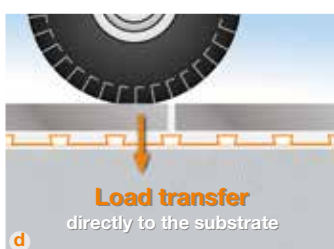
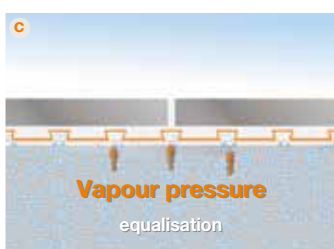
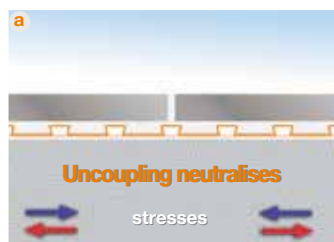
Schlüter®-DITRA 25 is used with a great variety of applications. Its suitability for specific chemical or mechanical conditions must be evaluated for each individual case. The instructions below provide some general guidelines.

Coverings constructed with Schlüter®-DITRA 25 may have a certain hollow sound when they are walked upon with hard shoes or tapped with a hard object.

Note

The thin-bed adhesive and the covering materials selected for use with Schlüter®-DITRA 25 must be suitable for the corresponding application and must meet the requirements of the site. Materials used in exterior applications must be waterproof as well as resistant to frost and weather.

Schlüter®-DITRA 25 should be used primarily as a waterproofing layer when installing cover materials that are sensitive to moisture (e.g. natural stone or synthetic resin panels) or if moisture is expected to build up on the underside (e.g. in the case of green screed). When Schlüter®-DITRA 25 is installed in exterior applications, special protective measures may be required; e.g. shielding the installation from direct sunlight. The use of rapid setting thin-bed adhesives may be an advantage for certain projects.





Schlüter®-DITRA 25 should be covered with protective running boards if the transport of material makes it necessary to walk over the matting.

Movement joints

Schlüter®-DITRA 25 must be separated at existing movement joints. If Schlüter®-DITRA 25 is used as a waterproofing layer, the joints between the sheets must be covered with Schlüter®-KERDI-FLEX band. Movement joints must be continued in the tile covering, as specified by the applicable industry standards. In all other cases, large area floor assemblies installed over Schlüter®-DITRA 25 must be subdivided into smaller fields with the help of movement joints. The distance between such control joints in exterior applications (balconies and terraces) should not exceed three metres. Depending on the construction of the substrate, field sizes may need to be smaller. Please refer to our Schlüter®-DILEX profile range. Install the corresponding profiles such as Schlüter®-DILEX-BT or Schlüter®-DILEX-KSBT over expansion joints in accordance with the expected movements. It must be assured that no tension can build at the edge of coverings, e.g. at upright construction elements or floor to wall transitions. The edge profiles and connective joints have to meet the requirements of the corresponding construction standards and must be suitable to prevent the build up of tensions. Please refer to our Schlüter®-DILEX profile range.

Substrates for Schlüter®-DITRA 25

Substrates on which Schlüter®-DITRA 25 is to be installed must always be checked for their suitability to make sure they are level, load-bearing, clean and compatible with the materials to be used. Remove all surface components that may weaken the bond. Any unevenness or height and slope differences in the substrate must be levelled prior to the application of Schlüter®-DITRA 25.

Concrete

Concrete is subject to lengthy deformation processes due to shrinkage. Concrete and pre-stressed concrete may build up tension because of deflection.

Thanks to the installation of Schlüter®-DITRA 25, the tensions occurring (in the floor and wall area) between the concrete and the tile covering are absorbed.

Mortar screeds

With Schlüter®-DITRA 25, tiles can be installed on green cementitious screeds as soon as they are ready to bear weight. According to the applicable standards, mortar screeds must cure a minimum of 28 days prior to the installation of tile and their residual moisture content must be below 2% (percentage by volume). In particular, floating screeds and heated screeds tend to change shape or develop cracks after installation, e.g. due to load stresses or temperature changes.

Schlüter®-DITRA 25 absorbs inherent stresses between the concrete and tile covering so that the tile can be installed as soon as the concrete is hard enough to be walked upon, (depth of screed does need to be considered and additional drying time should be allowed in some instances, please contact us for advice).

Cracks and curling forming in the screed over time will be neutralised by DITRA 25 and will not be transferred to the tile covering.

Gypsum based screeds

According to the applicable standards, the residual moisture of gypsum based screeds should not exceed 0.5% (percentage by volume) prior to the installation of tiles. With the application of Schlüter®-DITRA 25, tile coverings can be installed as soon as the residual moisture is below 2.0% (percentage by volume).

If required, the screed surface may need to be pre treated (sanding, priming) in accordance with the applicable industry standards and manufacturers' recommendations.

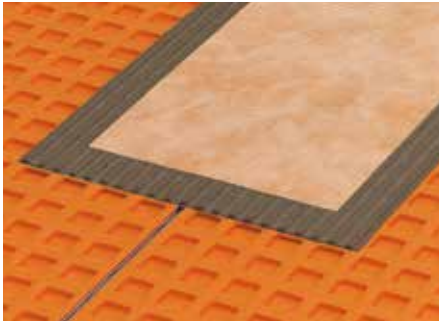
Schlüter®-DITRA 25 can be applied using thin-bed tile adhesives that are suitable for the substrate. Schlüter®-DITRA 25 protects the screed against moisture penetration from the surface. Gypsum based screeds are sensitive to moisture and must be protected from additional moisture penetration, especially on the underside.

Radiant heated screeds

Schlüter®-DITRA 25 may be used over heated screeds as described in the sections on mortar screeds and gypsum based screeds. With Schlüter®-DITRA 25, tiles can be heated seven days after installation.

Starting at 77 °F (25 °C), the radiant heated floor temperature can be raised gradually by +9 °F (+5 °C) per day, to a maximum of





104 °F (40 °C). The air channels of Schlüter®-DITRA 25 allow for a quick and even distribution of heat below the tile covering.

Note:

For radiant heated floors, we recommend our system Schlüter®-BEKOTEC-THERM, the ceramic thermal comfort floor.

Schlüter®-DITRA 25 is also recommended for uncoupling of radiant heated floors consisting of thin electric heating mats. Schlüter®-DITRA 25 may be installed either above or below the heating mat. However, the uncoupling function is more effective if Schlüter®-DITRA 25 is installed above the heating mat.

Schlüter®-DITRA-HEAT is a special uncoupling membrane that was developed for attachment of the matching system heating cables of electrical floor/wall heating systems. Further information can be found in product data sheet 6.4.

Dry screed elements

Following the professional installation of the dry screed material according to manufacturer instructions, the maximum tile size can be freely chosen with the use of Schlüter®-DITRA 25.

Masonry / mixed substrates

Masonry consisting of brick, stone, limestone, cement block, lightweight concrete, or similar is generally a suitable substrate for Schlüter®-DITRA 25. Uneven areas must be levelled in advance. Particularly in refurbishments or extensions, different materials (mixed masonry) may be encountered. At the transitions, movement can cause cracks. With Schlüter®-DITRA 25, stresses and cracks do not transfer to the tile covering.

Stucco / plaster

Plaster substrates should be examined in accordance with the applicable building codes to ensure they are dry. The surface may need to be pre-treated with a primer. Schlüter®-DITRA 25 can be applied using thin-bed tile adhesives that are suitable for the substrate.

Balconies / terraces

As an uncoupling membrane, Schlüter®-DITRA 25 neutralises the stresses between the substrate and the tile covering that are caused by the frequent and extensive temperature changes occurring on balconies. Moreover, Schlüter®-DITRA 25 can serve

as the sole waterproofing membrane in tile assemblies for cantilevered balconies and terraces that are built directly on the ground (note instructions for waterproofing). The substrate (concrete, screed) must be sufficiently sloped.

For refurbishments, the existing surface assembly can generally remain, provided it is sufficiently sloped and load bearing. Prior to the application of Schlüter®-DITRA 25 over existing and cracked tile floors, the loose tiles must be removed and the remaining cavities filled using an appropriate adhesive. The preparations also include ensuring a proper slope in the substrate.

We recommend Schlüter®-DITRA-DRAIN (see product data sheet 6.2) for coverings with side lengths exceeding 30 x 30 cm.

Rooftop terraces

In the case of roof terraces over residential/commercial or other spaces as well as roof-covered surfaces, the surface needs to be designed as a flat roof, following the applicable technical rules for roof structures. In the case of heat-insulated residential and commercial spaces (as well as spaces with expected temperature differences from the outside), a vapor barrier as well as ceiling insulation is required in a standard-confirming assembly. National standards and/or the applicable technical data sheets need to be observed if applicable.

A drainage system such as Schlüter®-TROBA or Schlüter®-TROBA-PLUS must be installed over this top insulation layer. This is then topped with screed to act as a load distribution layer. Schlüter®-DITRA 25 is installed over this screed as an uncoupling layer with the tile covering and as a moisture barrier for the screed. Otherwise, any loose or insufficiently attached parts must be removed and defects and missing sloping leveled with a suitable suitable self-levelling compound prior to adhering Schlüter® DITRA 25.

We recommend Schlüter®-DITRA-DRAIN (see product data sheet 6.2) for coverings with side lengths exceeding 30 x 30 cm.

Synthetic flooring and surface coatings

In principle, the surface must be load bearing and prepared in such a way that a suitable tile adhesive will adhere to it and anchor the fleece on the underside of the Schlüter®-DITRA 25 matting. The compatibility of the adhesive for the substrate and Schlüter®-DITRA 25 must be verified ahead of time.



Plywood and chipboard

These materials are particularly prone to deformation under the influence of moisture (or significant changes in atmospheric humidity). The plywood and chipboard panels used in construction should therefore be exterior grade. In principle, plywood can be used as backing materials for Schlüter®-DITRA 25 on both floors and walls in interior applications. The thickness of the panels must be sufficient to ensure stability in conjunction with a suitable supporting construction. Attach the panels with screws set at the required minimum spacing. The joints must feature tongue and groove connections and should be secured with additional adhesive. Movement joints of at least 10 mm must be left at the transition to other construction parts. Schlüter®-DITRA 25 neutralises the stress occurring in the tile covering and prevents the penetration of moisture.

Structural plank subflooring

Sufficiently load bearing structural plank subflooring in tongue and groove construction, with the appropriate screws in place, is suited in principle as a substrate for ceramic tiles. The timber substrate should have reached the equilibrium moisture content prior to installing Schlüter®-DITRA 25. However, an additional layer of plywood panels is recommended. Uneven floors must be levelled using an appropriate levelling compound.

Bituminous screed (paving grade asphalt)

Schlüter®-DITRA 25 allows for the installation of ceramic coverings on standard weight-bearing, unheated mastic asphalt screeds in indoor areas. The surface needs to be sanded or must be suitable to allow for the proper adhesion of the thin-bed tile adhesive for the installation of Schlüter®-DITRA 25.

Installation

1. The substrate must be free of bond inhibiting components, be load bearing and even. Any unevenness in the substrate must be levelled prior to the application of Schlüter®-DITRA 25.
2. The type of bonding adhesive used to apply Schlüter®-DITRA 25 depends on the type of substrate. The adhesive must bond to the substrate and mechanically anchor the fleece on the underside of the Schlüter®-DITRA 25 matting. Verify

the compatibility of all materials prior to installation.

3. Apply the bonding adhesive to the substrate using a 3 x 3 mm or 4 x 4 mm notched trowel.
4. Individual courses of Schlüter®-DITRA 25 are cut to size. Solidly embed the anchoring fleece on the underside of Schlüter®-DITRA 25 in the adhesive so that its entire surface is bonded and immediately work it into the adhesive using a float or screed trowel. Among other tools, an orbital sander is well-suited for this purpose. Please observe the open time of the bonding adhesive. When initially positioning Schlüter®-DITRA 25, it is advisable to align and position the matting while slightly stretching it. This is best done with an additional helper. Tightly abut the individual membranes.

Note:

If Schlüter®-DITRA 25 is only installed as an uncoupling membrane, side edges and ends of individual courses do not need to be sealed with Schlüter®-KERDI-KEBA. Please refer to the instructions for waterproofing if the membrane is to serve as a waterproofing layer.

5. Once installed, the matting must be protected against heavy mechanical loads to avoid loosening it from the substrate or other damage. It is advisable to place running boards (especially in the centre of material transports) to protect Schlüter®-DITRA 25. Other protective measures, such as shielding of direct sunlight or protection from precipitation in exterior applications, may also be required. Carefully remove any moisture that may have gathered in the indentations of the studs before applying the thin-bed tile adhesive.
6. Immediately after the Schlüter®-DITRA 25 matting is installed, the tiles can be set using the thin-bed method and using a bonding tile adhesive that matches the requirements of the covering. It is recommended to fill the square cavities with the smooth side of the trowel and to establish a regular pattern in the bonding adhesive with the notched side of the trowel in one application. The tiles are fully embedded in the adhesive. Fully embedded installation of tiles in accordance with the applicable professional standards is particularly important for coverings with high traffic loads and in outdoor areas. The notches of the trowel must match the format and thickness of the tiles, so as to achieve solid bedding. Please observe the open





time of the adhesive. The adhesive bed over Schlüter®-DITRA 25 should not exceed 10 mm.

7. For movement joints as control joints, expansion joints, or connection joints please follow the instructions given in this product data sheet as well as the applicable industry regulations.

Waterproofing with Schlüter®-DITRA 25

Provided the mat joints and the connections to built-in elements and upright structural fixtures are carefully sealed, Schlüter®-DITRA 25 can be used to create a certified bonded waterproofing assembly with the tile covering. Schlüter®-DITRA 25 features the national technical approval (abP) required in Germany and bears the Ü mark. Moisture exposure class according to abP: 0 - B0 as well as A and C.

Schlüter®-DITRA 25 has the required European Technical Assessment (ETA) as specified in ETAG 022 (bonded waterproofing assemblies) and bears CE marking. Exclusively use system-approved thin-bed adhesive for areas that require CE conformity or compliance with the general certificate of national technical approval (abP). Please contact us at the address shown in this data sheet for further information about suitable thin-bed adhesive and the corresponding test certificates.

We recommend the use of our waterproofing membrane Schlüter®-KERDI (see product data sheet 8.1 Schlüter®-KERDI) for applications of Utilisation Class B, "pools." Schlüter®-DITRA 25 therefore protects the substrate from damages due to the penetration of moisture and aggressive substances. The abutting joints are covered with the sealing adhesive Schlüter®-KERDI-COLL-L and Schlüter®-KERDI-KEBA (minimum width: 12.5 cm) is solidly embedded over the joint. For floor to wall transitions, adhere the Schlüter®-KERDI-KEBA in the appropriate width. The sealing band should overlap at least 5 cm.

Schlüter®-KERDI-KEBA is also suited for sealing joints with existing fixtures such as door frames, window frames and balcony edge profiles of metal, wood or plastic.

Start by applying Schlüter®-KERDI-FIX to the part of the fixture that is to be adhered. The remaining width is fully embedded on Schlüter®-DITRA 25, using the adhesive Schlüter®-KERDI-COLL-L.

The suitability of Schlüter®-KERDI-FIX for the material of the corresponding fixtures must be verified beforehand.

Cut Schlüter®-DITRA 25 above structural and seismic expansion joints, then cover the joint with Schlüter®-KERDI-FLEX.

Schlüter®-KERDI-FLEX can also be used for flexible finishing edges. Alternatively, Schlüter®-KERDI-KEBA may be used, provided a loose fold is left above the joint.

Note regarding floor drains:

Schlüter®-KERDI-DRAIN and Schlüter®-KERDI-LINE are components that were specifically developed for connection to bonded waterproofing assemblies. Schlüter®-DITRA 25 can be quickly and reliably abutted in these cases with the use of Schlüter®-KERDI collars.



Product Overview

Schlüter®-DITRA 25

Length = m	5	30
Width = 1 m	•	•

Schlüter®-KERDI-KEBA (Band)

Ⓐ Thickness = 0.1 mm

Length = m	5	30
Width = 8.5 cm	•	•
Width = 12.5 cm	•	•
Width = 15 cm	•	•
Width = 18.5 cm	•	•
Width = 25 cm	•	•

Schlüter®-KERDI-FLEX

Ⓑ Thickness = 0.3 mm

Length = m	5	30
Width = 12.5 cm	•	•
Width = 25 cm	•	•

Schlüter®-KERDI-KM (Pipe collar)

Ⓒ Thickness = 0.1 mm

Dim. Ø 15 cm / Hole Ø 22 mm
KM 5117 / 22 Set = 5 pieces

Schlüter®-KERDI-KERECK

Ⓓ Thickness = 0.1 mm

Internal Corner	2 Pc.	5 Pc.	10 Pc.
Prefabricated	•		•
Pre cut section		•	
External Corner	2 Pc.	5 Pc.	10 Pc.
Prefabricated	•		•
Pre cut section		•	

Schlüter®-KERDI-COLL-L

Ⓔ

Sealant adhesive	4.25 kg
	1.85 kg
see product data sheet 8.4	

Schlüter®-KERDI-FIX (Installation adhesive)

Ⓕ G = grey, BW = brilliant white

Colour	G	BW
Cartridge 290 ml	•	•
Squeezable tube 100 ml	•	
see product data sheet 8.3		

Schlüter®-KERDI-DRAIN (Floor drains)

Ⓖ

see product data sheet 8.2

Ⓗ Schlüter®-KERDI-LINE (linear drainage)

see product data sheet 8.7



**Text template for tenders:**

Bond in a professional manner and according to the manufacturer's specifications

_____ m² Schlüter®-DITRA 25 as

☐ uncoupling matting
☐ waterproofing and uncoupling matting for tile consisting of a crack bridging polyethylene membrane with a grid structure of square cavities, each cut back in a dove tail configuration, and an anchoring fleece laminated to its underside, to an existing, even and load bearing substrate on the

☐ floor, consisting of _____

☐ wall, consisting of _____

with a suitable

☐ tile adhesive, as suggested by the supplier.

☐ tile adhesive, type _____

Connections to pipes and floor drains:

☐ are to be included in unit prices;

☐ are to be charged as extra.

Material: _____/m²

Labour: _____/m²

Total: _____/m²

Text template for tenders:

Bond in a professional manner and according to the manufacturer's specifications

_____ linear metres of Schlüter®-KERDI-FLEX as a highly flexible seam sealing tape with anchoring fleece laminated on both sides for waterproofing

☐ flexible butt joints

☐ flexible floor to wall transitions

☐ flexible connections of

Schlüter®-DITRA 25 waterproofing membrane to building elements.

Width of Schlüter®-KERDI-FLEX:

☐ 12.5 cm ☐ 25 cm

Material: _____/m

Labour: _____/m

Total: _____/m

Text template for tenders:

Accurately bond in a professional manner and according to the manufacturer's specifications

_____ metres of Schlüter®-KERDI-KEBA as a polyethylene waterproofing strip, covered on both sides with fleece material for the sealing of

☐ butt joints

☐ floor to wall transitions

☐ connections

to fixed installation parts of the Schlüter®-DITRA 25 waterproofing membrane.

Internal and external corners

☐ are to be included in unit prices

☐ are to be charged as extra.

Width of the Schlüter®-KERDI-KEBA:

☐ 8.5 cm ☐ 12.5 cm ☐ 15 cm

☐ 18.5 cm ☐ 25 cm

Material: _____/m

Labour: _____/m

Total: _____/m

Text template for tenders:

Bond in a professional manner and according to the manufacturer's specifications

_____ pieces of Schlüter®-KERDI-KM as a polyethylene pipe sleeve, covered on both sides with fleece fabric.

Material: _____/Piece

Labour: _____/Piece

Total: _____/Piece