

Schlüter®-DITRA-PS

Peel-and-stick installation membrane
Uncoupling, vapour pressure equalisation

6.7

Product data sheet

Application and function

Schlüter-DITRA-PS is a polypropylene mat with EasyCut gridlines as well as square, dovetailed EasyFill recesses and an anchoring fleece and pressure sensitive adhesive laminated to the underside.

It is a universal substrate for tile coverings that forms an uncoupling and vapour pressure equalisation layer.

DITRA-PS is exclusively intended for installation on floors in interior areas. Substrates for installing the product must be level, clean, dust free, dry, smooth, rigid and load bearing, with no deflection. To install, peel the release film off DITRA-PS and place the mat on the substrate. It can be lifted and re-positioned providing no pressure has been applied to it. However, once pressure has been applied, the adhesive sticks the mat firmly to the substrate.

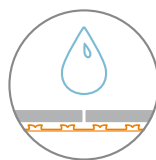
Using the thin-bed method, tiles can be installed in accordance with the applicable regulations immediately after adhering the mat.

Summary of functions:



a) Uncoupling

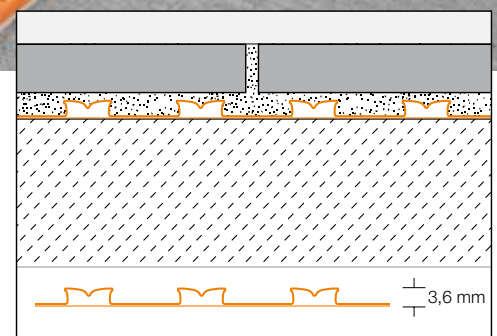
Schlüter-DITRA-PS uncouples the covering from the substrate and neutralises stresses between the substrate and the tile covering that result from various deformations. It also bridges tension cracks from the substrate and prevents them from affecting the tile covering.

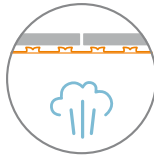


b) Waterproofing

DITRA-PS is waterproof and suitable for use in wet areas, provided the abutting joints are sealed with Schlüter-KERDI-KEBA and Schlüter-KERDI-COLL-L.

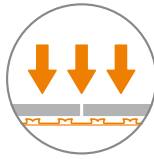
Note: DITRA-PS does not have ETA or abP certification. If ETA or abP certification is required, we recommend using the original Schlüter-DITRA which is bonded to the substrate with cementitious tile adhesive.





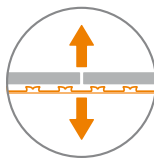
c) Vapour pressure equalisation

The air channels of Schlüter-DITRA-PS, 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-PS in floor areas should have a minimum size of 5 x 5 cm and a thickness of at least 5.5 mm. The tile adhesive-filled, square recesses of DITRA-PS transfer mechanical stresses impacting the tile covering directly to the substrate. That makes tile coverings installed on DITRA-PS 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-load areas must be fully embedded in the tile adhesive. The impact of hard objects must be avoided on ceramic coverings.



e) Bonded assembly

The special adhesive layer on the underside anchoring fleece of DITRA-PS sticks well to the substrate, while the mechanical anchoring of the tile adhesive in the under-cut square indentations results in an excellent bond with the tile covering.

Material

Schlüter-DITRA-PS is a polypropylene mat with square dovetailed recesses in EasyFill design and imprinted EasyCut gridlines. The anchoring fleece laminated on the underside features a special thermoplastic adhesive layer that is not water soluble and free of solvents. The material thickness measured across the stud structure is approx. 3.6 mm. DITRA-PS is not UV-stable and must be protected against prolonged exposure to direct sunlight. The product must be stored in a dry location above freezing. It is best to install DITRA-PS at ambient temperatures of 5-30 degrees C.

Material properties and areas of application

Schlüter-DITRA-PS 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. The adhesive layer is not water soluble and permanently attaches to coverings that are free of solvents, plasticisers 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. The polyethylene release film and the packaging material can be fully recycled. DITRA-PS 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-PS with hard shoes or tapping them with a hard object may produce a hollow sound. DITRA-PS is exclusively intended for installation on floors in interior areas.



Note

The cementitious tile adhesive installed over DITRA-PS and the covering material must be suitable for the respective application area and meet the corresponding requirements. DITRA-PS 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).

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

Notes on movement joints:

Separate Schlüter-DITRA-PS over existing movement joints. Continue the movement joints in the tile covering as specified by the applicable standards. DITRA-PS can be installed over trowel cuts or construction joints (resulting from work interruptions) without any further pretreatment. Such joints do not have to be continued in the tile covering. Divide larger coverings installed over the DITRA-PS mat into sections, using movement joints according to the applicable standards.

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 structural movement 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. Edge 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.



Schlüter®-DILEX-F on Schlüter®-DITRA-PS



Schlüter®-DILEX-RF on Schlüter®-DITRA-PS



Schlüter®-DILEX-AKWS on Schlüter®-DITRA-PS

Substrates for Schlüter®-DITRA-PS:

Always check the substrates on which DITRA-PS 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-PS.

Concrete

Concrete undergoes long-term structural deformation due to shrinkage. In addition, tension can build up in concrete and prestressed concrete due to deflection. Since DITRA-PS absorbs the resulting stresses between the concrete and the tile covering on the floor, tiles can be immediately installed as soon as the concrete is ready to bear weight.

Cement screeds

Cement screeds must have cured for at least 28 days prior to tile installation in accordance with the applicable regulations 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-PS, tiles can be installed on fresh cement screeds as soon as their surface is sufficiently dry (typically this takes approx. 3-5 days for well ventilated standard cement screeds). Additional drying time may be necessary for screeds over 40 mm thick or where environmental conditions delay the drying process. DITRA-PS will neutralise cracks and screed deformations that develop 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-PS.

If necessary, the screed surface must be treated (grinding, priming) as specified by the applicable technical regulations and manufacturer instructions. DITRA-PS can then be affixed to the pre-treated screed surface. DITRA-PS can be installed with dry-setting or other suitable cementitious



tile adhesives. DITRA-PS 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-PS can be used on heated screeds, provided the above notes (cement, gypsum-based screeds) are followed. Covering assemblies created with DITRA-PS are ready for heating only 7 days after completion. Starting from a temperature of 25 °C, the supply temperature can be increased by no more than 5 °C a day to a usage temperature of max. 40 °C. The interconnected air channels of DITRA-PS 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.

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

Schlüter-DITRA-HEAT / HEAT-PS was developed specifically as an uncoupling mat designed to attach the matching system heating cables for electric floor/wall heating systems. You can find further details in product data sheets 6.4 and 6.5.

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-PS.

Vinyl coverings and coatings

All surfaces must be load bearing and pre-treated or suitable for bonding with the adhesive anchoring fleece on the underside of DITRA-PS. The compatibility of the adhesive with the substrate must be verified in advance. DITRA-PS may only be installed on substrates that are free of solvents, plasticisers and oils.

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. 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. Edge joints of about 10 mm have to be maintained at the transition to adjoining building structures. DITRA-PS 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-PS 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.



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-PS.

2. Thoroughly vacuum the substrate prior to installation to remove all dust.

Note:

Although it is not mandatory to apply a primer, a standard primer without coarse components such as quartz sand may be used if the condition of the substrate necessitates it.

3. Cut the uncoupling mat DITRA-PS to size and lay it out on the floor. Now remove the release film from the fleece on the underside and press the mat evenly on the substrate, using a float or roller.

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

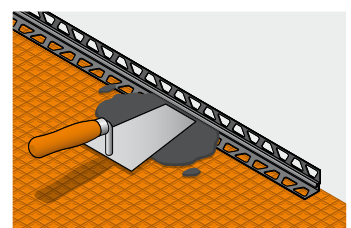
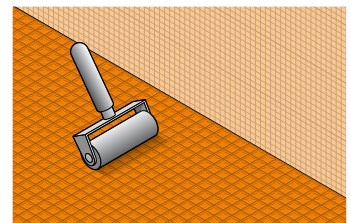
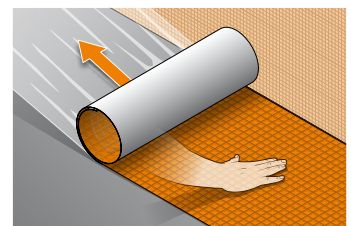
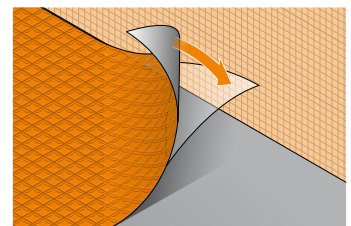
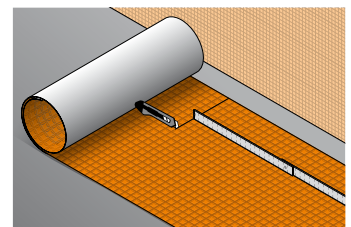
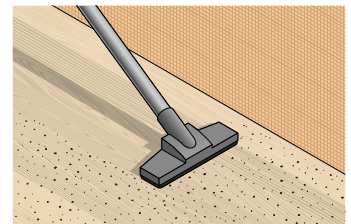
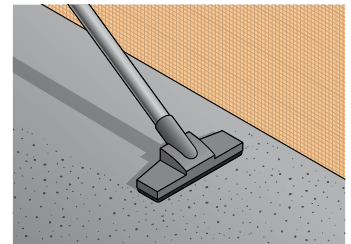
4. To prevent any damage to the installed DITRA-PS or detachment from the substrate, it is recommended to protect it from mechanical stresses, e.g. by setting out running boards (particularly in the centre areas used for material transport).

5. Immediately after adhering DITRA-PS, tiles can be installed in the thin-bed method, 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 cementitious tile 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.

Note: Fill the square indentations using the smooth side of the notched trowel (mortar requirement approx. 2.0 kg/m²) then groove 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 of 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 that exceeds 30 cm, we recommend a quick-setting tile adhesive with crystalline water binding capacity for fast curing and drying of the mortar.

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





Waterproofing with Schlüter®-DITRA-PS

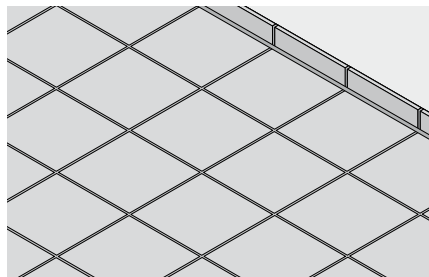
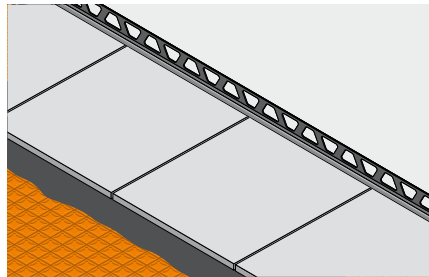
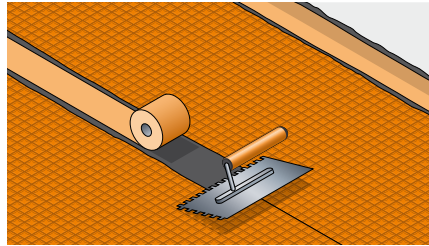
Unless a certified bonded waterproofing assembly is required, DITRA-PS can serve as a waterproofing layer, provided the abutting membrane seams and the connections to installed components and upright building structures are carefully sealed.

If national technical approval (abP) or European approval (ETA = European Technical Assessment) is needed, choose the DITRA variants for installation with cementitious tile adhesives that have the corresponding certification.

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

To waterproof floor-wall transitions, adhere KERDI-KEBA over DITRA-PS on the floor and directly on the substrate in wall areas in the corresponding width. The sealing band must 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 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 fully adhered to DITRA-PS with KERDI-COLL-L.

The suitability of KERDI-FIX for the respective materials of the structural elements must be verified in advance. Separate DITRA-PS at existing movement joints or structural movement joints and seal the abutting joints with Schlüter-KERDI-FLEX. KERDI-FLEX should also be used for flexible finishing edges. As an alternative, a sufficient loop of KERDI-KEBA can also be used.





Schlüter®-DITRA-PS at a glance	
general product properties	
Material	polypropylene
Adhesive layer	PSA hotmelt
Protective foil	PE, transparent
Thickness	3.6 mm
Width	0.985 m
Length	25.4 m (rolls), 0.735 m (mats)
Weight	785 g/m ²
Storage conditions	Store in a frost-free and UV-protected location, temperatures may not exceed 70 degrees C for an extended period
Adhesive requirement (dry weight) *	
Trowelling over indentations	approx. 1.5 - 2.0 kg/m ²
Technical properties	
Processing temperature	+ 5°C 30 °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	
VOC	A+

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

Areas of application for Schlüter®-DITRA-PS					
	Load class *	Sample application areas	Required breaking strength of covering (DIN EN ISO 10545-4)	Maximum compression	Category **
✓	I	Apartment construction, hotel bath-rooms 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 Vulcolan 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"

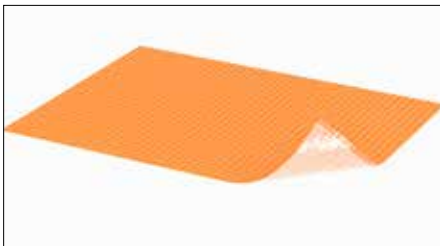


Product overview:



Schlüter®-DITRA-PS Rolls





D PS 25M
25.4 x 0.985 m = 25 m²



Schlüter®-DITRA-MA-PS Rolls

D PS MA
0.735 x 0.985 m = 0.72 m²

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