

## Schlüter®-BEKOTEC-EN 12 F PS

**Peel-and-stick panel**  
for thin covering assemblies  
as a bonded covering assembly for renovation projects

# 9.7

Product data sheet

### Application and function

The reliable **Schlüter-BEKOTEC-EN 12 F PS** covering assembly technology is a system for crack-free and functionally safe screeds and heated screeds, with coverings made of ceramics, natural stone, and other covering materials.

The bonded assembly is installed directly on load bearing, weight-distributing substrates – such as concrete, existing screeds or timber floors. The special pressure sensitive adhesive on the underside of the studded panel achieves an excellent bond with the substrate. The suitability of the substrate for heating purposes has to be verified (movement joints, edging strips, etc.).

This system is based on the studded screed panel BEKOTEC-EN 12 FK with a special pressure sensitive adhesive on the underside. The geometry of the BEKOTEC-EN 12 F PS studded panel dictates a minimum screed layer thickness of 20 mm between and 8 mm above the studs. The stud spacing allows for clamping the heating pipes of the system, which have a 10 mm diameter, in a 50 mm grid to produce a heated screed.

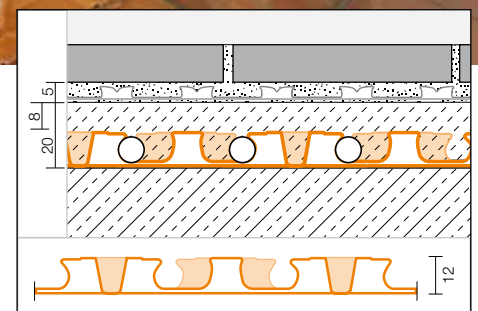
Since only a relatively small amount of screed has to be heated or cooled (with a coverage of 8 mm, approx. 40 kg/m<sup>2</sup>  $\approx$  20 l/m<sup>2</sup>), the floor heating system is easily adjustable and ideally suited for operation at low supply temperatures.

Any contraction occurring while the screed cures is absorbed by the studded pattern. As a result, stresses from contraction buckling cannot affect the entire area, and it is not necessary to install movement joints in the screed. Once the cement screed is ready to support the weight, the uncoupling mat Schlüter-DITRA (alternatively, Schlüter-DITRA-DRAIN 4 or Schlüter-DITRA-HEAT)



can be installed (gypsum based screed  $\leq$  2 CM-%). Ceramic tiles or natural stone can then be installed directly over this layer, using the thin bed method. Movement joints in the covering layer have to be created with Schlüter-DILEX in the customary spacing. Cover materials that are not susceptible to cracking, such as parquet or carpeting, are directly installed over the screed as soon as it reaches the corresponding residual moisture level.

Further information can be found in our Technical Manual.



plus pressure sensitive adhesive (approx. 0.1 mm)



## Material

Schlüter-BEKOTEC-EN 12 F PS is made of impact resistant structured polystyrene with a pressure sensitive adhesive laminated on the underside. It is suited for use with conventionally applied cement or gypsum screeds as well as flowing screed. The material must be stored in a location above freezing where it is not exposed to UV radiation.

## Installation

1. Install Schlüter-BEKOTEC-EN 12 F PS on a sufficiently weight bearing and level substrate. Carefully inspect this area to make sure it is clean and compatible with the materials to be used. Remove all surface components that may weaken the bond. 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.

Correct uneven sections in the floor with screeds or suitable levelling compounds in advance.

2. Cover the edges of the covering at rising walls or structural elements with the 8 mm edging strip Schlüter-BEKOTEC-BRS 808 KSF. The adhesive leg integrated into the edging strip features a self-adhesive strip on the underside for attachment. The edging strip is pressed toward the wall by the adhesion on the substrate and the pre-tensioning of the integrated foil leg. When the studded BEKOTEC panel is adhered to the top of the adhesive leg, the panel bonds with the substrate and flowing screed can no longer flow underneath the panel.

3. The BEKOTEC-EN 12 F PS studded panels must be precisely cut to size in the edge areas. The BEKOTEC panels are connected by overlapping a row of studs. To install the studded panel, peel the release film off BEKOTEC-EN 12 F PS and place the panel on the substrate. It can be lifted and re-positioned providing no pressure has been applied to it. However, the pressure sensitive adhesive on the underside will firmly stick the studded panel to the substrate once pressure has been applied. In door threshold areas and

near distributor boxes, the smooth levelling panel Schlüter-BEKOTEC-ENFGK PS may be used to simplify the pipe installation. The pressure sensitive adhesive on its underside attaches the panel. The self-adhesive pipe clamping strip Schlüter-BEKOTEC-ZRKL 10/12 enables precise pipe layout in these areas.

4. Clamp the system pipes with a diameter of 10 mm between the cutback studs to create a BEKOTEC-THERM floor heating system. The spacing of the pipes must be determined based on the required heating output, as shown in the BEKOTEC heating diagrams.

5. As part of the screed installation, install fresh cement screed of screed quality CT-C25-F4, max. F5, or gypsum based screed CA-C25-F4, max. F5, over the studded panels with a minimum screed cover of 8 mm (recommended aggregate size 0-4 mm). The layer thickness can be partially increased to max. 15 mm for levelling. When installing a flowing screed, carefully place the studded panels and seal the abutting edges/end points. Make sure the screed does not flow underneath the BEKOTEC panels.

Note: Please contact our Technical Department in advance to discuss different screed properties for specific projects.

To prevent impact sound transmission between two rooms, separate the screed in the relevant places with the expansion joint profile Schlüter-DILEX-DFP.

6. The Schlüter-DITRA uncoupling mat (or alternatively, Schlüter-DITRA-DRAIN 4 or Schlüter-DITRA-HEAT) can be installed in accordance with the installation instructions of product data sheets 6.1 (alternatively: 6.2 or 6.4) as soon as the screed is ready to bear weight. The uncoupling mat can be installed over gypsum based

screeds as soon as they have reached a residual moisture level of 2 CM % or less.

7. Install the corner movement profile Schlüter-DILEX-EK or -RF as a flexible edge joint in the area of the floor-wall transition (see product data sheet 4.14). Cut off the protruding part of the edging strip BEKOTEC-BRS 808 KSF in advance.

8. If the BEKOTEC-THERM ceramic thermal comfort floor is to function as a floor heating system, the full covering assembly is ready for heating only 7 days after completion. Start from a water temperature of 25 degrees C and increase the supply temperature by no more than 5 degrees C a day until the desired usage temperature has been reached.

9. Covering materials that are not susceptible to cracking (e.g. parquet, carpet or vinyl coverings) can be installed without the uncoupling mat, directly on top of the BEKOTEC screed. The screed thickness must be adjusted to the relevant material thicknesses.

Note: In addition to the applicable installation guidelines, the permissible residual moisture level of the screed must be observed for the selected covering material. For detailed installation instructions in conjunction with non-ceramic surface coverings, please refer to our technical manual for Schlüter-BEKOTEC-THERM or contact our Technical Department.

## Notes

Schlüter-BEKOTEC-EN 12 F PS, -ENFGK PS and -BRS do not rot and require no special maintenance or care. Before and during the installation of the screed, the studded panel may need to be protected from

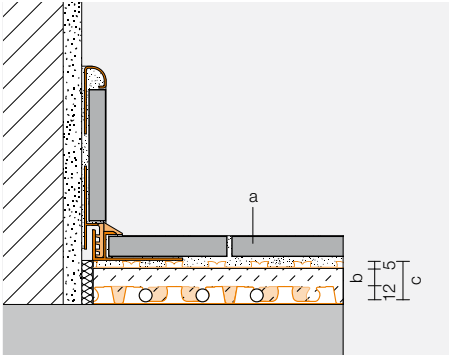
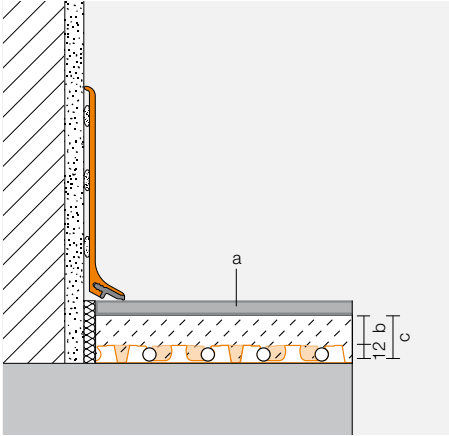


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mechanical damage with suitable measures, such as laying out wooden boards.

### Screed coverage over Schlüter-BEKOTEC-EN 12 F PS for various covering types

Schlüter®-BEKOTEC-THERM-EN 12 F PS					
Screed coverage and maximum traffic loads for various surface coverings					
Ceramic coverings	(a)	Max. traffic load $q_k$ according to DIN EN 1991	Max. individual load $Q_k$ according to DIN EN 1991	System coverage with conventional screeds (b)	Total thickness of BEKOTEC assembly (c)
Floor covering					
	Ceramic tile/ natural stone	5.0 kN/m <sup>2</sup>	3.5 – 7.0 kN	8 – 15 mm	25 – 32 mm
	Soft coverings: PVC, vinyl, linoleum, carpet, cork	2.0 kN/m <sup>2</sup>	2.0 – 3.0 kN	15 mm	27 mm
Adhered parquet without tongue and groove connection	5.0 kN/m <sup>2</sup>	3.5 – 7.0 kN	15 mm	27 mm	
Adhered parquet with tongue and groove connection	5.0 kN/m <sup>2</sup>	3.5 – 7.0 kN	8 – 15 mm	20 – 27 mm	
Floating parquet, laminare	2.0 kN/m <sup>2</sup>	2.0 – 3.0 kN	8 – 15 mm	20 – 27 mm	



<b>Schlüter®-BEKOTEC-EN 12 F PS at a glance</b>	
<b>general product properties</b>	
Material	Polystyrene (PS) with 70% recycled material content
Adhesive layer	PSA hotmelt
Protective foil	PE, transparent
Material thickness	1 mm
Panel height	12 mm
Width	1100 mm
Length	700 mm
Weight	825 g
Working area	0.77 m <sup>2</sup> (1.1 x 0.7 m)
Storage conditions	store above freezing and protected against UV radiation, no temperatures > 70°C for an extended period
<b>System data</b>	
Weight per unit area with 8 mm coverage	40 kg/m <sup>2</sup>
Screed volume with 8 mm coverage	20 l/m <sup>2</sup>
Traffic load	up to 5 kN/m <sup>2</sup>
System heating pipes	diam. 10 mm white
Heating pipe installation spacing	50/100/150/200 mm
<b>Technical properties</b>	
Processing temperatures	from 5 +°C
Temperature resistance	-30 °C to +70 °C
Density	1.05 g/cm <sup>3</sup>
Thermal conductivity	0.17 W/m K
<b>Certifications/approvals</b>	
VOC (French regulation / EMICODE)	approved (A+ / EC 1 PLUS)

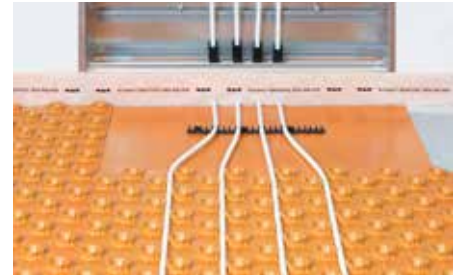


## Supplementary system products

### Levelling panel

The levelling panel Schlüter-BEKOTEC-ENFGK PS is installed on the load bearing substrate in the area of door thresholds and heating circuit distributors to simplify connections and to minimise cutting waste. It consists of smooth polystyrene foil material with a pressure sensitive adhesive layer covered by a release film on the underside.

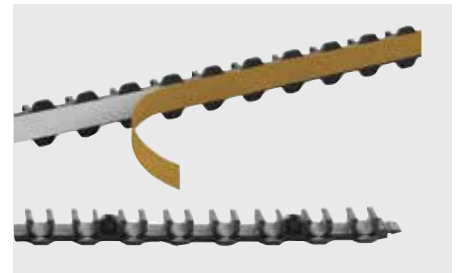
Dimensions: 1100 x 700 mm



### Pipe clamping strip

Schlüter-BEKOTEC-ZRKL 10/12 is a pipe clamping strip for securing the pipes on the levelling panel. The clamping strips are self-adhesive to allow for permanent attachment on the levelling panel.

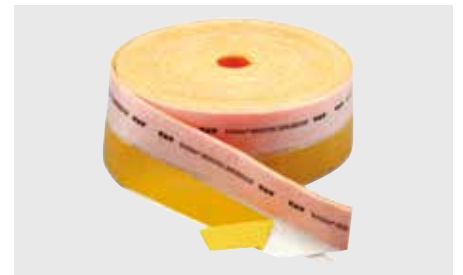
Length: 80 cm



### Edging strip

Schlüter-BEKOTEC-BRS 808 KSF is an edging strip of closed cell polyethylene foam with an integrated adhesive leg that features an adhesive strip on both sides for attachment. The edging strip is pressed toward the wall by the adhesion on the substrate and the pre-tensioning of the integrated foil leg. When the studded BEKOTEC panel is placed on top of the adhesive leg, the panel bonds with the substrate and flowing screed can no longer flow underneath the panel.

Roll: 25 m, height: 8 cm, thickness: 8 mm

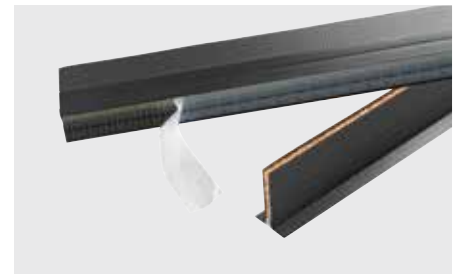


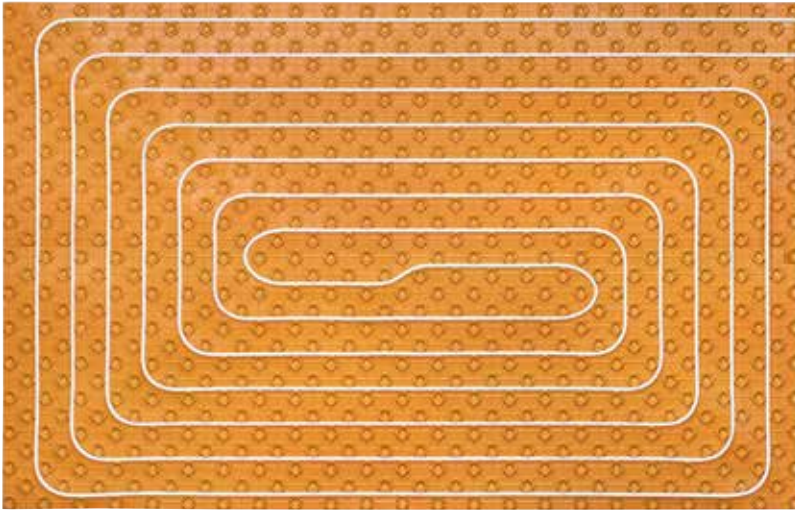
### Expansion joint profile

Schlüter-DILEX-DFP is an expansion joint profile for installation in door threshold areas to prevent sound bridges. Due to the bilateral coating and the self-adhesive strip, straight line installation is very easy.

Length: 1.00 m, height: 60 / 80 / 100 mm, thickness: 10 mm

Length: 2.50 m, height: 100 mm, thickness: 10 mm





Schlüter-BEKOTEC-EN 12 F PS with BT HR 10

### Product overview:

#### Schlüter®-BEKOTEC-EN 12 F PS

Studded screed panel	Dimension	Packaging
EN12 F PS	1100 x 700 mm	10 units (7.7 m <sup>2</sup> ) / carton

#### Schlüter®-BEKOTEC-BRS

Edging strip	Dimension	Roll
BRS 808 KSF	8 mm x 80 mm	25 m

#### Schlüter®-BEKOTEC-ENFGK-PS

Levelling panel	Dimension
EN 12 FGK PS	1100 x 700 mm

#### Schlüter®-BEKOTEC-ZRKL

Pipe clamping strip	Dimension
BTZRKL 1012	800 mm x 25 mm





**Text template for tenders:**

\_\_\_\_\_m<sup>2</sup> Schlüter-BEKOTEC-EN 12 F PS as a studded panel for bonded screed, made of structured polystyrene with undercut, 12 mm studs and a pressure sensitive adhesive laminated on the underside. The heating pipes can be installed in a spacing pattern of 50, 100, 150 ... mm. The stud pattern on the edge has an interlocking design to connect panels, with a working area of 1.1 m x 0.7 m = 0.77 m<sup>2</sup>, to be professionally installed, including cuts in the edge area, if necessary with the use the levelling panel Schlüter-BEKOTEC-ENFGK PS.

The manufacturer's specifications must be observed.

Material: \_\_\_\_\_ /m<sup>2</sup>  
 Labour: \_\_\_\_\_ /m<sup>2</sup>  
 Total: \_\_\_\_\_ /m<sup>2</sup>

\_\_\_\_\_ linear metres of Schlüter-BEKOTEC-BRS 808 KSF as an edging strip made of closed-cell polyethylene foam, 8 mm thick and 80 mm high, with a self-adhesive leg on both sides, to be adhered to rising walls or fixed structural components. The adhesive leg of the edging strip must be installed below the studded screed panel and bond with the underside of the studded panel.

The manufacturer's specifications must be observed.

Material: \_\_\_\_\_/m  
 Labour: \_\_\_\_\_/m  
 Total: \_\_\_\_\_/m

\_\_\_\_\_linear metres of Schlüter-DILEX-DFP as an expansion joint profile of closed cell polyethylene foam, lateral rigid plastic coating, 10 mm thick and with a self-adhesive leg, to be installed in the door threshold area.

The manufacturer's specifications must be observed.

Height:  60 mm  80 mm  100 mm  
 Material: \_\_\_\_\_/m  
 Labour: \_\_\_\_\_/m  
 Total: \_\_\_\_\_/m

\_\_\_\_\_ linear metres of Schlüter-BEKOTEC-THERM-HR as a heating pipe 10 x 1.3 mm, quality-controlled, of high-quality PE-RT plastic, with high temperature resistance, very flexible for optimised installation in the BEKOTEC studded screed panels, to be supplied and professionally installed.

The manufacturer's specifications must be observed.

Type: \_\_\_\_\_ Art.-No.: \_\_\_\_\_  
 Material: \_\_\_\_\_ /m  
 Labour: \_\_\_\_\_/m  
 Total: \_\_\_\_\_/m

- \_\_\_\_\_m<sup>2</sup>
- Cement screed of strength class CT-C25-F4 (ZE 20)
    - conventional installation
    - flowing screed
  - Gypsum based screed of strength class CA-C25-F4 (AE 20)
    - conventional installation
    - flowing screed
    - equivalent screeds

with a minimum coverage of 8 mm over the studs of the polystyrene panel Schlüter-BEKOTEC-EN without joints, to be compacted and levelled. Sound bridges at wall transitions or fixed structural components as well as in door transitions must be avoided.

The manufacturer's specifications must be observed.

Material: \_\_\_\_\_ /m<sup>2</sup>  
 Labour: \_\_\_\_\_ /m<sup>2</sup>  
 Total: \_\_\_\_\_ /m<sup>2</sup>

