

## ETICS Perimeter Insulation Board 3537

WDVS Perimeter-Dämmplatte 3537

**PW perimeter or WAP base**  
**“schwerentflammbar” (flame-retardant),**  
**blunt edges**

### Properties

Rot-resistant, embossed with a honeycomb pattern, expanded hard foam insulation board in accordance with EN 13163, application type PW perimeter or WAP base with structured surface. Chemically and biologically neutral, HBCD-free, resistant to moisture and normal soil pollutants. A perimeter insulation board measuring 5 to 30 cm has been approved.

### Field of application

Hard foam insulation board, tested in system build-up, particularly for use in Brillux ETICS System VI, plinth and underground (perimeter) insulation, glue technique. For thermal insulation of old and new buildings in plinth area, including soil connection (up to depth of approx. 30 cm) and as perimeter insulation up to 3 m below ground level. Perimeter insulation is not to be used in capillary fringe of ground water and in areas with pressing water. This perimeter insulation can only be used for thermal insulation of walls with ground contact in areas of exposure to “ground moisture and non-standing seepage water” in compliance with DIN 18195-4.

### Material description

**Building material class:**  
 schwerentflammbar (flame-retardant) in accordance with DIN 4102

**Rated thermal conductivity  $\lambda$ :**  
 0.035 W/(m·K) in accordance with DIN V 4108-4 for the base area.

In areas with ground contact \*:  
 0.039 or 0.041 W/(m·K)

\* Brillux Consulting Service provides information on the exact value.

**Water vapor diffusion resistant coefficient  $\mu$ :**

40/100 as per EN 12 086

**Pressure strength and pressure stress at 10% compression:**

$\geq 0.20$  N/mm<sup>2</sup> as per DIN EN 826

**Irreversible elongation:**

(dimension for shrinkage)

< 0,15 %

**width and length tolerance:**

max. 0.3 %

**Thickness tolerance:**

$\pm 1$  mm

### Squareness:

$\pm 2$  mm/m

### Film formation on edge:

blunt edges

For insulation board thicknesses  $\geq 22.0$  cm with step rabbet

### Insulation board format:

Length: 100 cm

Width: 50 cm

### Insulation board thicknesses/

### Packaging:

Insulation boards	Thicknesses	m <sup>2</sup> per pack
	5,0 cm	approx. 4,5 m <sup>2</sup>
	6,0 cm	approx. 4,0 m <sup>2</sup>
	8,0 cm	approx. 3,0 m <sup>2</sup>
	10,0 cm	approx. 2,0 m <sup>2</sup>
	12,0 cm	approx. 2,0 m <sup>2</sup>
	14,0 cm	approx. 1,5 m <sup>2</sup>
	16,0 cm	approx. 1,5 m <sup>2</sup>
	18,0 cm	approx. 1,0 m <sup>2</sup>
	20,0 cm	approx. 1,0 m <sup>2</sup>
	22,0 cm	approx. 1,0 m <sup>2</sup>
	24,0 cm	approx. 1,0 m <sup>2</sup>
	26,0 cm	approx. 0,5 m <sup>2</sup>
	28,0 cm	approx. 0,5 m <sup>2</sup>
	30,0 cm	approx. 0,5 m <sup>2</sup>

## Use

### Substrate preparation

The substrate must be clean, solid, dry, stable, load bearing and free from any efflorescence, sintered layers and separating agents. The surface must be pre-treated according to the actual condition and the requirements. Compatibility of any existing coats with the gluing mortar must be verified by an expert. All necessary measures against exposure to water, e.g., building waterproofing in accordance with DIN 18195, must be in place and must not be damaged.

#### The following also applies in the base area

Remove coarse projecting mortar or concrete parts. Mechanically eliminate greater substrate unevennesses or compensate them with suitable plaster mortar in accordance with DIN EN 998-1, category CS II, CS III or CS IV. Check existing plaster for strength and cavities and existing coatings for their load-bearing capacity. Remove non-bearing plaster and coatings completely. Prime substrates with Lacryl Deep Penetrating Primer ELF 595, as required. Also see VOB Part C, DIN 18363 and 18345, Paragraph 3.

#### The following also applies in the perimeter area

The prerequisites are non-binding and water-permeable soils. If this is not the case, impounded or long-term pressing water can reliably be drained by a drainage system in accordance with DIN 4095. When designing a drainage system, its functionality must be ensured for the long term.

### Insulation board mounting

#### a) Perimeter insulation (in the soil)

Apply 6 - 8 lumps of BaseTec 3540 Adhesive to each ETICS Perimeter Insulation Board 3537.

Additional anchoring in the soil is not feasible because the basement waterproofing must not be damaged.

#### b) Base insulation

##### (area exposed to splash water)

Mount the ETICS Perimeter Insulation Boards 3537 with BaseTec 3540, ETICS Powder Adhesive 3550 or ETICS Powder Adhesive VZ 3600 from top to bottom in a running bond pattern, level and offset-free using a bonding technique. Use only BaseTec 3540 on existing basement waterproofing and sealing originating in the soil. In order to avoid thermal bridges, ensure a tight joint connection and proper, glue-free implementation of the insulation board joints. Ensure that the insulation boards on all corners of the building dovetail (offset joints) and that the corner formation is vertical and aligned flush.

Any projecting board edges and unevennesses should be leveled out amply using a sanding board. After drying, the insulation boards must also be anchored in the base area, as required, depending on the substrate type/conditions.

If the base insulation is not bonded directly onto perimeter insulation or a concrete floor slab when being introduced into the soil (up to approx. 30 cm below the ground surface), it is also possible to bond the insulation board in the soil with a beveled outer lower edge.

If the end in the soil is beveled, apply adhesive to the entire surface of the ETICS Perimeter Insulation Boards 3537, BaseTec 3540, ETICS Powder Adhesive 3550 or ETICS Powder Adhesive VZ 3600 with a notched trowel of 10 x 10 or 15 x 15 mm or to part of the surface using the edge-beading lump method depending on the unevenness of the substrate. Only use BaseTec 3540 as adhesive mortar if the end in the soil is straight and there is basement waterproofing and ensure that the system is sealed against moisture with adhesive at its lower edge.

### Cutting insulation board to size

The individual insulation boards can be cut to size with a hot wire cutter or a hard foam saw. Additional information can be found in the Brillux tool product range.

### Bridging of joint areas

Bridge the transition or joint area in composite constructions - e.g. concrete-skeleton construction with brickwork infill, facade cracks or joints on prefabricated buildings by at least 10 cm with insulation boards. Do not arrange the board joints congruently. The existing expansion joints in the substrate are to be adopted as is.

### Arrangement of insulation boards in the case of offset in facade

Ensure that the insulation board joint is not directly above a substrate offset. Insulation board must be cut to appropriate size (min. width 10 cm).

### Storage

Store at a dry place, protect against moisture. Do not expose to UV radiation for longer periods.

## Anchoring the ETICS Perimeter Insulation Board 3537

### In the soil

The ETICS perimeter insulation boards are only to be bonded in the soil. This also applies when integrating it into the soil (transition area approx. 30 cm below the ground surface),

### In the base area

#### If the base is recessed

If the base area is recessed, the ETICS Perimeter Insulation Boards do not require additional anchoring on substrates with a tear strength  $\geq 0.08 \text{ N/mm}^2$ .

The required tear strength can be presumed for

- untreated substrates made from brickwork in accordance with DIN 1053 without plaster and
- concrete in accordance with DIN 1045 without plaster without any further examination.

The ETICS insulation boards can generally also be glued to uncoated, fixed adhesive plaster (plaster mortar made from inorganic bonding agents from the category CS II and CS III in accordance with DIN EN 998-1) without additional anchoring. All other substrates must be examined by an expert.

Additional structural anchoring of the glued ETICS Perimeter Insulation Boards must generally be provided with ETICS anchors on all other fixed, load-bearing substrates in the base area, e.g. concrete or brickwork with intact, fixed adhesive coating, decorative plaster, basement waterproofing, among others. Position the anchoring at least 15 cm above the top ground surface to avoid damaging the existing basement waterproofing. Please refer to the information on structural anchoring below and to Table 1 on the anchor arrangement.

#### If the base is flush with the facade

When it comes to forming base areas flush with the facade by using ETICS Perimeter Insulation Boards in the ETICS facade systems, the information on anchoring corresponds to the ETICS facade insulation boards used. The ETICS Perimeter Insulation Boards in the base area are applied to the facade in the same manner as ETICS insulation boards and anchored as required. The anchoring procedure is described in detail in the Data Sheets for the respective ETICS insulation boards; follow the instructions given there.

### Ceramic coverings

When using ceramic coverings as a top coat, it is important to follow the specific instructions on anchoring in accordance with the German General Building Inspection Approval No. Z-33.46-1327 and the "Ceramic Coverings" Data Sheet 5kb1.

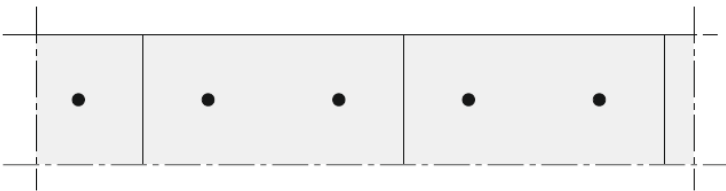
### Anchor selection for structural attachment in the base area

	ETICS Sunk Anchor STR U 2G 3811 <sup>1)</sup>	ETICS Impact Anchor H1 eco 3856 ETA
Concrete	X	X
Solid brick	X	X
Sand-lime brickwork	X	X
Sand-lime perforated brickwork	X	X
Vertically perforated brick	X	X
Hollow block	X	X
Porous lightweight concrete	X	
Solid brick and solid block made from lightweight concrete	X	
Hollow blocks made from lightweight concrete	X	
Aerated concrete	X	

<sup>1)</sup> The ETICS Sunk Anchor STR U 2G 3811 can only be positioned flush with the surface. The anchor plate must be closed with an STR plug.

It is necessary to check the suitability of "less stable" construction materials or substrates made from perforated brick in advance by means of a test application. Please follow the instructions on anchor usage and anchor lengths in the Data Sheets for the respective ETICS anchor.

**Table 1**  
**Structural anchoring of the ETICS perimeter insulation boards in the base area**

Insulation board thickness <i>mm</i>	Number of an- chors <sup>1)</sup> <i>Anchor/m<sup>2</sup></i>	Anchor arrangement <sup>2)</sup>
50–300	4 (2)	

<sup>1)</sup> Based on long-term practical experience. Number of anchors per board in brackets.

<sup>2)</sup> Taking into account a minimum distance to the top ground surface  $\geq 15$  cm.

## Notes

### Base area

The base area is the area of a facade exposed to splash water up to a height of at least 30 cm above the top ground surface. Specific measures must be taken in relation to the other facade surface in the base area due to the potential increase in mechanical stress. Rainwater must be diverted from the facade using structural measures, e.g. gravel bed or other anti-capillary layers. Plaster or board covers must be set up with a gradient away from the building and a structural separation from the building and/or the insulation layer must be established.

### Solvent-free priming

Polystyrene hard foam is attacked by solvents. Therefore, only solvent-free primers should be used.

### Cables on the exterior wall

If cables are installed on the exterior wall, it is important to mark the cable's path on the insulation board to avoid damage (due to additional mechanical anchoring).

### Reveal formation

In order to form the insulation in the reveal area, it is necessary to vary the insulation board thickness to such an extent that the frames of windows and doors of the same width remain visible and the reveal edges of the overlapping structural element openings are aligned vertically.

## Rework insulation boards briefly

Cover insulation boards glued to the facade with reinforcement plaster briefly in compliance with the drying times. Weathered insulation boards that are not protected for long periods tend to chalk on the surface and must be sanded before further processing.

### Size of the anchor plate

The stipulated anchor quantities apply to the use of anchor plates  $\varnothing = 60$  mm and anchoring under the fabric.

### Further information

Follow the instructions on the data sheets of the products used.

## Remark

This Data Sheet has been prepared taking into account the current applicable German laws, standards, specifications and codes of practice. All details have been translated from the current German version. The contents do not form a legal contract. The user and/or the purchaser is not released from the responsibility of checking that our products are suitable for the proposed use. In addition our Terms of Conditions and Payment apply.

When a new version of this Data Sheet with updated information is published, the previous version loses its validity. The current version is available on our website.

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**Figure 1**  
ETICS Perimeter  
Insulation Board 3537

