TERMOFOL

THERMOTERM XPS UNDERLAY

THICKNESS
4–30 MM

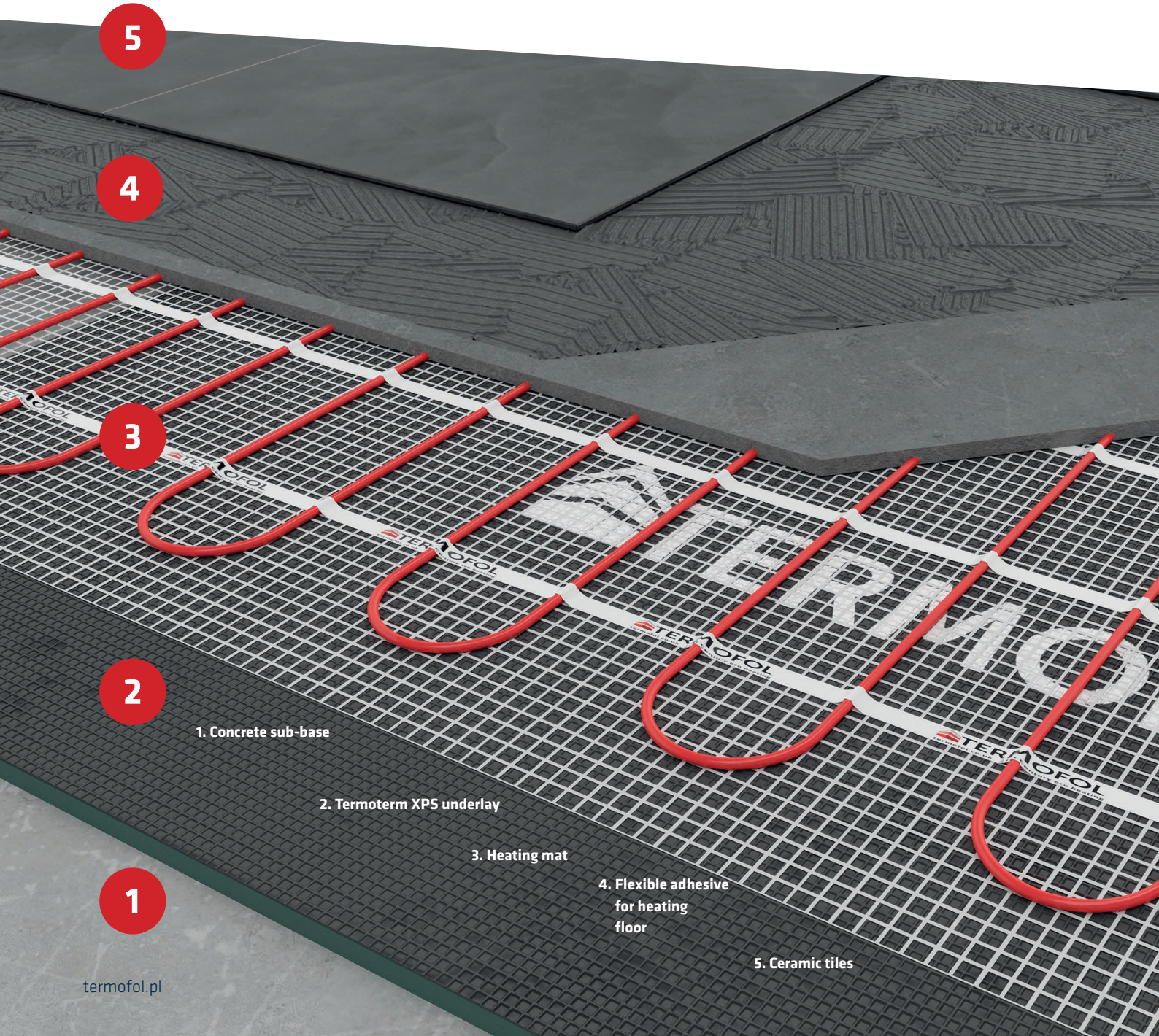
XPS insulation board for under heating mats

strength compressive strength
C_s=300 kPa

class flammability
E

conductivity thermal
λ=0,033 W/m•K

The Termofol Termoterm panel for heating mats provides effective waterproofing and thermal insulation. Its construction is based on closed-cell expanded polystyrene. The outer layer consists of a polymer compound containing resin and a fibreglass mesh, ensuring lightness and resistance to damage. The panel's construction is also characterised by its low weight and, at the same time, exceptional resistance to damage.





Specifications

Model	Width	Length	Thickness	Area
TF-XPS-30MM	60 cm	120 cm	30 mm	0.72 m²
TF-XPS-20MM	60 cm	120 cm	20 mm	0.72 m²
TF-XPS-12MM	60 cm	120 cm	12 mm	0.72 m²
TF-XPS-6MM	60 cm	120 cm	6 mm	0.72 m²
TF-XPS-4MM	60 cm	120 cm	4 mm	0.72 m²

- **Thermal conductivity:** λ = 0.033 W/(mK)
- **XPS foam density:** 32±0.02 kg/m³
- **Fire resistance class:** E (flame-retardant)
- **Compressive strength:** min. 300 kPa at 10 per cent deformation
- **Water absorption after 48 hours:** < 0.2%
- **Flexural strength:** 0.30±0.02 MPa
- **Water vapour permeability:** 0.028 ng/Pa·m·s
- **Water vapour diffusion resistance:** 110–225 μ
- **Maximum load per square metre:** 62 kg/m²
- **Impact sound reduction:** dLw=21

Installation

• Adhere the TERMOTERM insulation board to a suitable substrate (concrete, reinforced concrete or OSB board). The adhesive should be spread evenly over the entire surface of the board using a notched trowel. The adhesive used to bond the board should be flexible, whilst the board must adhere tightly across its entire surface to the suitable substrate.

• Lay out the boards with an offset of half their length.

• The joints between the panels must be reinforced with 5 cm wide fibreglass mesh. Embed the mesh in the flexible adhesive. This ensures there are no thermal bridges.

• The substrate, once insulated in accordance with the above instructions, forms the basis for the installation of underfloor heating using a heating mat.

• The floor layers should be laid on the TERMOTERM board using flexible adhesive.

XPS board performance

Termofol XPS boards are made from high-performance, waterproof polystyrene (XPS) board, reinforced on both sides with fibreglass mesh embedded in a thin layer of modified polymer mortar. Termofol XPS boards are rigid, waterproof, provide excellent insulation, are lightweight and easy to install.

No.	Parameter name	Standard	Result
1	Density	DIN 53420	35 ± 1kg/m^3
2	Thermal conductivity	EN 12667:2001	0.033 W/(m·K)
3	's compressive strength (10% deflection)	DIN 53421	A minimum of 0.3N/mm^2
4	Bending strength	ASTM C203	0.30 ± 0.02 MPa
5	Water absorption (capillary)	DIN 53428	Zero
6	Coefficient of linear expansion	N/A	70 x 10-6 K-1
7	Water vapour diffusion resistance (μ)	DIN 52615	110 - 225 μ
8	Water vapour permeability	ASTM E-96	0.028ng/Pa·m·s

Coverage of the top layer of primer

No.	Parameter name	Standard	Result
1	Thermal conductivity	EN 12667:2001	0.033 W/(m·K)
2	's compressive strength (10% deflection)	EN 826:1996	A minimum of 0.35N/mm^2
3	Bond strength	BS EN 1384	0.4N/mm^2
4	Maximum load weight for the plate	CERAM121107	62$^{kg/m^2}$
5	Bending strength	ASTM C203	2.05 ± 0.02 MPa
6	Long-term water absorption	EN12087	0.11kg/m^2
7	Water vapour permeability (Sd)	DIN EN 12086	3.2m
8	Impact resistance	ETAG 003	3 × 120 N·m
9	Bending stiffness, E (12 mm)	EN 12089	420 KNmm^2
10	Coefficient of linear expansion	N/A	30 x 10-6 K-1
11	Flammability	EN 13501-1	Class E
12	Impact noise reduction	BS-ISO140-8	dLw = 21
13	Compressive strength	EN 1448	3.32kg/cm^2

Panel thickness in mm	R-value (m^2·K)/W	U-value in W/m^2 x K	λd Rated value
6	0.11	3.63	0.0378
12	0.28	2.23	0.0378

Operating temperature range: -50 to +80°C

Dimensional tolerances for standard panels:
Thickness +/- 1 mm, Width +/- 1 mm, Length +/- 1 mm

The boards should be stored in a dry place and laid flat. Slight warping caused, for example, by incorrect storage or transport is not permanent and does not constitute a technical defect. Slight warping can be corrected by storing the boards flat.

Thickness	600 x 1200 mm Weight (kg/unit)
4 mm	1,8
6 mm	1,9
12 mm	2.2
20 mm	2.4
30 mm	2.6