



LINZMEIER

Insulate with system

Thin attic insulation as an alternative to roof insulation

Efficient protection against heat and the cold if the attic is not developed.

Attic insulation

LINITHERM®

PHW
PAL
PGV



Low structure heights,
high insulation
performance



Protection from heat in
the summer and cold in
the winter

With insulation solutions for walkable
attic floors or non-walkable attic top
halves

Full-face, homogenous thermal
insulation – λ_D from 0.022 W/(mK)

With integrated vapour barrier

With compression strength and
dimensional stability

Light and easy to handle



Meets the QNG requirements for prevention
of hazardous substances in insulants. "pure life" is
a seal of approval issued by the UGPI association.
certification applies to PU insulation board

www.Linzmeier.de

So your heating costs do not go through the roof – LINITHERM PHW attic insulation



Small investment, big impact

Without insulation, an unconverted attic will guzzle energy because you are heating unused roof space. Inadequately insulated attics can result in up to 30 % loss of valuable heating energy. LINITHERM offers the perfect solution for every requirement. The insulation core made of Polyurethane rigid foam (PU) is particularly effective due to its low thermal conductivity level and thus high insulation performance. PU is lightweight, pressure-resistant, dimensionally stable, biologically neutral, mould- and mildew-resistant and sustainable.

Which insulation element you choose depends on the later use of your attic:

Efficient insulation for usable attic floors – LINITHERM PHW

Thermal insulation for useable, walkable attic floors:

LINITHERM PHW attic element

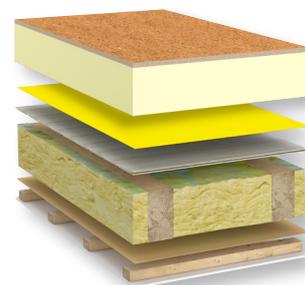
LINITHERM PHW elements ensure a fast installation. The stable, 10 mm thick derived wood panel is equipped all round with tongue and groove. The surface is robust and water-repellent.



LINITHERM attic insulation PHW
LINITHERM PE vapour barrier 120
Formwork
Rafter
Room-sided cladding



LINITHERM attic insulation PHW
LINITHERM PE vapour barrier 120
Concrete ceiling



LINITHERM attic insulation PHW
LINITHERM PE vapour barrier 120
Formwork
Mineral fiber insulation between the rafters
Room-sided cladding

Installation

Our handy LINITHERM loft elements can be carried by just one person and installed on concrete floors or timber flooring¹⁾. They can be machined with conventional woodworking tools and little waste. Prior to installation, cover the floor with PE vapour barrier 120; tape cut edges and joints. Concrete ceilings don't need foil. Add a 8 mm insulation strip and fill it with soft insulation material. (For large lofts we recommend adding more expansion joints into the derived wood panel after max. 10 m). Start in a corner with laying the insulation boards. Glue to edges of the OSB boards with wood glue and press together full-face. Lay the next rows without any gaps. You can immediately walk on the boards and put weight on them. Attach insulation boards to rising components to insulate the sides.

¹⁾ In case of timber flooring with insulation between the beams a structural check of the entire construction may be advisable.



Efficient insulation for unused attic floors – LINITHERM PAL and LINITHERM PGV

For the topmost floor ceiling that is walkable and usable only with limitations (e. g., space under a non-converted pitched roof for storing lightweight objects such as boxes with Christmas decorations, suitcases, ... or unused low attic top halves:

LINITHERM PAL attic insulation

The insulation elements are available with an all-round rebated joint. Installation is quick and easy. All you need for cutting the boards and precise cut-outs is a knife or a jigsaw. The aluminium lining on both sides acts as a vapour barrier and protects from electrosmog.

LINITHERM PGV attic insulation

The diffusible insulation elements are coated with mineral fleece on both sides. Here too, the rebated joint ensures a fast insulation without thermal bridges.

Insulating the topmost floor ceiling is the most lightweight and cost-efficient insulation option for unused attic top halves. Prior to installation, cover the floor with LINITHERM PE vapour barrier 120; tape cut edges. Concrete ceilings don't need foil. Now lay the LINITHERM PAL and/or LINITHERM PGV universal insulation boards without gaps by starting in one corner.



LINITHERM attic insulation PAL or PGV
LINITHERM PE vapour barrier 120
Wooden beam ceiling
Rafter



LINITHERM attic insulation PAL or PGV
LINITHERM PE vapour barrier 120
concrete ceiling

The benefits for builders and renovators

- Streamlined construction for extra head space
- Effective cold and heat protection, also for passive house standard
- Aluminium lining protects from electrosmog
- Structurally sound safe construction
- Saves time and money because installation requires only a few work steps
- Easy handling and finishing



Ideal for hip roofs if the loft has to remain unused because it offers too little space and/or for storing lightweight objects.



LINITHERM PHW
PH 212010

Insulation core	PU rigid foam acc. to EN 13165, fire behavior class E acc. to EN 13501-1, coated with aluminum film on both sides
Facing	Derived wood panel P5, thickness 10 mm
Edge joints	PU rigid foam serrated on all sides, derived wood panel round about with rebated joint
Overall dimension	1200 × 600 mm (= calculation measurement) (coverage is 1 cm smaller)

Thickness mm total	Thickness mm PU	Thickness mm P5 panel	Quantity of package Piece	Quantity of package m ²	Quantity of pallet Piece	Quantity of pallet m ²	PU λ _D W/(mK)	U-value* [W/(m ² K)]
90	80	10	3	2.16	48	34.6	0.022	0.26
110	100	10	3	2.16	42	30.2	0.022	0.21
130	120	10	3	2.16	36	25.9	0.022	0.18
150	140	10	2	1.44	32	23.0	0.022	0.15
170	160	10	2	1.44	28	20.2	0.022	0.13

Other thicknesses upon request/Delivery only in full packages.

LINITHERM PAL
PH 214000

Insulation core	PU rigid foam acc. to EN 13165, fire behavior class E acc. to EN 13501-1, coated with aluminum film on both sides, low-glare on one side
Edge joints	Thickness 100 mm and 200 mm: round about edgeless cut or with rebated joint Thickness 120–240 mm: round about rebated joint
Overall dimension	1200 × 600 mm (= calculation measurement) (coverage with rebated joint is 2 cm smaller)

Thickness mm total	Quantity per package Piece	Quantity per package m ²	Quantity per pallet Piece	Quantity per pallet m ²	λ _D W/(mK)	U-value** [W/(m ² K)]
100	5	3.60	50	36.0	0.022	0.21
120	4	2.88	40	28.8	0.022	0.18
140	3	2.16	36	25.9	0.022	0.15
160	3	2.16	30	21.6	0.022	0.13
*180	2	1.44	28	20.2	0.022	0.12
*200	2	1.44	24	17.3	0.022	0.11
*220	2	1.44	20	14.4	0.022	0.10
*240	2	1.44	20	14.4	0.022	0.09

LINITHERM PGV
PH 214000

Insulation core	PU rigid foam acc. to EN 13165, fire behavior class E acc. to EN 13501-1, coated with mineral fleece on both sides
Edge joints	Thickness 100 mm and 200 mm: round about edgeless cut or with rebated joint Thickness 120–240 mm: round about rebated joint
Overall dimension	1200 × 600 mm (= calculation measurement) (coverage with rebated joint is 2 cm smaller)

Thickness mm total	Quantity per package Piece	Quantity per package m ²	Quantity per pallet Piece	Quantity per pallet m ²	λ _D W/(mK)	U-value** [W/(m ² K)]
100	5	3.60	50	36.0	0.026	0.25
120	4	2.88	40	28.8	0.025	0.20
140	3	2.16	36	25.9	0.025	0.17
160	3	2.16	30	21.6	0.025	0.15
*180	2	1.44	28	20.2	0.025	0.14
*200	2	1.44	24	17.3	0.025	0.12

Other thicknesses upon request/Delivery only in full packages.

* Might have longer delivery times.

 ** U-value calculation takes the thermal resistances R_s = 0.1 [m²K/W] and R_{se} = 0.04 [m²K/W] into account.
Building-specific peculiarities for example as per DIN EN ISO 6946 are not taken into account.

Special Information:

Our installation recommendations are intended as guidelines for the purchaser/user. They make no claim to be valid in all cases, nor do they form the basis for a guarantee. Each building presents different requirements, so as a general rule the accepted rules of structural engineering should be applied to each building. This information ceases to be valid when it is updated. Otherwise, our general sales and delivery conditions apply. In particular for timber ceilings you often have to consider potential insulation layers in the dividers.



Optimal cold protection



Optimal heat protection



Moisture resistant



Thin with maximum insulation



Easy & pressure resistant



Odorless & physiologically safe



Recyclable



Environmentally friendly



Cuts costs, ensures excellent ROI



Protection against electric smog (except LINITHERM PGV)

LINZMEIER

Insulate with system

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Subject to changes