

**LINITHERM®**

insulation systems

**LINZMEIER**

building elements

Cellar ceiling insulation system

- PAL KD
- PAL KD white
- PAL KD Top



## The thin cellar ceiling insulation robust and highly effective

With LINITHERM PAL KD you get a warm floor in the living area and significantly reduce your energy consumption.



Homogenous thermal insulation TCL 022

Thin insulation, maximum effect

The right surface for every purpose

Quick and easy to assemble

### The safe insulation...

The easy way to separate the cold bridge between heated and non-heated rooms.

Complete solution for all cellar ceilings.

### ...in perfect professional quality...

With a special edge connection

Integrated vapour barrier

Inherently stable and pressure resistant

Insulates extensively and continuously

### ... for PUR(e) energy saving

Noticeably reduced energy consumption

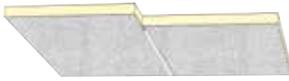
Insulation core made of PUR/PIR rigid foam TCL 022

Low construction height – little height loss

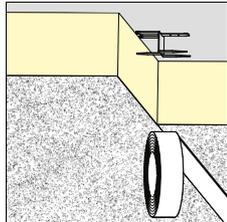
Positive eco-balance



**LINITHERM PAL KD**



**Insulation core:** PUR/PIR rigid foam according to DIN EN 13165, class E, with natural aluminium foil on both sides  
**Edge joints:** round about edgeless  
**Overall dimension:** 1200 x 600 mm (= calculation measurement)



Thickness mm PUR/PIR	Package contents Qty.	Package contents m <sup>2</sup>	Pallet contents Qty.	Pallet contents m <sup>2</sup>	TCL PUR/PIR	U-value * [W/(m <sup>2</sup> K)] Element
40	12	8.64	120	86.4	022	0.50
60	8	5.76	80	57.6	022	0.35
80	6	4.32	60	43.2	022	0.26
100	5	3.60	50	36.0	022	0.21

other thicknesses on request / Delivery of complete packages

The insulation elements are attached to the cellar ceiling via double-sided attachment hooks from below. The hook is pushed into the edge of the already fixed insulation element and then doweled to the ceiling. The next element is pushed into the sticking out hook. The joint area of the insulation elements is stuck down with LINITHERM tape.

**LINITHERM PAL KD white**



**Insulation core:** PUR/PIR rigid foam according to DIN EN 13165, class E, with aluminium foil on both sides  
**Outer facing:** Visible side = aluminium foil, coated in white  
**Edge joints:** grooved all around for H-joint profile  
**Overall dimension:** 1200 x 600 mm (= calculation measurement)

Thickness mm PUR/PIR	Package contents Qty.	Package contents m <sup>2</sup>	Pallet contents Qty.	Pallet contents m <sup>2</sup>	TCL PUR/PIR	U-value * [W/(m <sup>2</sup> K)] Element
40	12	8.64	120	86.4	022	0.50
60	8	5.76	80	57.6	022	0.35
80	6	4.32	60	43.2	022	0.26
100	5	3.60	50	36.0	022	0.21

other thicknesses on request / Delivery of complete packages

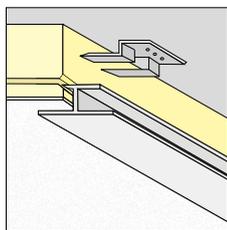
**LINITHERM PAL KD Top**



**Insulation core:** PUR/PIR rigid foam according to DIN EN 13165, class E, with aluminium foil on both sides  
**Outer facing:** Visible side = décor chipboard, 3 mm thick, coated in white  
**Edge joints:** grooved all around for H-joint profile  
**Overall dimension:** 1500 x 1200 mm (= calculation measurement)

Thickness mm total	Thickness mm PUR/PIR	Pallet contents Qty.	Pallet contents m <sup>2</sup>	TCL PUR/PIR	U-value* [W/(m <sup>2</sup> K)] Element
43	40	56	100.8	022	0,50
63	60	38	68.4	022	0,34
83	80	28	50.4	022	0,26

other thicknesses on request



\* Thermal conductivity coefficient U takes the thermal resistance (R<sub>si</sub> = 0.0 m<sup>2</sup>K/W and R<sub>se</sub> = 0.17 m<sup>2</sup>K/W). Object-specific features according to DIN EN ISO 6946 are not taken into account.

The elements are attached directly to the cellar ceiling with attachment hooks. Push the clamp into the edge of the already fixed elements and dowel to the ceiling. The peculiarity here is that the insulation boards are grooved all the way round. The colour-coordinated grey-white H-joint profile is now stuck in the grooved joint of the board edges. Push the next element into the profile. After each row insert a continuous H-joint profile into the long edge and assemble the next board row. The elements are laid in formation. Foam the joint on the wall and create the wall connection with L wall connection profiles.

**Maximum insulation performance with the lowest construction heights**

In cellars the room height is often not very large and the insulation should only reduce it minimally. The thin PUR/PIR insulation elements provide maximal insulation performance with the lowest construction heights. The proof: According to the German Energy Saving Ordinance (EnEV 2009) the U-value of a retrospectively insulated cellar ceiling must be less than 0.30 W/(m<sup>2</sup>K). At just 80 mm thick, LINITHERM PAL KD elements have a thermal conductivity level of 022 and can therefore achieve an U-value of 026 W/(m<sup>2</sup>K) without any further construction. The insulation boards with aluminium cladding on both sides are extremely moisture-resistant, robust and inherently stable.

**Warm ceilings – more light**

The PUR/PIR rigid foam insulation elements from Linzmeier don't just save energy. The room-side, white surface of the LINITHERM PAL KD white and LINITHERM PAL KD Top elements looks good and reflects the usually dim cellar light back into the room. LINITHERM PAL KD Top creates a stable, impact resistant surface.

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