
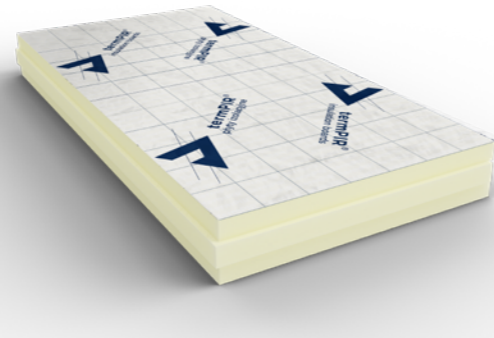


TECHNICAL CARD

termPIR® AL INSULATION BOARDS



termPIR® AL	Product details:	
Description of board:	The termPIR® AL insulation boards comprise of a PIR rigid foam thermal insulation core. The boards are protected on both sides with a gas tight lining layer composed of aluminium (AL), paper and polyethylene.	
Certificates / Approvals:	 	
CE mark		■
ISO 9001, ISO 14001 System certificates		■
Compatibility with EN 13165+A2 and EN 13172		■
Environmental Declaration EPD (type III)		■
Environmental Certificate (type III)		■
CO2 footprint		■
(Leed & Breeam) Green Card		■
Atest PZH		■
VOC		■
Keymark certificate and quality label		■
Tests of thermal properties ITB		■
Fire classifications		■
ATG (50 mm - 200 mm)		■
KOMO		■
Board in the product base SVT		■
Board in the product base EPDM		■
SundaHUS		■
BVB		■
Swan- The Nordic Ecolabel		■
Certificate for the system ETICS		
Admitted to trading in the EU	■	
Information about product safety:	Information about substances contained in the product referred to in Art. 31 and 33 of the Regulation (CE) No.1907/2006 (REACH): Not applicable.	
Instruction:	<p>Boards can be installed in one or multiple layers in an interlocking manner. Boards should fit tightly to each other. The substructure needs to be stable.</p> <p>Install mechanically with fasteners, glue or suspend - depending on the kind of substructure and type of waterproofing. Prevent from pulling the fasteners through the board. Secure against the impact of weather conditions. The boards are not load-bearing elements</p> <p>Additional information is available in the Technical Catalogue at the website www.termpir.eu</p>	

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Kind of core:	Rigid polyisocyanurate foam (PIR)								
Apparent PIR core density:	$\rho = 30 \text{ kg/m}^3$								
Declared heat transfer coefficient for lining:	for $(20 \leq d_N \leq 250 \text{ mm})$: $\lambda_D = 0,022 \text{ (W/m-K)}$								
Standard board dimensions [mm]:	600 x 1200 / 1200 x 2400 (minus the depth of the joint)								
Available boards dimensions [mm]:	1000 x 1200 / 1200 x 1200 / 1200 x 1800 / 1200 x 3000 (minus the depth of the joint)								
Coefficient: U [W/m ² ·K], wg U = 1 / (Re + R _o + Ri)									
For a given nominal thickness [mm]: Thermal resistance: R _D [m ² ·K/W]	for wall	20	0,93	30	0,66	40	0,50	50	0,40
	or roof	0,90	0,96	1,35	0,67	1,85	0,50	2,30	0,41
	for floor		0,93		0,66		0,50		0,40
		60	0,34	70	0,29	80	0,26	90	0,23
		2,75	0,35	3,25	0,29	3,70	0,26	4,15	0,23
			0,34		0,29		0,26		0,23
		100	0,21	110	0,19	120	0,17	130	0,16
		4,65	0,21	5,10	0,19	5,55	0,18	6,05	0,16
			0,21		0,19		0,17		0,16
		140	0,15	150	0,14	160	0,13	170	0,12
		6,50	0,15	6,95	0,14	7,45	0,13	7,90	0,12
			0,15		0,14		0,13		0,12
		180	0,12	190	0,11	200	0,11	210	0,10
		8,35	0,12	8,85	0,11	9,30	0,11	9,75	0,10
			0,12		0,11		0,11		0,10
		220	0,10	230	0,09	240	0,09	250	0,08
		10,25	0,10	10,75	0,09	11,15	0,09	11,60	0,08
			0,10		0,09		0,09		0,08
Compressive strength at 10% of deformation:	$\sigma \geq 120 \text{ kPa}$ $20 \leq d_N < 30 \text{ mm}$, $\sigma \geq 150 \text{ kPa}$ $30 \leq d_N < 140 \text{ mm}$, $\sigma \geq 140 \text{ kPa}$ $140 \leq d_N \leq 250 \text{ mm}$,								
Tensile strength perpendicular to faces:	$(20 \leq d_N \leq 130 \text{ mm})$: $\geq 80 \text{ kPa}$, TR80 $(130 < d_N \leq 250 \text{ mm})$: $\geq 40 \text{ kPa}$, TR40								
Flatness after one-sided moisting:	$\leq 10 \text{ mm} / \text{FW2}$								
Long-term absorption upon complete immersion:	$\leq 2 \% \text{ [kg/kg]} / \text{WL(T)2}$								
Water absorption upon short-term diffusion:	$\leq 0,5 \% \text{ for } (100 \leq d \leq 250 \text{ mm})$								
Water vapour transmission: Z resistance, coecient Sd and μ :	Z coecient: for 20 mm: 6,3 [m · h·Pa/mg]; for 250 mm: 89,6 [m · h·Pa/mg] / Z 5-100 Sd coecient: for 20 mm: 4,5 [m]; for 250 mm: 64 [m]; $\mu = 205-275$								

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Dimensional stability:	for ($20 \leq d_N < 50$ mm): DS(70,-)1	for ($50 \leq d_N \leq 250$ mm): DS(-20,-)2 / NDS(70,90)3
Reaction to fire (of the product as placed on the market):	E - termPIR® AL (20-49: F class, 50-250: E class)	
Reaction to fire (end of use) Fire spread:	B-s2,d0; „non-fire spreading product“ (on a substructure from trapezoidal sheets)	
External fire performance:	Roof(t1); „non-fire spreading product“	
	Structure: - base: wood, trapezoidal sheets, concrete - vapour barrier: PE foil, bituminous sheeting - termPIR® AL: 20-250 mm - waterproofing: PVC, tar sheets two layers termPIR® AL boards have a classification for the traditional and glued system. Conditions of use as per ITB classification.	
Fire resistance:	REI 30 / REI 20 / REI 15	
	Structure: - base: trapezoidal sheet, concrete; - vapour barrier: PE foil, bituminous sheeting or no vapour barrier; - termPIR® AL: at least 120 mm (REI 30), at least 100 mm (REI 15), 70 mm (RE 30); - waterproofing: PVC, EPDM, TPO, tar sheets, steel, alu. and titanium-zinc sheets; - possible counter-slope wedges with PIR, EPS, WM. termPIR® AL boards have a classification for the traditional and glued system. Conditions of use as per Fires and ITB classification	

Buildings:	Intended use of the board:	
residential, high density housing	on rafter insulation system on pitched roofs	■
residential	under rafter insulation system on pitched roof	■
residential, retail and industrial	build Up Roofs [BUR] - Flat roofs, mechanically fastened	■
residential, retail and industrial	build Up Roofs [BUR] - Flat roofs, adhesive or glued systems	■
residential, retail and industrial	triple layered external walls - cavity walls	■
residential, retail and industrial	double layered external walls - ETICS system	
residential, retail and industrial	basement and foundation walls	■
residential, retail and industrial	partition walls	
residential, retail and industrial	slabs between floors	■
residential, retail and industrial	ground floor slabs	■
livestock, industrial	suspended ceilings - high pressure washable	
existing, historic, stair-cores	internal wall insulation	
prefabricated concrete walls	highly resistant to corrosion caused by concrete	

■ the board recommended for use ■ boards that can be used