DoP Nr **termPIR / AL / 14.a**

TECHNICAL CARD

termPIR® AL INSULATION BOARDS

termPIR® insulation boards

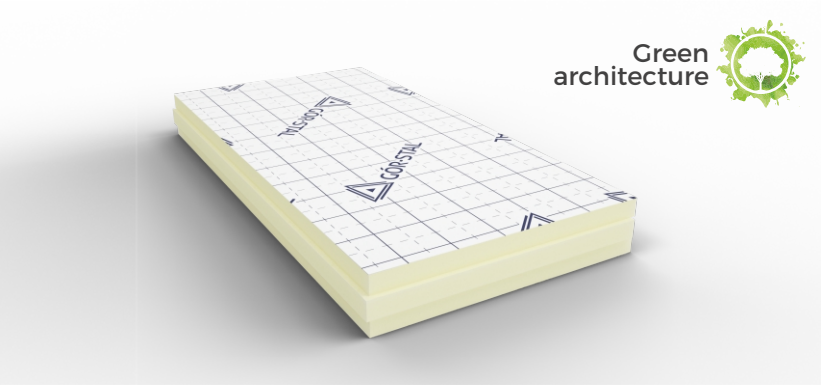
Description of board:	The **termPIR® AL** insulation boards comprise of a PIR rigid foam thermal insulation core. The boards are protected on both sides with a gas tight lining layer composed of aluminium (AL), paper and polyethylene.

- National Institute of Hygiene
- Board in the product base: **EPDM** and **SVT**
- Tests of thermal properties: **ITB**
- Fire classifications:: **ITB, Fires**
- Keymark certificate and quality label
- **ISO 9001**, **ISO 14001** system certificates
- Compatibility with **EN 13165+A2** and **EN 13172**
- Admitted to trading in the **EU**

- Determination for parameters with DoP:

021-IMBIGS-001 16, 1488 1454

Green architecture



Visualisation of boards with available joint types:			
Joint types:	**FIT** (flat milling)	**LAP** (stepwise milling)	**TAG** (tongue and groove)
Information about product safety:	Information about suabstances contained in the product referred to in Art. 31 and 33 of the Regulation (CE) No.1907/2006 (REACH): Not applicable.		
Instruction:	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. 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. Additional information is available in the Technical Catalogue at the website www.termpir.eu		

Buildings:	Intended use of the board:	
residential, high density housing	on rafter insulation system on pitched roofs	■
residential	under rafter insulation system on pitched roofs	▒
residential, retail and industrial	build Up Roofs [BUR] - Flat & Green roofs, mechanically fastened	■
residential, retail and industrial	build Up Roofs [BUR] - Flat & Green 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 corrossion caused by concrete	

Key: ■ the board recommended for use ▒ boards that can be used

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Performance:	Values / Classes:									
Length / Width:	2,4 m / 1,2 m; 1,2 m / 1,2 m; 0,6 m/ 1,2 m; (minus the depth of the joint) Other lengths also available on request									
Nominal thickness:	d_N = (20 - 250) mm									
Declared heat transfer coefficient for lining, λ_D:	for (20 ≤ d_N ≤ 250 mm): **0,022** [W/m·K]									
	Coefficient. U [W/m²·K], accod. to U = 1 / (Re + R_D + Ri)									
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall for roof for floor	**20** 0,90	0,93 0,96 0,93	**30** 1,35	0,66 0,67 0,66	**40** 1,85	0,50 0,50 0,50	**50** 2,30	0,40 0,41 0,40	**60** 2,75	0,34 0,35 0,34
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall for roof for floor	**70** 3,25	0,29 0,29 0,29	**80** 3,70	0,26 0,26 0,26	**90** 4,15	0,23 0,23 0,23	**100** 4,65	0,21 0,21 0,21	**110** 5,10	0,19 0,19 0,19
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall for roof for floor	**120** 5,55	0,17 0,18 0,17	**130** 6,05	0,16 0,16 0,16	**140** 6,50	0,15 0,15 0,15	**150** 6,95	0,14 0,14 0,14	**160** 7,45	0,13 0,13 0,13
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall for roof for floor	**170** 7,90	0,12 0,12 0,12	**180** 8,35	0,12 0,12 0,12	**190** 8,85	0,11 0,11 0,11	**200** 9,30	0,11 0,11 0,11	**210** 9,75	0,10 0,10 0,10
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall for roof for floor	**220** 10,25	0,10 0,10 0,10	**230** 10,70	0,09 0,09 0,09	**240** 11,15	0,09 0,09 0,09	**250** 11,65	0,08 0,08 0,08	- - -	- - -
Compressive strenght at 10% of deformation, σ_{10}:	for (20 ≤ d_N < 30 mm): ≥ **120 kPa**, CS(10/Y)120						for (30 ≤ d_N ≤ 250 mm): ≥ **150 kPa**, CS(10/Y)150				
Tensile strength perpendicular to faces:	≥ 40 kPa / TR40										
Flatness after one-sided moisting:	≤ 10 mm / FW2										
Long-term absorption upon complete immersion:	≤ 2 % [kg/kg] / WL(T)2										
Water absorption upon short-term diffusion:	≤ 0,5 % for (100 ≤ d_N≤ 250 mm):										
Water vapour transmission: Z resistance, coefficient Sd and μ:	Z coefficient: for 20 mm: 6,3 [m²·h·Pa/mg]; for 250 mm: 89,6 [m²·h·Pa/mg] / Z 5-100 Sd coefficient: for 20 mm: 4,5 [m]; for 250 mm: 64 [m]; μ = 205-275										
Dimensional stability:	for (20 ≤ d_N< 50 mm): DS(70,-)1						for (50 ≤ d_N≤ 250 mm): DS(-20,-)2 / DS(70,90)3				
Apparent PIR core density:	30 kg/m³										
Reaction to fire (of the product as placed on the market):	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:	**Broof(t1);** "non-fire spreading product"										
	Structure: - base: wood, trapezoidal sheets, concrete - apour barrier: PE foil, bituminous sheeting - termPIR® AL: 20-250 mm - waterproofing: PVC, tar sheets two layers.						Płyty 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										

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