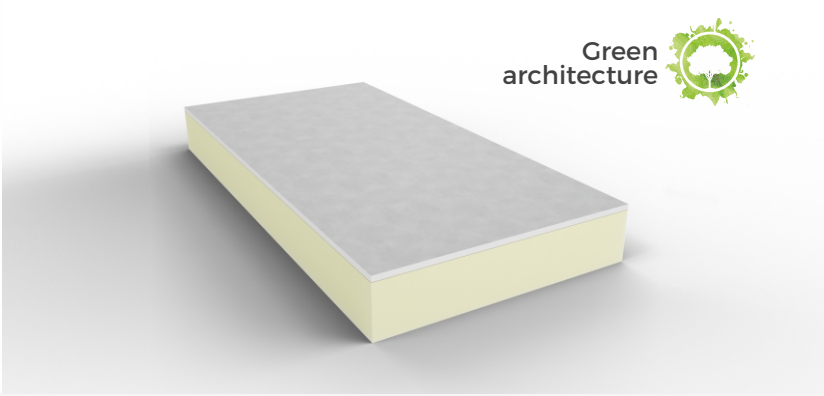
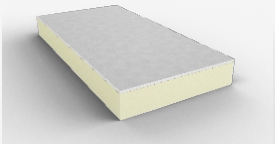
TECHNICAL CARD

termPIR® WS GK INSULATION BOARDS

termPIR®
insulation boards

Description of board	The **termPIR® WS GK** insulation boards comprise of a PIR rigid foam thermal insulation core. The boards are protected on both sides with gas-permeable lining from glass reticular fibre (WS) and with a plasterboard on one side. Between the termPIR® board and the plasterboard, there is a thin adhesion layer.



Visualisation of boards with available joint types			
Joint types	**FIT** (flat milling)	**LAP** (stepwise milling)	**TAG** (tongue and groove)

Application of termPIR® WS GK boards in energy efficient buildings

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

Instrukcje	termPIR® boards should be installed using adhesive and fasteners as an additional mechanical measure (i.e. gypsum board screws, with the length appropriate for board thickness and type of substrate). Select an adhesive according to substrate type and glass fleece facing. Read directions for use of the adhesive prior to installation. Recommended installation temperature range: 5 - 20°C. Ensure substrate stability. Prior to installation, clean and (optionally) apply a primer coat. After installation, expansion joints between the gypsum boards should be grouted and protected as in the case of standard gypsum boards. Leave a gap between the floor and the board and take steps to prevent rising damp. Store the panels in dry conditions. termPIR® boards are not structural components.

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Performance	Values / Classes
Length / Width	2,6 m (±10 mm) / 1,2 m (±7,5 mm)
Total thickness (d_N+ 12,5 mm)	d_N* thickness of a termPIR® board with facings and gypsum board thickness 12.5 mm
Declared heat transfer coefficient for lining, λ_D for d_N* = 25 mm	**0,026** [W/m·K]
Thermal resistance, R_D for d_N* = 25 mm	**0,95** [W/m²·K]

Declared heat transfer coefficient for lining, λ_D for d_N* = 20 - 250 mm	for (20 ≤ d_N < 80 mm): **0,026** [W/m·K]	for (80 ≤ d_N ≤ 120 mm): **0,025** [W/m·K]	for (120 ≤ d_N ≤ 250 mm): **0,024** [W/m·K]

For a given nominal thickness [mm]:	Thermal resistance: R_D [m²·K/W] for d_N* = 20 - 250 mm:	**20**	0,75	**30**	1,15	**40**	1,55	**50**	1,90	**60**	2,30
For a given nominal thickness [mm]:	Thermal resistance: R_D [m²·K/W] for d_N* = 20 - 250 mm:	**70**	2,70	**80**	3,20	**90**	3,60	**100**	4,00	**110**	4,40
For a given nominal thickness [mm]:	Thermal resistance: R_D [m²·K/W] for d_N* = 20 - 250 mm:	**120**	5,05	**130**	5,45	**140**	5,85	**150**	6,30	**160**	6,70
For a given nominal thickness [mm]:	Thermal resistance: R_D [m²·K/W] for d_N* = 20 - 250 mm:	**170**	7,15	**180**	7,55	**190**	8,00	**200**	8,40	**210**	8,80
For a given nominal thickness [mm]:	Thermal resistance: R_D [m²·K/W] for d_N* = 20 - 250 mm:	**220**	9,25	**230**	9,65	**240**	10,10	**250**	10,50		

* Applies to the thickness of a termPIR® WS board (not including gypsum board thickness and the adhesive layer between the boards).

Reaction to fire (end of use) Fire spread	**B-s1,d0** Class „non-fire spreading product" Applies to termPIR® WS GK panels, with thickness of 20-140 /12.5 mm Substrate: the boards can be used on any non-combustible or wood effect substrate. The panels can be attached to structures using adhesives or, optionally, mechanical fasteners. For details please see the classification.

Mechanical and physical properties of termPIR® WS panels

Reaction to fire	**E** Class	
Apparent PIR core density	30 kg/m³	
Compressive strenght at 10% of deformation, σ_{10} (Only for termPIR® WS)	for (20 ≤ d_N < 30 mm): ≥ **120 kPa**, CS(10/Y)120	for (30 ≤ d_N ≤ 250 mm): ≥ **150 kPa**, CS(10/Y)150

Mechanical and physical properties of gypsum boards (based on the manufacturer's declared performance data)

Reaction to fire	**A2-s1,d0** Class
Coefficient of thermal conductivity (for thickness of 12.5 mm)	**0,25** [W/m·K]