TECHNICAL CARD

termPIR® ETX INSULATION BOARDS

termPIR®
insulation boards

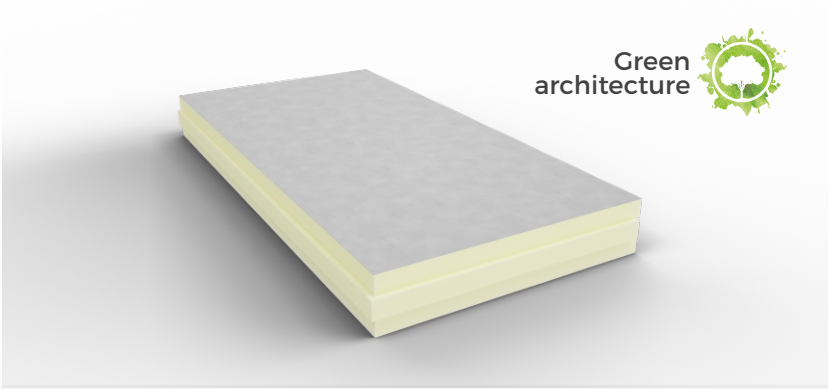
Description of board	The **termPIR® ETX** insulation boards comprise of a PIR rigid foam thermal insulation core. The boards are protected with gas-permeable lining from glass reticular fibre (EXT).

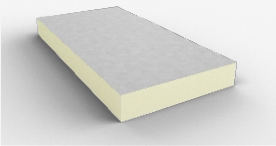
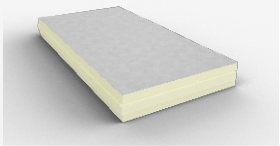
- Tests of thermal properties: **ITB**
- Fire classifications:: **ICiMB**
- **Keymark** certificate and quality label
- Certificate for the **ETICS** system
- **ISO 9001**, **ISO 14001** system certificates
- Compatibility with **EN 13165+A2** and **EN 13172**
- Admitted to trading in the **EU**

- Determination for parameters with DoP:

021-IMBIGS-001 16, 1488 1487

Green architecture



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

Application of termPIR® ETX 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

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.
Instrukcje	Lay boards in a single layer or multiple layers, in a staggered pattern. Ensure that the boards adhere tightly to each other. Ensure substrate stability. Insulation boards can be installed mechanically using screws, can be suspended or bonded - depending on the type of surface and type of waterproofing membrane. Ensure that the screws do not come clear through the boards. Protect your insulated board system against the elements. termPIR® boards are not structural components. Where insulation boards are to be installed as part of an ETICS facade system, do not install them until after one month from the date of manufacture shown on the label. For further information consult the Technical Catalogue available on www.gor-stal.pl., termpir.eu as well as the ETICS Guideline - termPIR® system.

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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 < 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]

	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	**20**	1,09	**30**	0,76	**40**	0,58	**50**	0,48	**60**	0,40
	for roof		1,12		0,78		0,59		0,49		0,41
	for floor	0,75	1,09	1,15	0,76	1,55	0,58	1,90	0,48	2,30	0,40
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall	**70**	0,35	**80**	0,30	**90**	0,27	**100**	0,24	**110**	0,22
	for roof		0,35		0,30		0,27		0,24		0,22
	for floor	2,70	0,35	3,20	0,30	3,60	0,27	4,00	0,24	4,40	0,22
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall	**120**	0,19	**130**	0,18	**140**	0,17	**150**	0,15	**160**	0,15
	for roof		0,19		0,18		0,17		0,16		0,15
	for floor	5,05	0,19	5,45	0,18	5,85	0,17	6,30	0,15	6,70	0,15
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall	**170**	0,14	**180**	0,13	**190**	0,12	**200**	0,12	**210**	0,11
	for roof		0,14		0,13		0,12		0,12		0,11
	for floor	7,15	0,14	7,55	0,13	8,00	0,12	8,40	0,12	8,80	0,11
For a given nominal thickness [mm]: Thermal resistance: R_D [m²·K/W]	for wall	**220**	0,11	**230**	0,10	**240**	0,10	**250**	0,09		
	for roof		0,11		0,10		0,10		0,09		
	for floor	9,25	0,11	9,65	0,10	10,10	0,10	10,50	0,09		

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	for (20 ≤ d_N < 50 mm): NPD for (50 ≤ d_N ≤ 250 mm): ≥ 80 kPa, TR80
Water vapour transmission	μ = (90 ÷ 170)
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)	**E** Class

Mechanical and physical properties of termPIR® ETX insulation panels in the ETICS facade system
(for panels with minimum thickness of 50 mm):

Reaction to fire (end of use)	**B-s1,d0** Class
Fire spread	**NRO,** „non-fire spreading product"
Certifications	The product has had issued for it a Certificate of Conformity, based on a European Technical Approval, according to the ETAG 004 Guideline.