



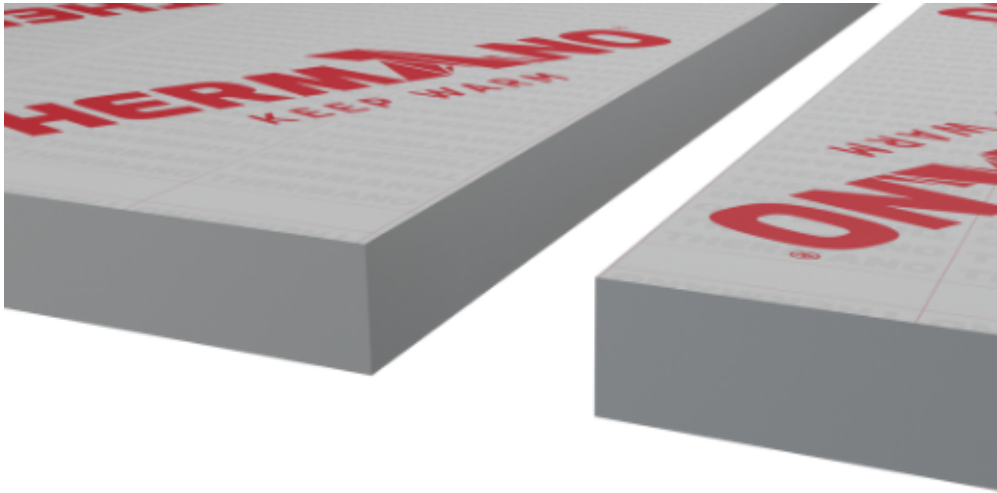
Thermano Roof

Description

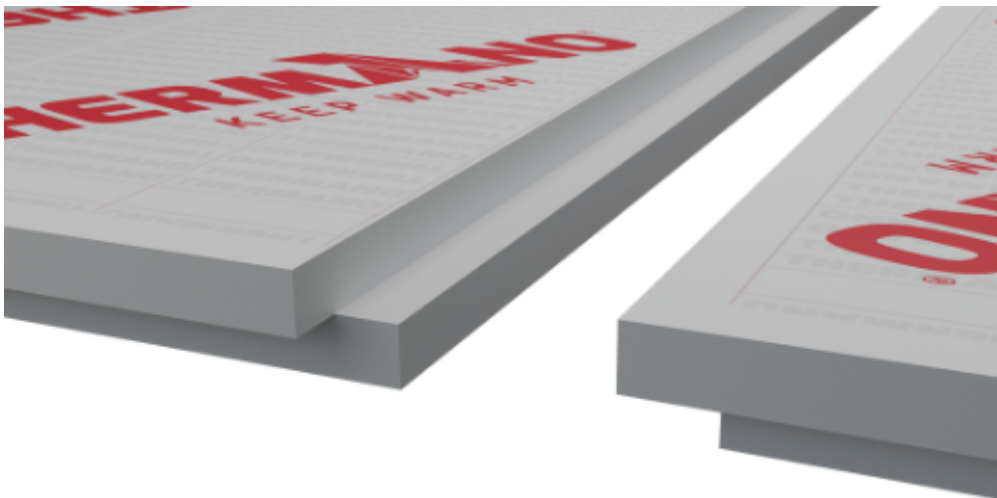
Features of Thermano panels:

- High compressive strength (20 t/m²)
- Rigidity: Maintains the thermal insulation performance for years
- Low weight: The relatively low profile thickness and small density of the panel material reduce the overall roof weight, which can help reduce the load-bearing structure costs by 15 to 20%.

Panel joint types



Basic



TOP lock (overlapping)



MASTER

Whole building thermal insulation



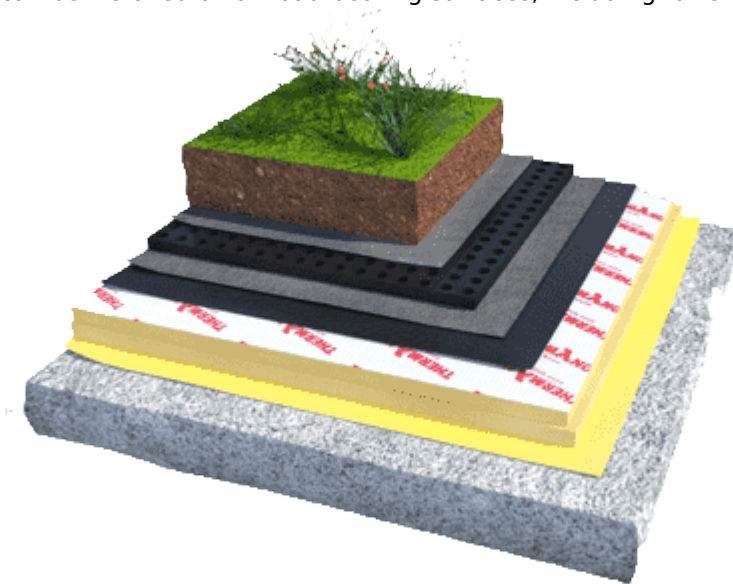
Pitched roof thermal insulation

The panels are a perfect thermal insulation system for pitched roofs, for new and refurbished buildings. The unique advantage of Thermano is in their installation variants: over the rafter, under the rafter and in-rafter



Flat roof thermal insulation

Thermano is a perfect thermal insulation system for flat roofs of both new and refurbished buildings. The insulating panels can be installed on all load-bearing surfaces, including rafters, box profile sheets and concrete slab floors.



Green roof thermal insulation

Thermano is a perfect thermal insulation system for traditional green roofs, both extensive (with moss, lichens, herbs, and grass) and intensive (shrubby, small trees and large trees).



Cavity wall thermal insulation

Thermano is an excellent thermal insulation layer for cavity walls and basement walls in new and renovated buildings.



Floor thermal insulation

Thermano is a perfect choice for the thermoinsulating layer for heated and unheated floors, as well as balconies, patios, and even the most demanding insulated horizontal structures: patios over heated rooms. The outer layer of Thermano panels is made of aluminium, which reflects and directs the heat from floor heating systems into the building interior.

Attributes

Name	Thermano Roof
Lock types	TOP, BASIC
Cladding	Multi-layered, with aluminium cladding
Overall width [mm]	1200
Module coverage width [mm]	1185 (TOP), 1200 (BASIC)
PIR foam thickness [mm]	40, 50, 60, 80, 100, 120, 125, 140, 150, 160
Standard length [mm]	2400
Age-weighted thermal conductivity coefficient, λ [W/mK]	0,023
Bulk density [kg/m ³]	30
Relative diffusion resistance, μ	50-100
Absorbability	≤2%
Compression strength	min. 200 kPa (10% deformation)
Fire reaction class	Euroclass E (EN 13501)

Certificates	CE (EN 13165)
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The chief material used in the production of Thermano panels is polyisocyanurate (PIR), secured on both sides with a gas-tight cladding, comprising several polymer layers and aluminium foil.

The high gas-tightness of Thermano panels ensures stability of the thermal insulating parameters over long periods of time, unlike other polyurethane-based materials without the cladding, i.e. spray-applied (in situ) materials.

The Thermano PIR core is formed by polymerisation of its two main components, polyols and isocyanates, with additional modifiers. The PIR core is a closed cell structure, which means that the material is an essential barrier to capillary wicking of the water and steam (water vapour) diffusion.

Thermano panels exhibit excellent mechanical performance, durability, low absorbability and other physical and chemical characteristics which mark the material out for application in even the most demanding construction environments.

Thermano thickness vs. thermal insulation ratings

THERMANO THICKNESS d [mm]		INSULATION COEFFICIENT U [W/m ² ·K]	THERMAL RESISTANCE R [m ² ·K/W]
λ=0.023 [W/mK]	40	0.57	1.70
	50	0.45	2.15
	60	0.38	2.60
	80	0.29	3.45
	100	0.23	4.35
	120	0.19	5.20
	125	0.18	5.40
	140	0.16	6.05
	150	0.15	6.50
	160	0.14	6.95

Attachments

Product declarations and certificates



Declaration of Performance: Thermano Roof (EN)

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Installation Manual: Thermano in flat roof (EN)

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Installation Manual: Thermano on pitched roof (EN)

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A graduate of the Faculty of Civil and Environmental Engineering at the Gdańsk University of Technology, a civil engineer with unlimited executive qualifications in the field of bridge engineering.

Go to **balex.eu/en/knowledge-base/ask-an-expert** and fill out the form

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