

FEEL  
GOOD  
INSIDE








WALL

# The insulation guide for walls

We want to create  
a “feel good inside”  
experience for  
ourselves and for  
future generations  
through excellent  
solutions and  
services.

That is what we go for.

▶	About Recticel Insulation		2
▶	Advantages of PIR		4
▶	Products		9
	• IP PIR 022		10
	• Powerwall Pro		11
	• Eurothane EWall		12
	• Eurowall		13
	• Eurothane G		14
▶	Case		15
▶	Added value with every application		18

# Your partner with a passion for comfort ...

## What is our expertise?

- ▶ Recticel Insulation is the benchmark for using PIR.
- ▶ We have 60 years of experience in the construction sector, and we deliver on this promise every day.
- ▶ Thanks to our 7 ultra-modern production plants in Europe, we are able to quickly and flexibly respond to our clients' needs.

## Satisfied professionals

Whether you're a builder, contractor, architect or craftsman, you can count on Recticel Insulation. We offer the maximum day-to-day comfort with a reliable partnership, outstanding service provision and unrivalled expertise.

## Innovative solutions, every day

More specifically, we offer high-performance thermal and acoustic insulation solutions for both residential and non-residential buildings. As part of this, we do everything we can to meet the demand for energy efficient buildings.





## ... and a passion for sustainability

### **Commitment on every level**

Sustainability is also deeply embedded in the Group's DNA. It's a distinct part of our company's core values. Recticel Insulation adheres to sustainable development by showing respect for its employees, its partners, the environment and legislation.

### **PIR: the sustainable insulation material**

Efficient insulation means that less energy is needed for heating and cooling. As a result, CO<sub>2</sub> emissions are reduced, which means that our insulation products contribute significantly to the fight against global warming. The PIR insulation boards have a lifespan exceeding 25 years.

### **Our new products: driven by sustainable innovation**

Sustainable innovation is one of the primary drivers of all Recticel's research and development efforts. This has led to the development of 'low lambda' insulation materials with a lambda value reduced from 0.022 to 0.019 for Xentro® and vacuum panels (0.006 W/mK for VIP product as such) to achieve a higher insulation performance.

Sustainability is a distinct part of our strategy and company values.

### **Minimising our CO<sub>2</sub> footprint**

We estimate that the CO<sub>2</sub> emissions prevented by our insulation solutions in 2017 totalled over 30 times our carbon impact throughout the value chain.

### **Waste management and recycling**

We seek out new ways to avoid waste during the production process, as well as possibilities to reuse or recycle production waste and products that have reached the End-Of-Life (EOL) phase.

# Keeping it light:

## how PIR is transforming insulation

- ▶ Today's insulation materials need to do much more than just help to keep building interiors warm or cool. The growing urgency of the fight against climate change means that emissions must be tackled not just through the energy efficiency of buildings but also by reducing the carbon footprint of the construction sector.  
To stay competitive, we also need materials that will help streamline processes and reduce costs. And with ever more discerning customers to please, a reliable long-term performance and guaranteed quality are essential.
- ▶ Contractors are increasingly finding the solutions they need in Recticel Insulation's PIR (rigid foam) solutions. The high thermal performance of PIR means that only a thin layer of insulating material is needed, providing advantages when it comes to the wall design, material transport and installation. PIR boards also offer superior on site performance and durability, guaranteeing long-term customer satisfaction.

### Easier handling and installation

Not only does the slimness of the insulating layer affect transport volumes: it also makes PIR insulation boards extremely light (5 to 8 times lighter than other traditional insulation materials such as mineral wool). While enhancing its role in reducing transport emissions, this quality also makes them very easy to handle and install. Installation goes by result much faster and is cheaper. Thinner boards require shorter screws, creating more savings. Furthermore, as the boards contain no fibres, they do not cause irritation of the eyes, skin or lungs during installation.



### Insulating with PIR, a conscious product selection

Recticel Insulation's products Eurothane® EWall, Powerwall® Pro and IP PIR 022 are assessed and registered by BYGGVARUBEDÖMNINGEN and have reached the accepted level. These products are also registered in SundaHus Material Data and Basta.



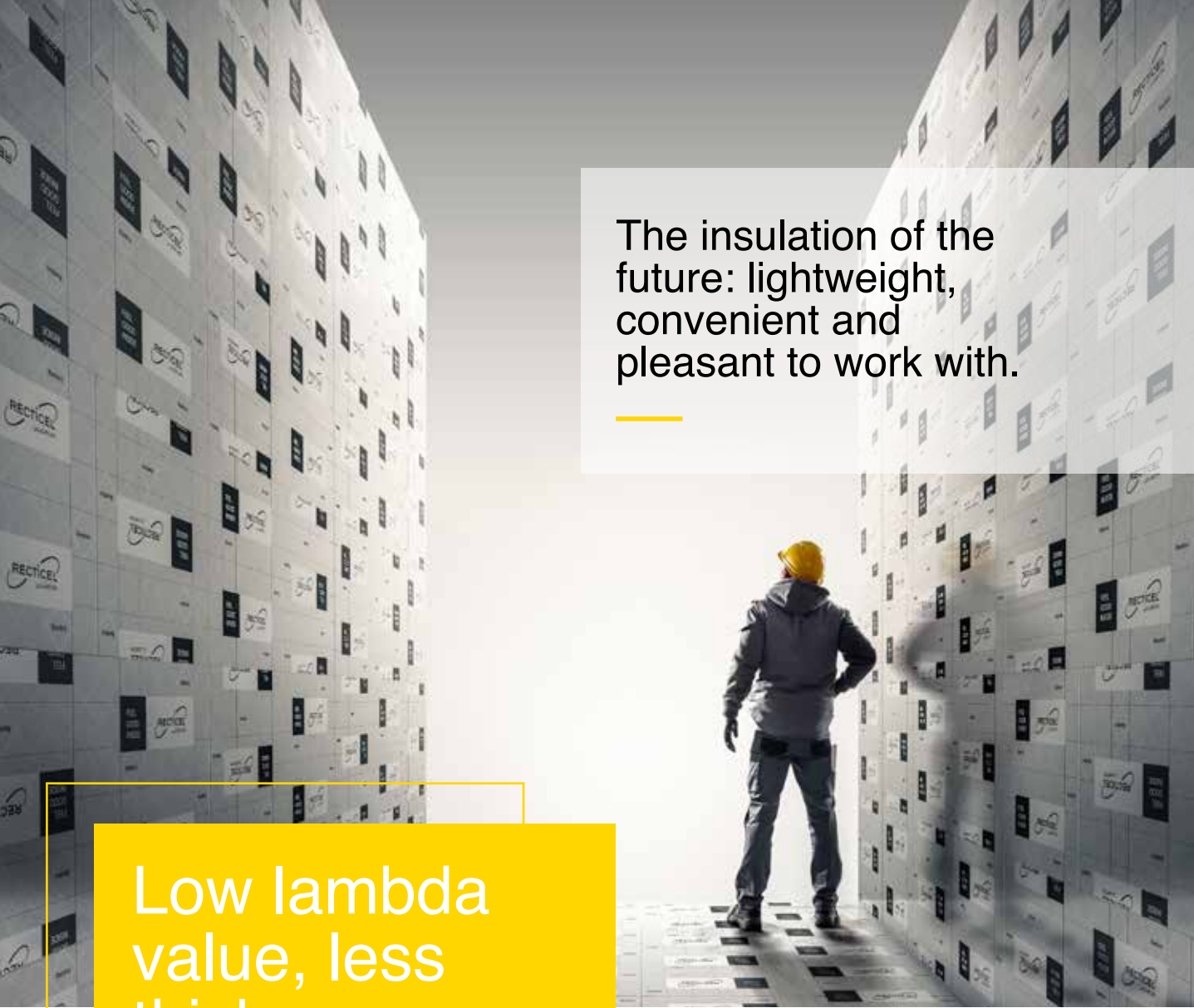
**BASTA**



**BYGGVARU  
BEDÖMNINGEN**



**SundaHus**



The insulation of the future: lightweight, convenient and pleasant to work with.

## Low lambda value, less thickness

The lower the lambda value (thermal conductivity) of the insulation, the thinner the layer needed to achieve the desired U-value. Compared to other insulation materials, PIR boards have a very low lambda value (typically between 0.019 and 0.026 W/mK), greatly reducing the thickness of material required. For example, a typical U-value target of 0.17 W/m<sup>2</sup>K for external walls can be achieved with layers as thin as 150 mm PIR (Powerwall Pro). The slimness makes PIR boards extremely versatile to work with.

The volume of material to be transported is reduced by up to a third, significantly cutting CO<sub>2</sub> emissions caused by transport. This reduces the environmental impact of the project and offers considerable opportunities for the building sector to shrink its carbon footprint.

## Strong, moisture and future proof

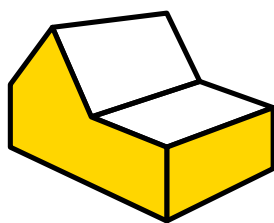
The moisture resistant function of the PIR boards make them a strong and future proof solution for your wall constructions. PIR foam does not absorb any water because of its closed cell structure. Therefore this material keeps its shape and does not sag over time which guarantees its insulation value over time. PIR foam has intrinsically high water vapour diffusion coefficient (=  $\mu$  value). Therefore, PIR board has a high resistance to water vapour. Nevertheless the storage and installation instructions must be followed. This means that our PIR boards are a future proof solution for your wall constructions.

- ▶ PIR boards do not absorb water what makes them keep their shape.





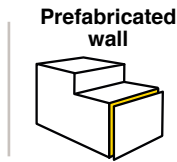




# Wall

# IP PIR 022

Thermal insulation board for composite concrete panel systems.



Lambda ( $\lambda_D$ )  
**0,022**  
W/mK

## Characteristics

- ▶ Alkali-resistant facer
- ▶ Thin and lightweight
- ▶ Straight edge finishing

## Advantages

- Concrete sandwich panels manufacturers do not need to change their equipment.
- Time, space and cost saving.
- Concrete compatible facing.
- Lengths up to 3000 mm available upon demand.

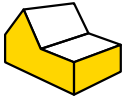


		600 x 2400 mm
Insulation thickness (mm)	R <sub>0</sub> -value (m²K/W)	#panels/pack
30	1,35	68
40	1,80	52
50	2,25	42
60	2,70	34
70	3,15	30
80	3,60	26
90	4,05	22
100	4,50	20
110	5,00	18
120	5,45	18
130	5,90	16
140	6,35	14
150	6,80	14
160	7,25	12
170	7,70	12
180	8,00	12
190	8,60	10
200	9,05	10

# Powerwall<sup>®</sup> Pro

Rigid thermal insulation board for ventilated facades.

External wall



Lambda ( $\lambda_D$ )  
**0,026**  
W/mK



## Characteristics

- ▶ Facing: One graphite coated side and one mineral coated glass fleece side
- ▶ Shiplap edge finishing
- ▶ Lightweight

## Advantages

- Optimal fire behaviour: B-s1,d0 (graphite coated side).
- Compatible with numerous façade systems.
- Easy to install thanks to shiplapped edges.



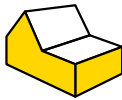
Insulation thickness (mm)	R <sub>D</sub> -value (m²K/W)	1200 x 2400 mm
		#panels/pack
50	1,90	21
60	2,30	17
70	2,65	15
80	3,05	13
90	3,45	11
100	3,80	10
110	4,20	9
120	4,60	9
130	5,00	8
140	5,35	7
150	5,75	7
160	6,15	6
170	6,50	6
180	6,90	6
190	7,30	5
200	7,65	5



# Eurothane® EWall

Rigid thermal insulation board for multiple wall constructions.

External wall



Lambda ( $\lambda_D$ )  
**0,022**  
W/mK

## Characteristics

- ▶ Multilayer facer
- ▶ Tongue and groove edge finishing
- ▶ Lightweight
- ▶ Reaction to fire behaviour: E

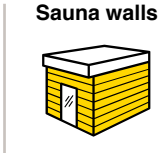
## Advantages

- Suitable for use in different wall constructions.
- Comfortable installation thanks to the tongue and groove edges.



Insulation thickness (mm)	$R_D$ -value (m <sup>2</sup> K/W)	1200 x 2400 mm
		#panels/pack
30	1,35	34
40	1,80	26
50	2,25	21
60	2,70	17
70	3,15	15
80	3,65	13
90	4,05	11
100	4,50	10
110	5,00	9
120	5,45	9
130	5,90	8
140	6,35	7
150	6,80	7
160	7,25	6
170	7,70	6
180	8,15	6
190	8,60	5
200	9,05	5

Rigid thermal insulation board for use in sauna.



Lambda ( $\lambda_D$ )  
**0,022**  
W/mK

### Characteristics

- ▶ Multilayer facer
- ▶ Tongue and groove edge finishing
- ▶ Thin and lightweight

### Advantages

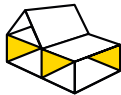
- Suitable for use in sauna.
- Space saving due to thin insulation boards.
- Fast installation thanks to the tongue and groove edge finishing.

		1200 x 600 mm
Insulation thickness (mm)	R <sub>D</sub> -value (m²K/W)	#panels/pack
30	1,35	128

# Eurothane® G

Rigid thermal insulation and plasterboard in one single, handy board for internal walls.

Internal wall



Lambda ( $\lambda_D$ )  
0,022  
W/mK

## Characteristics

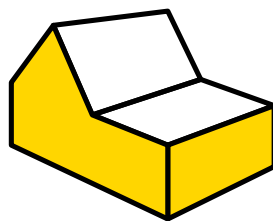
- ▶ PIR/plasterboard composite
- ▶ Factory bonded
- ▶ Straight edges on PU board
- ▶ Bevelled long sides on plasterboard

## Advantages

- Installation and finishing in one step
- Multiple fixing methods can be applied
- 2-in-1 solution for maximum use of space
- Optimal fire behavior in end use: B-s1,d0

		600 x 2600 mm
Insulation thickness (mm)	R <sub>D</sub> -value (m²K/W)	#panels/pack
20 + 12,5	0,90	72
30 + 12,5	1,35	56
40 + 12,5	1,80	46
50 + 12,5	2,25	38
60 + 12,5	2,70	32
80 + 12,5	3,60	26
100 + 12,5	4,50	20





# Case



Kouvola Housing Fair,  
Paja-Aukio row house

# Good insulation performance with thin insulation

“The Housing Fair is the place where housing developers, builders as well as interior designers and furnishing manufacturers can introduce their work to a large audience of both professional and private fairgoers. The Housing Fair is set up in an area where actual houses are built and decorated for the audience to visit. The houses are built for families that are going to move in and live there after the Housing Fair closes.”

---





**Location**  
Kouvola, Finland

**Architect**  
Laitila Architects

**Contractor**  
Artra Oy

**Type**  
Wall insulation

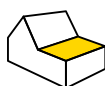
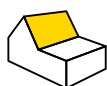
**Product**  
Eurothane EWall 120 x 1200 x 2400





# Our added value in every application

## ► Thermal PIR insulation



### Roof insulation

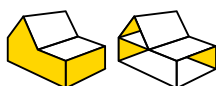
A wide range of insulation solutions for pitched and flat roofs.

#### Insulation for pitched roofs

- for new-build, renovation and conversion projects
- easy installation of the insulation panels on the roof.

#### Insulation for flat roofs

- on concrete, wood or steel constructions
- with or without slope
- in a mechanically fastened, adhered or loosely laid and ballasted waterproofing system.



### Wall insulation

Specific solutions for exterior and interior walls.

#### Insulation for cavity walls

- for cavity wall in new build and renovation projects
- with tongue-and-groove click system: ensure high level of wind tightness avoiding thermal bridges.

#### Exterior wall insulation

- façade insulation for new-build and renovation projects
- ensures efficient, uninterrupted insulation layer around the building
- combination possible with a broad range of exterior finishings.

#### Insulation for interior walls

- insulation with insulation board and plasterboard in one
- to (re)insulate interior walls for applications where aesthetics and use of space are important considerations
- examples: houses, flats, urban projects and historic or cultural heritage sites.



### Floor insulation

Recticel Insulation offers floor insulation for application on:

- ground floors
- attic floors.

Insulation installation: on or under the construction floor.

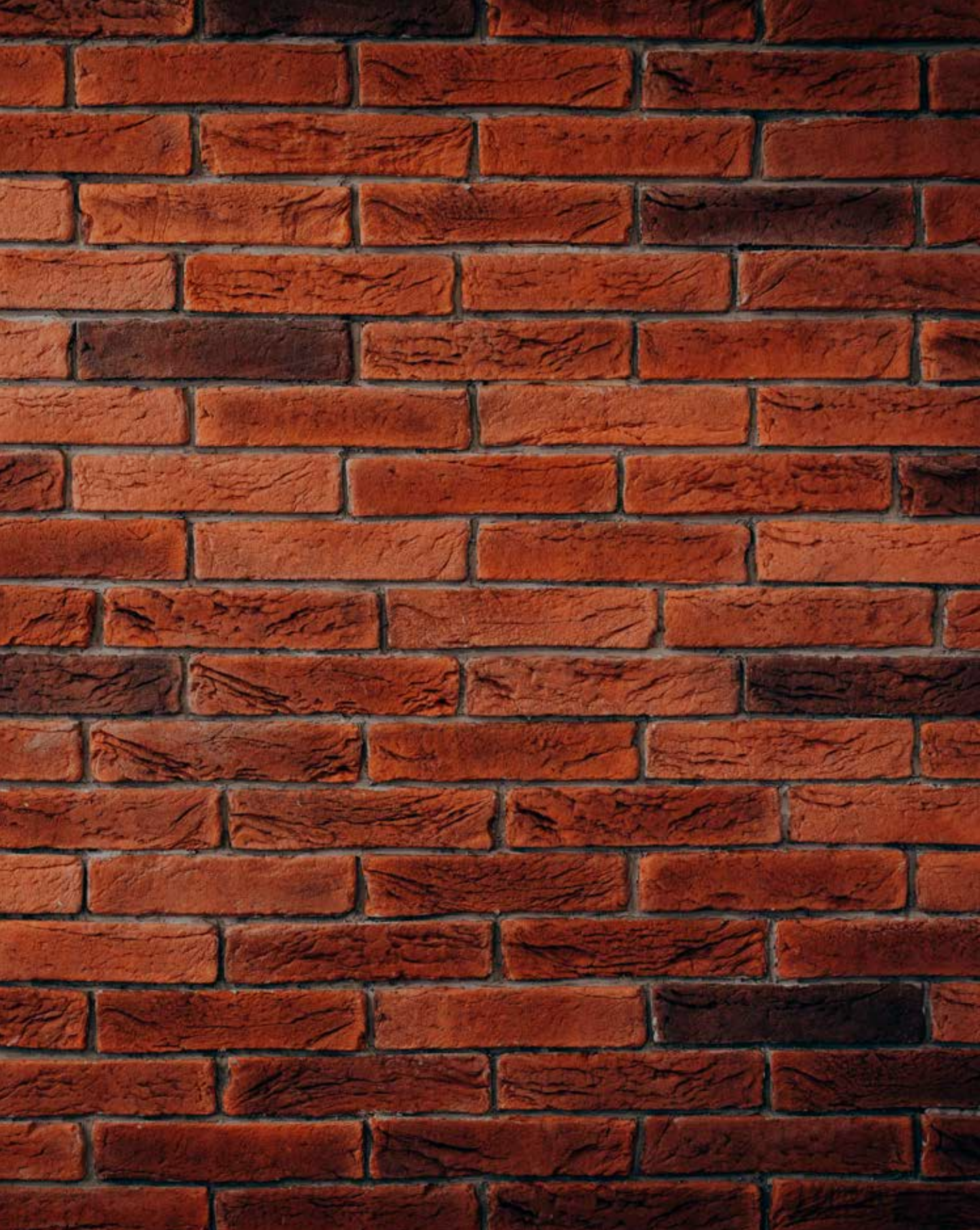
## ► Acoustic insulation

- for maximum comfort and noise reduction between two adjacent living areas
- smooth installation: adhered to the separation wall.

Go to **[www.recticelinsulation.com](http://www.recticelinsulation.com)** to discover our wide range of products for pitched roofs, flat roofs, tapered roofing systems, loft spaces, ceilings, external walls, cavity walls, internal walls, floors, basements and many industry-related applications

Recticel Insulation is part of the listed **Recticel Group**, a leading European market player in **polyurethane solutions**.

The Recticel Group employs around **8,400 people** in **28 countries** across the world. It serves diverse markets, primarily in Europe, which accounts for around 93% of its net sales. The Group is also active in the USA and Asia.



FEEL  
GOOD  
INSIDE



[www.recticelinsulation.com](http://www.recticelinsulation.com)