

SOUNDPROOFING
FOR FLOORS
AND FOR WALLS

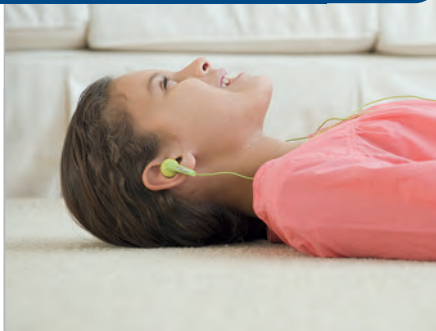


isolmant
benessere acustico e termico

Thermal insulation and soundproofing solutions

for floors
and walls





Tecnasfalti

acoustic and thermal wellbeing

Tecnasfalti is an Italian company which, since 1980, has been developing systems and products for thermal insulation and soundproofing for horizontal and vertical dividers in the building industry. The majority of European standards regulating noise levels in the civil building industry establish 4 types of noise: Airborne noise, Façade noise, Impact or footfall noise, System noise.

Tecnasfalti is the Italian market leader in the impact or footfall soundproofing

sector and in insulating vertical walls (airborne noise and heat).

The most effective systems for soundproofing in the building industry are floating floors as regards footfall or impact noise and insulating air gaps in the vertical walls as regards airborne noise.

All the products in the Isolmant range have been designed and created in order to function as part of these two systems.



The Product

Isolmant is physically reticulated closed cell expanded polythene. The physical reticulation and the waterproof closed cell structure give Isolmant high standards of thermal insulation and soundproofing specifications and allow it to maintain its levels of performance over time.

Isolmant is an elastic product, supplied in rolls of various thicknesses with an apparent density of 30 kg/m³ (± 3.5%). The research and development carried out by Tecnasfalti has allowed new, high-performing solutions to be created, based on specific applications. This has led to the creation of products composed of a mixture of Isolmant and other materials.

Isolmant Performance

Thickness mm	s' MN/m ²	ΔL _{nw} dB	R _t m ² K/W
2	-	-	0,05
3	80	19,5	0,08
5	60	25,5	0,14
6	50	26,5	0,17
10	32	28,0	0,28
15	-	-	0,42
20	-	-	0,56

Isolmant Standard Dimensions

Thickness mm	Type *	Height m	Length m	Rolls of m ²
2	FR/N	1,5	200/100	300/150
3	FR/N	1,5	200/100	300/150
5	FR/N	1,5	100	150
6	N	1,5	100	150
10	FR/N	1,5	50	75
15	N	1,5	30	45
20	N	1,5	30	45

PLUS RANGE



- **THICKNESS**
- **SOUND ABATEMENT**
- **DYNAMIC STIFFNESS**
- **THERMAL CONDUCTIVITY**
- **ROLL DIMENSIONS**

Lay with the screen-printed fabric facing upwards.

Isolmant MonoPlus

Recommended for soundproofing against footfall in cases where high resistance to pedestrian traffic is required or for direct laying of systems in single layer foundations. If a high level of noise abatement is required in the presence of reduced thicknesses of screed (no less than 4 cm and suitably reinforced or fibre-reinforced), this is the ideal product.

Approx. 6 mm.

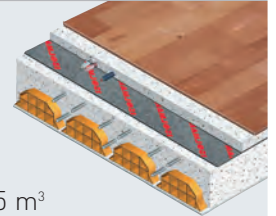
$\Delta L_{nw} = 26,5 \text{ dB}$.

$s' = 60 \text{ MN/m}^3$.

$\lambda = 0,0348 \text{ W/mK}$.

1,50m x 50m (h x L) = 75 m² - 1,50m x 25m (h x L) = 37,5 m²

The product has battens and is equipped with adhesive tape in order to seal them.



PLUS RANGE



- **THICKNESS**
- **SOUND ABATEMENT**
- **DYNAMIC STIFFNESS**
- **THERMAL CONDUCTIVITY**
- **ROLL DIMENSIONS**

Lay with the aluminised side facing upwards.

Isolmant BiPlus

In all cases where requirements include a high level of acoustic comfort and resistance to pedestrian traffic and to tearing. Suitable for both single and dual layer structures, it is advisable to create screeds which are at least 5 cm thick. For lesser thicknesses, reinforce the screeds with suitable mesh or fibres.

Approx. 9 mm.

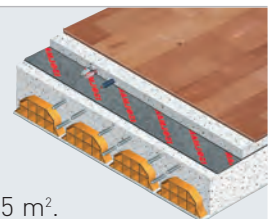
$\Delta L_{nw} = 34 \text{ dB}$.

$s' = 11,14 \text{ MN/m}^3$.

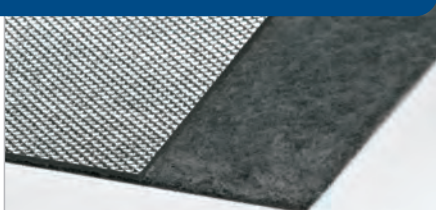
$\lambda = 0,0348 \text{ W/mK}$.

1,50m x 50m (h x L) = 75 m² - 1,50m x 25m (h x L) = 37,5 m².

The product has battens and is equipped with adhesive tape in order to seal them.



PLUS RANGE



- **THICKNESS**
- **SOUND ABATEMENT**
- **DYNAMIC STIFFNESS**
- **THERMAL CONDUCTIVITY**
- **ROLL DIMENSIONS**

Lay with the aluminised side facing upwards.

Isolmant Radiante

Specific product for applications with underfloor heating/cooling systems. Isolmant Radiante is able to screen heat dispersions downwards. Particularly useful in low thickness applications with thin heating panels. The resilient mat is always necessary as the heating panels do not perform any soundproofing function.

Approx. 5 mm.

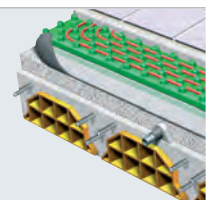
$\Delta L_{nw} = 25 \text{ dB}$.

$s' = 21 \text{ MN/m}^3$.

$\lambda = 0,0348 \text{ W/mK}$.

1,50m x 50m (h x L) = 75 m² - 1,50m x 25m (h x L) = 37,5 m².

Product with battens and aluminised, embossed film.



SPECIAL RANGE



- **THICKNESS**
- **SOUND ABATEMENT**
- **DYNAMIC STIFFNESS**
- **THERMAL CONDUCTIVITY**
- **ROLL DIMENSIONS**

Lay with the fabric facing downwards.

Approx. 5 mm.

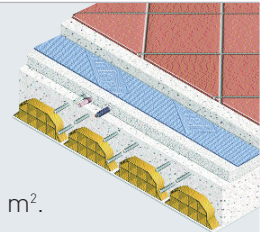
$\Delta L_{nw} = 25 \text{ dB}$.

$s' = 21 \text{ MN/m}^3$.

$\lambda = 0,0348 \text{ W/mK}$.

1,50m x 50m (h x L) = 75 m² - 1,50m x 25m (h x L) = 37,5 m².

Product with battens



SPECIAL RANGE



- **THICKNESS**
- **SOUND ABATEMENT**
- **DYNAMIC STIFFNESS**
- **THERMAL CONDUCTIVITY**
- **ROLL DIMENSIONS**

Lay with the fabric facing downwards.

Approx. 8 mm.

$\Delta L_{nw} = 34 \text{ dB}$.

$s' = 11,41 \text{ MN/m}^3$.

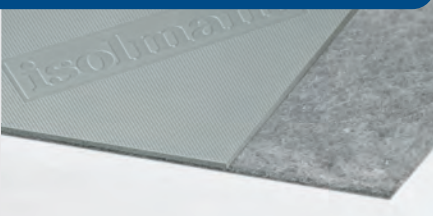
$\lambda = 0,0348 \text{ W/mK}$.

1,50m x 50m (h x L) = 75 m² - 1,50m x 25m (h x L) = 37,5 m².

Product with battens



GAMMA SPECIAL



- **THICKNESS**
- **SOUND ABATEMENT**
- **DYNAMIC STIFFNESS**
- **THERMAL CONDUCTIVITY**
- **ROLL DIMENSIONS**

Lay with the fabric facing downwards.

Approx. 6 mm.

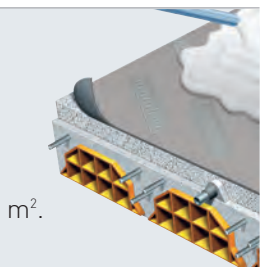
$\Delta L_{nw} = 25 \text{ dB}$.

$s' = 45 \text{ MN/m}^3$.

$\lambda = 0,0348 \text{ W/mK}$.

1,50m x 50m (h x L) = 75 m² - 1,50m x 25m (h x L) = 37,5 m².

Product with battens



Isolmant Underslim

Recommended for creating floating floors with screeds of a reduced thickness. As a matter of fact, in the presence of layers of cement finish with minimum thicknesses of less than 5 cm, there is a very high risk of the screed cracking. Combines a high level of acoustic performance with a reduction in the risk of cracking thanks to the high density layer of Isolmant Special.

Isolmant Underspacial

Guarantees a high level of underfloor noise abatement in all the cases where increased soundproofing power of the resilient layer is required. Recommended for dual layer foundations, it requires finishing screed thicknesses of at least 5 cm. For lesser thicknesses, it is advisable to reinforce the screeds with suitable mesh or fibres.

Isolmant Underlivell

Specific product for self-levelling screeds characterised by low thicknesses and affected by particularly irritating acoustic phenomena. Isolmant UnderLivell is the ideal resilient layer for soundproofing in this specific case and facilitates spreading the screed.

Thermal insulation and soundproofing of horizontal structures.

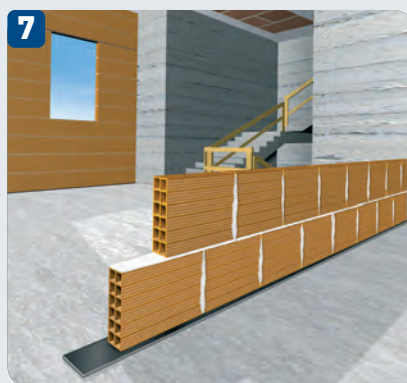
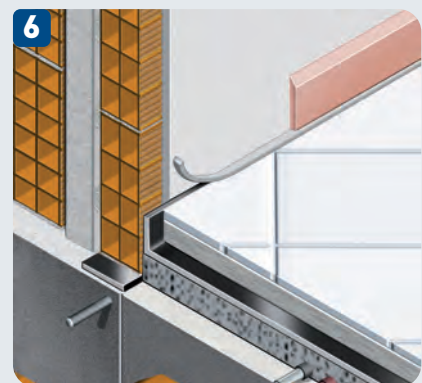
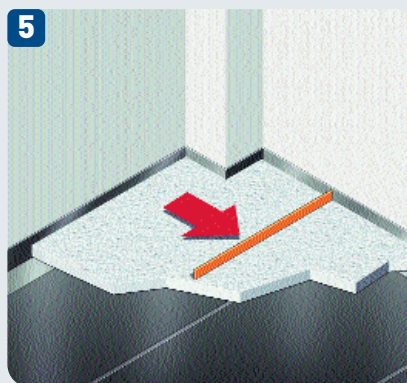
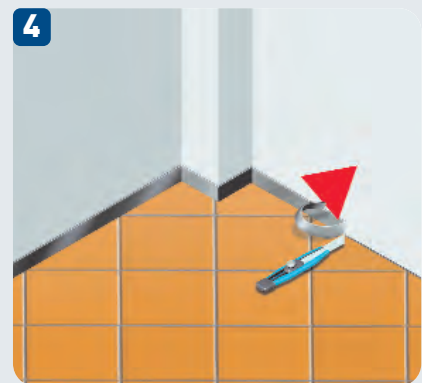
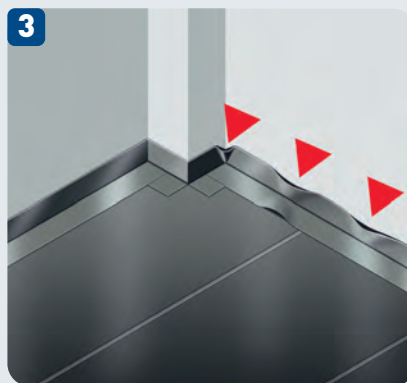
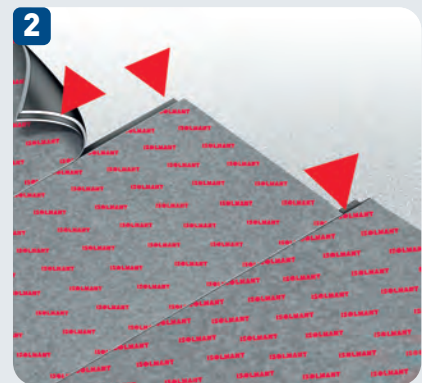
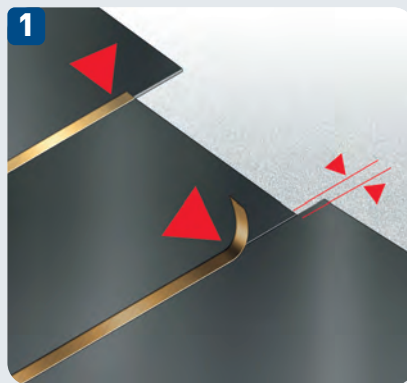
Laying advice



How to achieve horizontal soundproofing

When laying products for the thermal insulation and soundproofing of horizontal structures, it is basically necessary to pay attention to the continuity of the insulator, creating an actual tank following these main specifications:

- ▶ Go over by at least 10 cm and tape every sheet in order to seal the joint 1 perfectly. The floating floor must allow the screed contained to “float” inside it. Use the battens and the sealing on the prepared materials (Plus range) 2.
- ▶ Apply “Isolmant Fascia Perimetrale” (Perimeter Strip) onto the masonry, avoiding rigid connections between the horizontal and vertical structures. It is preferable if this strip starts directly from the height of the floor and separates the whole levelling layer (where envisaged). Prevent air bubbles when applying the strip and position it so that there is a vertical turn-up on the wall which is at least equal to the thickness of the finished screed plus the thickness of the floor 3. The excess part of the strip must only be trimmed after having laid the flooring 4.
- ▶ Start laying the screed in the direction in which the sheets overlap 5.
- ▶ For ceramic or marble skirting boards and tiled coverings in kitchens or bathrooms, use Isolmant Fascia TBTS in order to prevent any loss in soundproofing power due to transmission through the rigid connection between the floor, skirting board and wall 6.
- ▶ In order to improve the soundproofing and the flanking effect of the horizontal structures, apply “Isolmant Fascia Tagliamuro” (Wall Insulation Strip) under each partition in order to prevent noise from being transmitted to the floor below through the vertical structure itself 7.



PERFETTO RANGE



Isolmant Perfetto BV

Product composed of Isolmant Special 5 positioned on a technical textile fibre panel with high thermal performance levels. Unlimited duration, non-toxic, environmentally-friendly. Isolmant Perfetto BV (Vapour Barrier) requires just one laying operation in order to create thermal insulation and soundproofing for both internal and perimeter walls.

- **THICKNESS**
 - **THERMAL RESISTANCE**
 - **SOUNDPROOFING POWER**
 - **VAPOUR RESISTANCE**
 - **FORMAT**
- Apply with the screen-printed side in view.

30 mm	50 mm	70 mm
$R_t = 0,85 \text{ m}^2\text{K/W}$	$R_t = 1,45 \text{ m}^2\text{K/W}$	$R_t = 2,00 \text{ m}^2\text{K/W}$
$R_w = 54 \text{ dB}$ Double wall with 8 cm with hollow brick and 12 cm perforated brick (3 plaster layers)		
$\mu = 3600$		
Pannelli da $1 \times 2,85 \text{ m} = 2,85 \text{ m}^2$		
Product with battens		



PERFETTO RANGE



Isolmant Perfetto CG

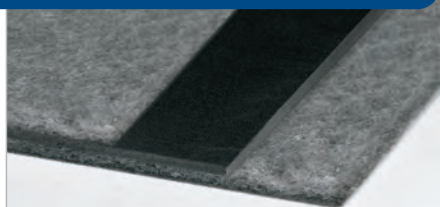
Product composed of a technical fabric fibre panel with high thermal performance levels. Unlimited duration, non-toxic, environmentally-friendly. Isolmant Perfetto CG (Plasterboard) requires just one laying operation in order to create thermal insulation and soundproofing for both internal and perimeter walls.

- **THICKNESS**
- **THERMAL RESISTANCE**
- **SOUNDPROOFING POWER**
- **FORMAT**

25 mm	45 mm
$R_t = 0,70 \text{ m}^2\text{K/W}$	$R_t = 1,27 \text{ m}^2\text{K/W}$
$R_w = 54 \text{ dB}$ wall panel (on 8 cm perforated brick) with metal warping and double sheet of plasterboard and Isolmant Perfetto CG 45 in the air gap.	
Panels: $0,6 \text{ m} \times 1,00 \text{ m} = 0,6 \text{ m}^2$	



WALL RANGE



Isolmant Polimuro

Product recommended for insulating in air gaps with reduced dimensions (from 2 to 4 cm). It is advisable to secure the Isolmant Polimuro sheet to the wall which has already been built using nylon anchors (with flange) or using an upper listel nailed to the wall. Spread the material in a continuous way using the battens for perfect soundproofing.

- **THICKNESS**
 - **SOUNDPROOFING**
 - **THERMAL CONDUCTIVITY**
 - **ROLL DIMENSIONS**
 - **ACOUSTIC FUNCTIONING**
- Product with battens

Approx. 12 mm.
$R_w = 54 \text{ dB}$ Double wall with 8 cm with hollow brick and 12 cm perforated brick (3 plaster layers)
$\lambda = 0,0352 \text{ W/mK}$.
$1,50\text{m} \times 50\text{m} \text{ (h x L)} = 75 \text{ m}^2$
The combined effect of Isolmant and the layers of needle punched fabric allow high soundproofing power values to be reached with walls of a suitable mass, even with low thicknesses of air gap.



Thermal insulation and soundproofing of vertical structures

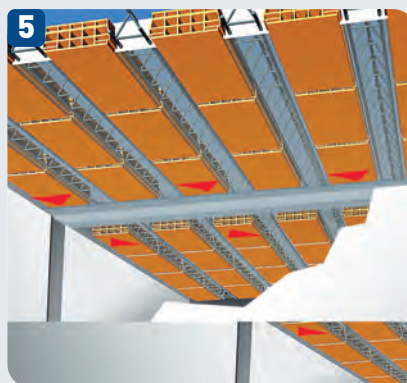
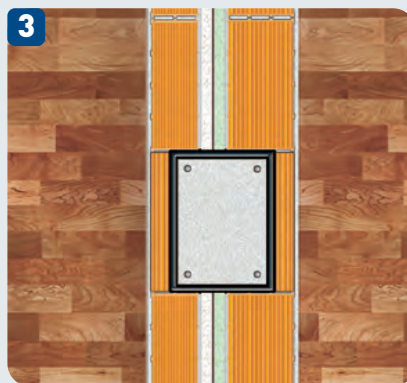
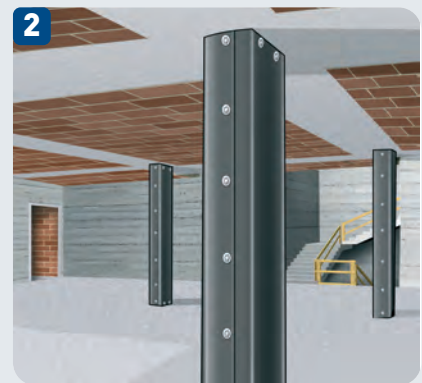
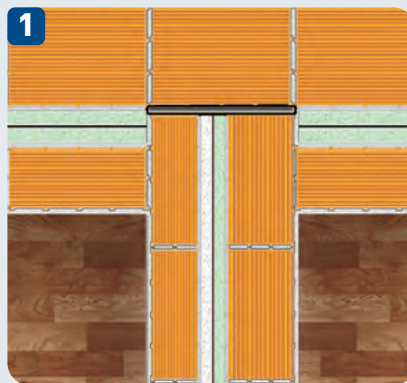
Laying advice



How to achieve vertical soundproofing

Once the appropriate product has been chosen, it will be necessary to ensure that it is laid in the correct way. It is advisable to construct a partition wall between property units in the following way:

- ▶ Differentiate the weights of the two walls, where possible choosing walls with vertical holes.
- ▶ Face the part of the partition wall towards the external wall in order to prevent noise from being transmitted through the air gap of the perimeter wall itself 1.
- ▶ Wrap any pillars present with Isolmant 2 and cover them with a hollow flat tile or specific plaster holder mesh 3.
- ▶ Always position the Wall Insulation Strip under the partitions 4.
- ▶ Take care not to insert electrical panels and connecting blocks or symmetrical systems in the property partition walls and, if they are large in size, take care to wrap them with Isolmant.
- ▶ Guaranteeing the necessary soundproofing also means building the walls in a suitable way without cracks between the walls and using the mortar both horizontally and vertically.
- ▶ Take care to ensure the continuity of the mortar between the last row of perforated bricks and the intrados of the floor for the depth of the perforated brick itself, preventing serious acoustic weakening of the wall.
- ▶ If possible, build the partition walls between different property units in a parallel way to the warping of the hollow flooring blocks, thereby preventing noise from being transmitted through the holes in the hollow flooring blocks. Otherwise, it is necessary to interrupt the path with a concrete cordon 5.
- ▶ Take care if reinforced concrete walls or separators are present, ensuring that they are insulated by creating a suitable acoustic wall panel 6.



STRIPS RANGE



Fascia Tagliamuro (Wall Insulation Strip)

The use of Isolmant Fascia Tagliamuro (Wall Insulation Strip) is necessary in order to separate all the vertical partitions in the building (including the single internal partition of the perimeter wall) in order to prevent the phenomenon of rigid connection between the various floors of the building.

- | | |
|--------------------------|--|
| ■ DESCRIPTION | 10/15/30 cm Isolmant strips with a high density (50 Kg/m ³ - Standard version) for soundproofing under partitions (also available in the Kg/m ³ Strong version for heavy walls). |
| ■ THICKNESS | Approx. 4 mm (6 mm for the 70 Kg/m ³ version) |
| ■ SOUNDPROOFING | Improvement in footfall noise abatement: approx. 4 dB.
Improvement in airborne noise abatement: approx. 4 dB. |
| ■ STRIP DIMENSION | 10 cm x 100 m / 15 cm x 100 m / 30 cm x 100 m. |

STRIPS RANGE



Perimeter strips

In order to ensure that the floating floor works correctly, it is essential to also insulate the vertical surfaces of the cement screed. In order to do this, as an alternative to the "turn-up" of the soundproofing mat, it is sufficient to apply Isolmant Fascia Perimetrale (Perimeter Strip), available in various versions, to the bottom of the wall and along the whole perimeter of the room.

- | | |
|--------------------------|---|
| ■ DESCRIPTION | Expanded polythene strips with or without pre-cutting to facilitate folding. |
| ■ THICKNESS | The thickness of the strip can vary from 3 to 10 mm <ul style="list-style-type: none">• Apply Isolmant Fascia Perimetrale (Perimeter Strip) along the perimeter, using adhesive where present.• The part of the Perimeter Strip which exceeds the thickness of the screed must only be trimmed after the final flooring has been laid and plastered. |
| ■ STRIP DIMENSION | 15 cm strip: rolls: (h x L) 1,5 m x 50 m with 10 strips per roll.
10 cm strip: rolls: (h x L) 1,5 m x 50 m with 8 strips per roll.
The perimeter strips can be customised. |

