ISOLMANT PERFETTO SPECIAL

AIRBORNE SOUND INSULATION WITH AIR GAP CAVITY

The full-height, high-performance panel specifically designed for acoustic insulation of partition and perimeter walls with air gap cavity.

WHAT IS ISOLMANT PERFETTO?

This product is made of a IsolFIBTEC PFT panel (recycled fibre of polyester for technical application whose density increases along the thickness. This fibre has high acoustic and thermal performance) joined to 5 mm Isolmant Special. Non toxic, ecological, with unlimited duration, recyclable. Product with full-height adhesive taping overlapping fabric for easy installation. 30 mm and 50 mm thickness available.

Thicknesses available:

30 mm 50 mm

SPECIFIC APPLICATIONS

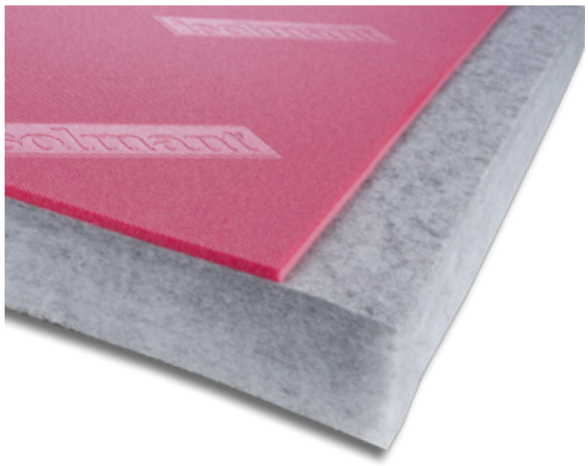
Isolmant Perfetto Special is a versatile product. It is recommended for acoustic and thermal insulation of vertical partitions, perimeter walls and partitions between different building units. Isolmant Perfetto Special can be used in air gap cavity through dry application between the two boards for masonry structures. This product can also be glued or bolted where required. To be positioned with the screen printed side (Isolmant logo) in visible position.

CAM MINIMUM ENVIRONMENTAL CRITERIA SUSTAINABLE

VOC FREE HEALTHY

ECOLOGICAL

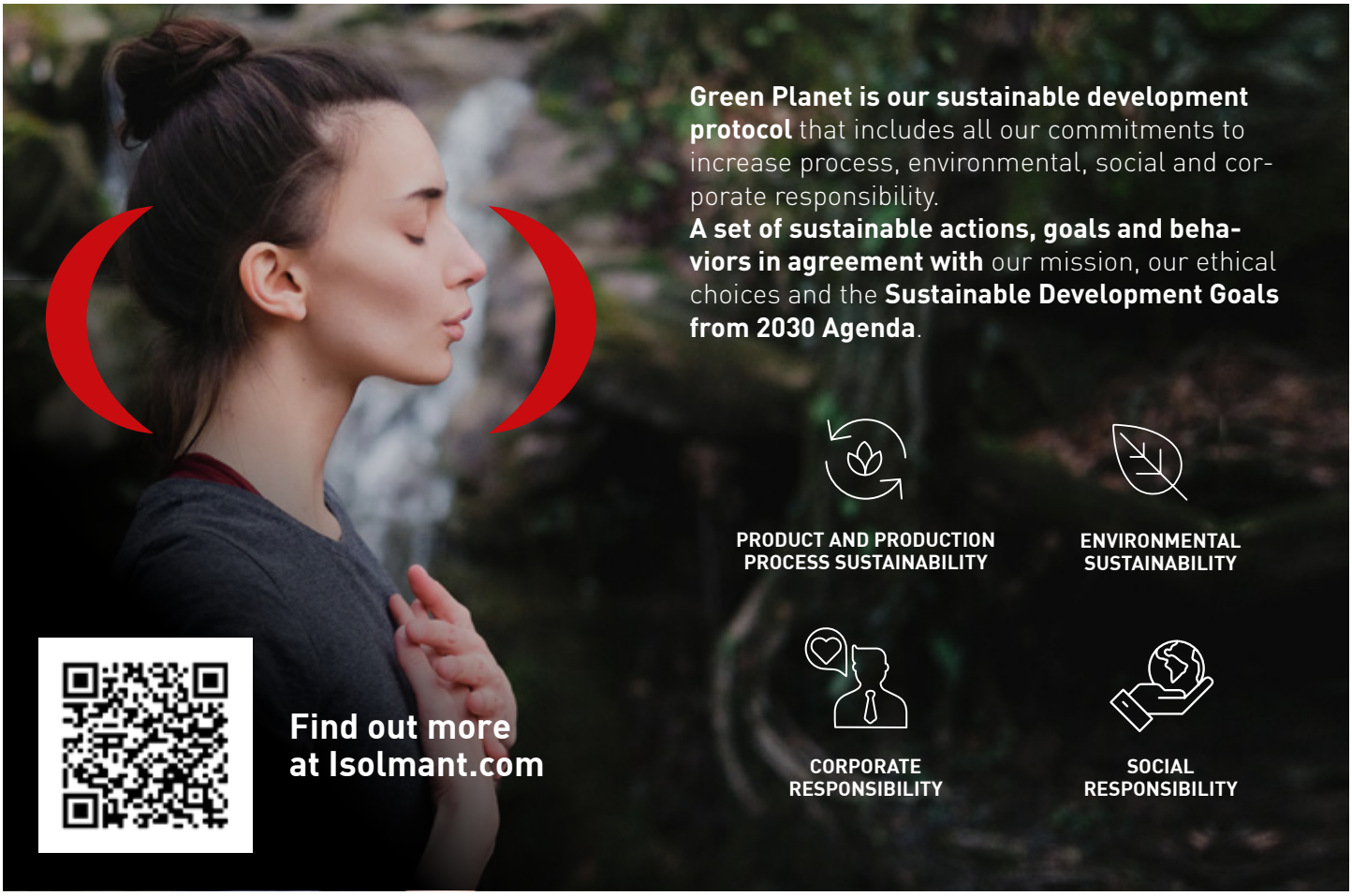
All our products with the "**Guaranteed Green Planet**" logo are compliant with the sustainability criteria of the most important environmental protocols and certified according to the major national and international standards.



GREEN FEATURES OF ISOLMANT PERFETTO SPECIAL

- **Volatile Organic Compounds free** (VOC A+);
- **Eco-friendly and recyclable.**
- **Manufactured with low environmental impact.**
- Contributes to achieving credits for the **environmental certification** of a building according to the **LEED or ITACA** protocols.
- This product can be disposed of according to EWC n. 170604.

Complies with the requirements defined by the Italian CAM Edilizia for acoustic and thermal insulation materials regarding the request for high acoustic insulation performance, the percentage of recycled material and the absence of hazardous substances.



ADVANTAGES

- Can be used both in renovation and in new buildings.
- High airborne acoustic insulation.
- High thermal insulation.
- Low thermal conductivity.
- Unalterable over time.
- Unlimited duration.
- Contact with water does not compromise performance or characteristics.
- Resistant to mould or insects.
- Non-toxic and non-allergenic.

ADVANTAGES FOR INSTALLATION

- Full-height load- bearing panel for easy and quick installation.
- Panel with adhesive taping overlapping fabric.

To be positioned with the screen printed side (Isolmant logo) in visible position.

NOMINAL THICKNESS:	30 mm	50 mm
SOUND INSULATION:	R_w = 54 dB [1] - R_w = 63 dB [2]	
"IN SITU" SOUND INSULATION:	R'_w = 56 dB [3]	R'_w = 59 dB [4]
CONDUCTIVITY:	λ= 0.035 W/mK	
THERMAL RESISTANCE:	R_t = 0.858 m^2K/W	R_t = 1.429 m^2K/W
SPECIFIC HEAT CAPACITY:	c = 1300 J/kgK	c = 1293 J/kgK
VAPOUR RESISTANCE:	μ = 3600 (this values refers to Isolmant polyethylene layer)	
EQUIVALENT AIR LAYER THICKNESS:	S_d = 18 m	
OPERATING TEMPERATURE:	Thermal decomposition > 300 °C - Melting point 160 °C - -180 °C	
VOC:	A+ [5]	
CE MARKING:	Harmonised standards for CE marking are NOT currently available for acoustic insulation products. This means that Isolmant products are currently NOT subject to CE marking, nor to the drawing up of a PDO (declaration of performance) or DDP (declaration of performance). All Isolmant products are placed on the market in compliance with the regulations in force in the country of destination and with the necessary certificationsguarantee their use in dedicated applications.	
PACKAGE:	Packs of 10 panels (equivalent to 28.5 m^2 per pack) Packs of 7 panels (equivalent to 19.95 m^2 per pack) Packs of 7 panels (equivalent to 19.95 m^2 per pack)	

(1) CSI Test Report No.033-B/DC/ACU/08 (Double wall with 8 cm hollow brick and 12 cm poured brick (3 plasters) and 30 mm thick.Isolmant Perfetto Special in the air gap cavity).

(2) Test report RI.CERT. no. 17-11722-002 (Double wall with 10 cm Ytong ACU acoustic block, 8 cm Ytong PRO block and 30 mm thick. Isolmant Perfetto Special in the air gap cavity)

(3) Value measured on site - see structure page 3 of this data sheet

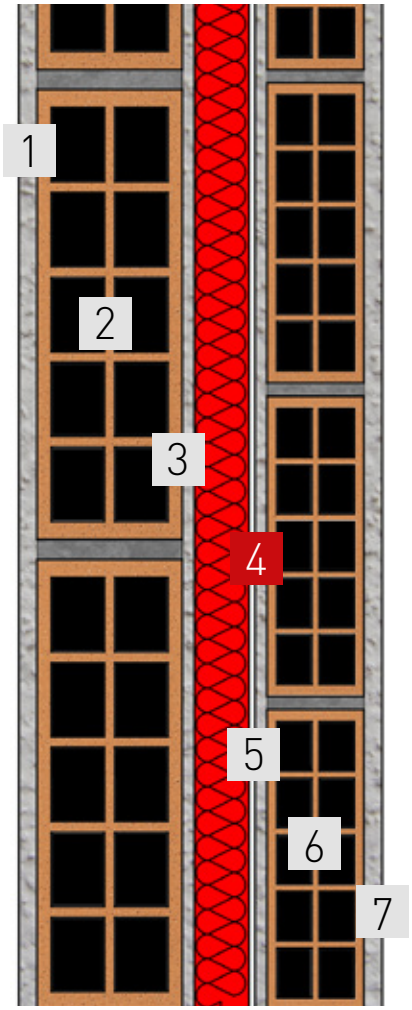
(4) Value measured on site - see structure page 4 of this data sheet

(5) Istituto Giordano test report n. 381825

ITEM SPECIFICATIONS

Full-height insulating panel (1.00 x 2.85 m) made of reticulated expanded closed-cell polyethylene joined to a layer of recycled fibre of polyester for technical application whose density increase along the thickness. This product provides high sound insulation performance and thermal resistance (Isolmant Perfetto Special type). This product comes with overlaps and adhesive tape. 30 or 50 mm nominal thickness Panel thermal resistance equal to 0.857 o 1.429 m^2K/W (for 30 and 50 mm versions respectively).

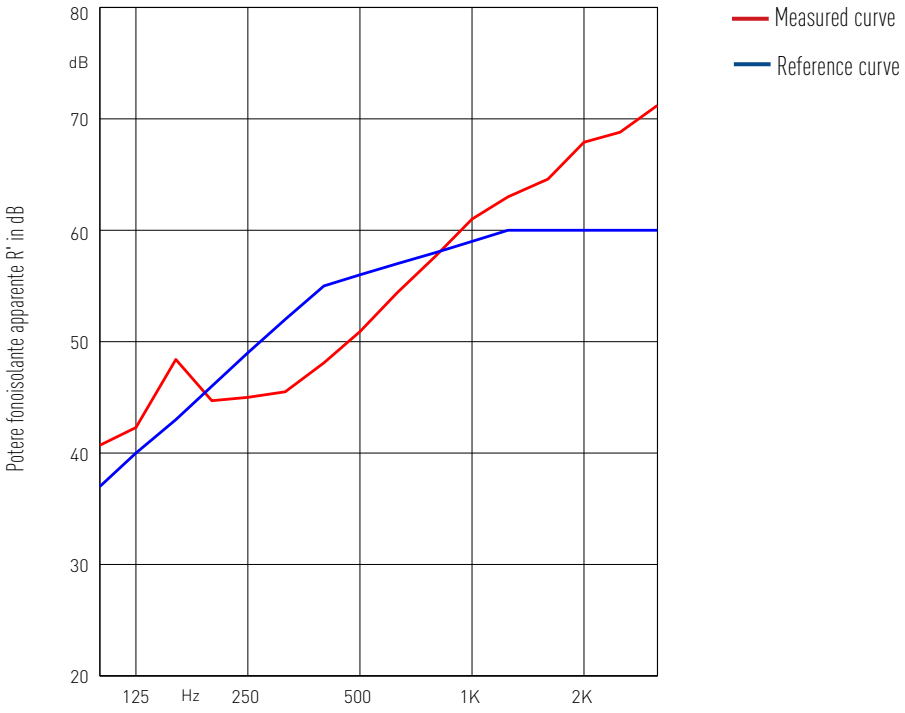
RESIDENTIAL BUILDING IN PONTOGLIO (BS)



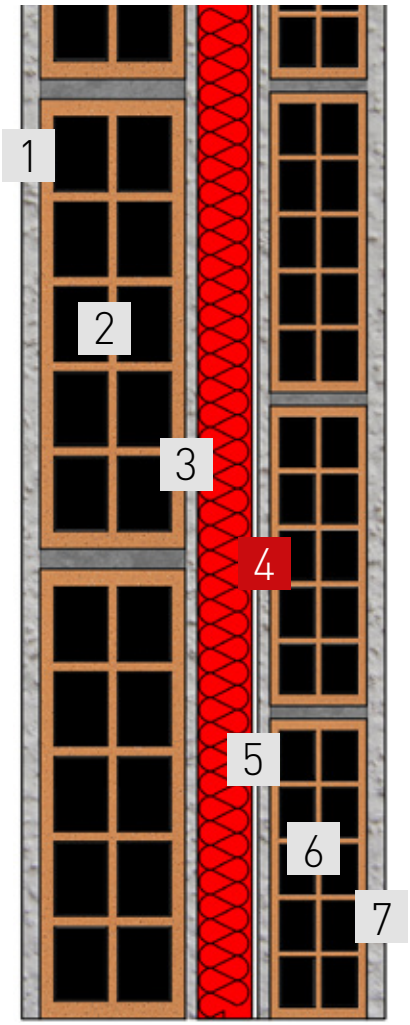
No.	Layer	Material	Thickness (m)	Surface mass (kg/m2)
1	Finishing	Premix	0.015	21
2	Wall 1	poroton brickwork	0.12	96
3	Mortar	rustic	0.01	18
4	Insulation material	**Isolmant PERFETTO SPECIAL**	**0.05**	
5	Air gap	cavity	0.02	
6	Wall 2	perforated brickwork	0.12	78
7	Finishing plaster	Premix	0.015	21
		spessore totale	0.35	

$$R'_w (C;C_{tr}) = 56 (-1;-4)\ dB$$

Frequency (Hz)	R'_w (dB)
100	40.7
125	42.3
160	48.4
200	44.7
250	45
315	45.5
400	48.1
500	50.9
630	54.4
800	57.7
1000	61
1250	63
1600	64.6
2000	67.9
2500	68.8
3150	71.2



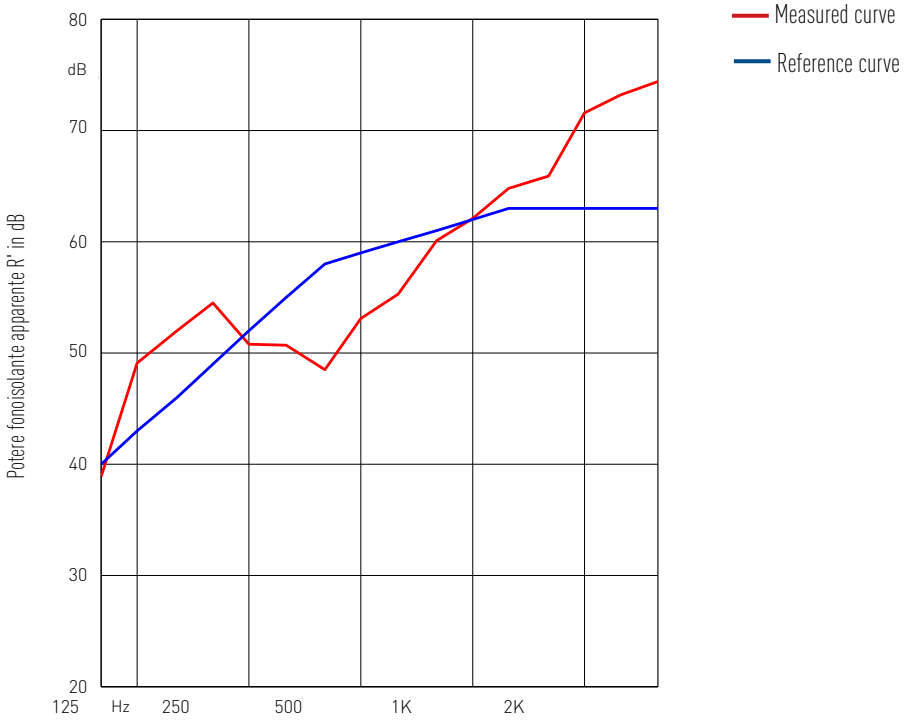
RESIDENTIAL BUILDING IN NOALE (VE)



No.	Layer	Material	Thickness (m)	Surface mass (kg/m2)
1	Finishing plaster	Premix	0.015	21
2	Wall 1	poroton brickwork	0.12	96
3	Mortar	rustic	0.01	18
4	Insulation material	**Isolmant PERFETTO SPECIAL**	**0.05**	
5	Air gap	cavity	0.03	
6	Wall 2	poroton brickwork	0.12	96
7	Finishing plaster	Premix	0.015	21
		spessore totale	0.36	

$$R'_w\,(C;C_{tr}) = 59\,(-1;-3)\ dB$$

Frequency (Hz)	R'_w (dB)
100	38.9
125	49.1
160	52
200	54.5
250	50.8
315	50.7
400	48.5
500	53.1
630	55.3
800	60.1
1000	62.1
1250	64.8
1600	65.9
2000	71.6
2500	73.2
3150	74.4



INSTALLING FASCIA TAGLIAMURO

STEP 1

Before starting the laying of all the partitions, including the internal counterfitting of the perimeter wall (if present), Isolmant Fascia Tagliamuro must be laid under the first brick layer. This high density, reticulated polyethylene foam accessory is specifically designed to disjoint partitions and slabs, and reduce the structural sound transmission from the walls to the slab. Disjointing occurs through imperceptible elastic behaviour that does not cause cracks in the finishing plaster. The elastic deformation is immediate (within 24 hours) and the plastic component is almost zero (figure A).

STEP 2

CREATING WALLS

It is advisable to build masonry partition walls between building units with two planks with a high and varied surface mass and which are perfectly airtight by virtue of the complete sealing of the vertical and horizontal joints between the bricks. If it is not possible to differentiate the masses of the flooring/slab, it is advisable to make a cement grout approximately 1 cm thick on one of the two boards (photo 2).

INSTALLING ISOLMANT PERFETTO SPECIAL

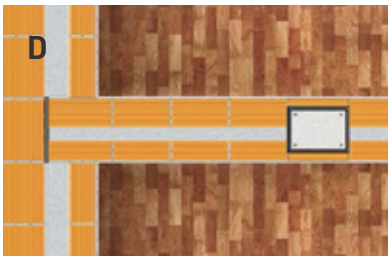
STEP 3

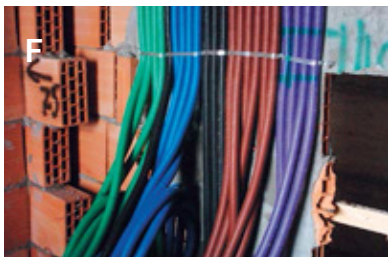
In double brick layer walls, the air gap cavity with the interposition of insulating material contributes to the reduction of the transmitted airborne noise component by acting on the reduction of the effect of air gap cavity resonance. In order to perform this function correctly, the insulation material must be carefully installed, with continuity over the entire surface of the masonry. Isolmant Perfetto Special is produced in full-height panels with adhesive overlapping fabric for fast installation (figure C). It should be laid ensuring that it fully covers the entire surface of the masonry. In the case of installation on a perimeter wall, the side with the polyethylene must face the heated room.

STEP 4

ACOUSTIC BRIDGES

When constructing the joint between the sound-insulating partition and the perimeter wall, the sound-insulating partition must be in direct contact with the external partition of the perimeter wall in order to prevent the passage of noise from one room to another through the air gap cavity in the perimeter wall (fig. D). It will then be necessary to correct the thermal bridge that will be created, using insulating materials with adequate thermal resistance. In the presence of stairwells, elevator compartments and pillars (even if contained within the vertical partitions) that rigidly connect all the structural elements from the foundations to the last floor, it is necessary to cover them with elastic material (such as Isolmant Cemento Armato) and then finish them, where possible, using a 4/5 cm roof tile/ or coated plasterboards. In the case of reduced thickness, it is possible to fix a strong plaster net directly onto the elastic material with nylon plugs, and proceed to finish the wall, paying particular attention to the cracks (fig.E). Stairs can also be a vehicle for the passage of noise into the structure, so they must be insulated with suitable material (such as Isolmant KIT SCALE).





STEP 5

INSTALLING BUILDING SYSTEMS

It will be essential that the tracks, electrical boxes and any type of intervention that is carried out on the sound-insulating partition do not alter its acoustic performance. It is therefore advisable to always reconstruct the recesses and electric tracks with abundant mortar and, if possible, avoid inserting systems or boxes in the partition which would demolish a large part of it, drastically reducing the mass and, sometimes, even the thickness of the insulation and consequently the soundproofing performance desired at the design level (figure F).

WARNINGS:

* This data sheet does not constitute a specification and, if it consists of several pages, please ensure that you have consulted the complete document. Although, these instructions are the result of our best expertise they are indicative. The user should establish whether the product is suitable for its intended application. The user will be also in charge of all the responsibility for the use of the product itself.

**The sound insulation values given in this technical data sheet are the result of laboratory tests or tests carried out on site: they cannot be considered a predictive value for every situation that may occur on site. Acoustic performance is closely linked to the specific conditions of each site.

***Caution: do not expose the product to direct sunlight and bad weather.

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