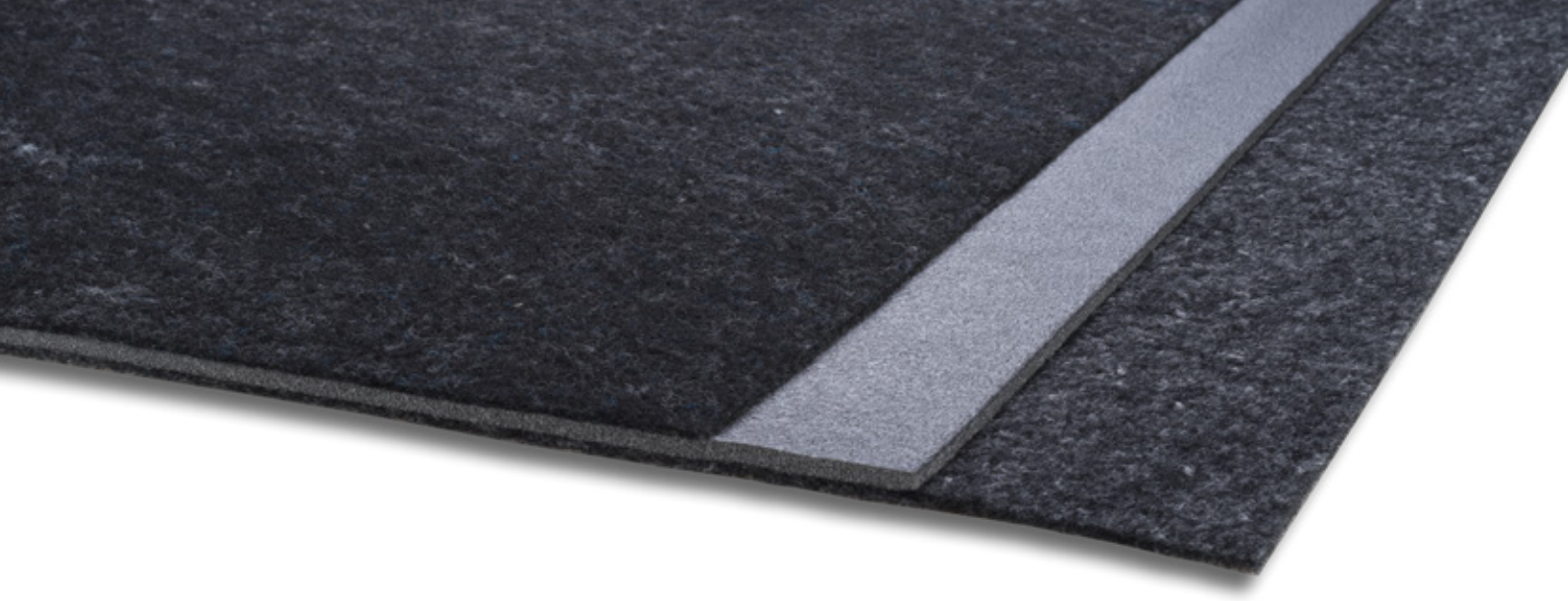


ISOLMANT POLIMURO

AIRBORNE SOUND INSULATION WITH AIR GAP CAVITY

SPECIFIC MULTI LAYER PRODUCT FOR ACOUSTIC INSULATION OF PARTITION WALLS WITH REDUCED THICKNESS AIR GAP CAVITY. THIS PRODUCT USES THE SYNERGY BETWEEN ISOLMANT POLYETHYLENE AND FIBTEC FIBRE.

WHAT IS ISOLMANT POLIMURO?

Product made of 5 mm polyethylene Isolmant joined on both side to FIBTEC XF3 (special needle-worked fibre produced according to specifications designed to provide a better noise reduction). Product with overlaps. Thickness 12 mm.

SPECIFIC APPLICATIONS

Isolmant Polimuro is conceived for the acoustic insulation of vertical partitions between different housing units, with small air gaps (2 to 3 cm) between the two boards that make them up. Isolmant Polimuro must be fastened to the vertical partition, at the connection between wall and ceiling using plastic fasteners thermal panels type) or by fastening a wooden frame nailed to the ceiling, letting it hang down to the floor. The special overlapping fabric ensures that the product remains in place during installation

ADVANTAGES

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

ADVANTAGES FOR INSTALLATION

- Easy to install;
- Hinged product for easier installation on site.

ISOLMANT Green Planet

- Volatile Organic Compounds free(VOC A+);
- Contributes to achieve credits for the environmental certification of a building according to LEED or ITACA standards;

- 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;

CAM MINIMUM ENVIRONMENTAL CRITERIA — SUSTAINABLE

VOC FREE — HEALTHY

ECOLOGICAL

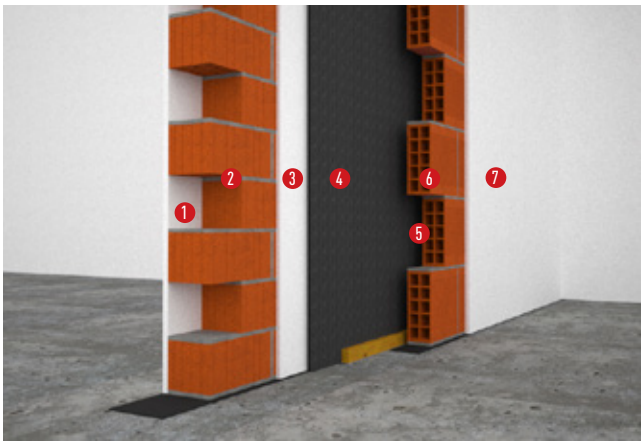
NOMINAL THICKNESS:	12 mm
SOUND INSULATION:	R_w = 54 dB [1] - R_w = 54 dB [2]
"IN SITU" SOUND INSULATION:	R'_w = 54 dB [3]
CONDUCTIVITY:	λ= 0.035 W/mK
THERMAL RESISTANCE:	R_t = 0,342 m^2K/W
SPECIFIC HEAT CAPACITY:	c = 1450 J/kgK
VAPOUR RESISTANCE:	μ = 3600 (referred to Isolmant polyethylene)
EQUIVALENT AIR LAYER THICKNESS:	S_d = 18 m
OPERATING TEMPERATURE:	Thermal decomposition > 300 °C - Melting point 160°C - 180 °C
VOC:	A+
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 certifications to guarantee their use in dedicated applications.
PACKAGE:	Rolls of 1.50 m x 50 m (h x L) = 75 m^2 Rolls of 1.50 m x 25 m (h x L) = 37.5 m^2 Product with overlaps
SIZE:	Single roll

(1) ITC Test Report No. 4172/RP/06 (Double wall with 8 cm hollow brick and 12 cm poured brick (3 plasters))
(2) ITC Test Report No. 4173/RP/06 (Double wall with 12 cm hollow brick and 12 cm poured brick (2 plasters))
(3) Value measured on site - see structure page 3 of this technical data sheet
(4) Istituto Giordano test report n.362731

ITEM SPECIFICATIONS

Isolmant Polimuro is an insulating layer that consists of rolls of reticulated expanded closed-cell polyethylene joined on both sides with a needle-worked fibre that is conceived to enhance the acoustic performance (type Isolmant Polimuro). Product with overlaps. Density 30 kg/m^3 approx. Nominal thickness 12 mm.

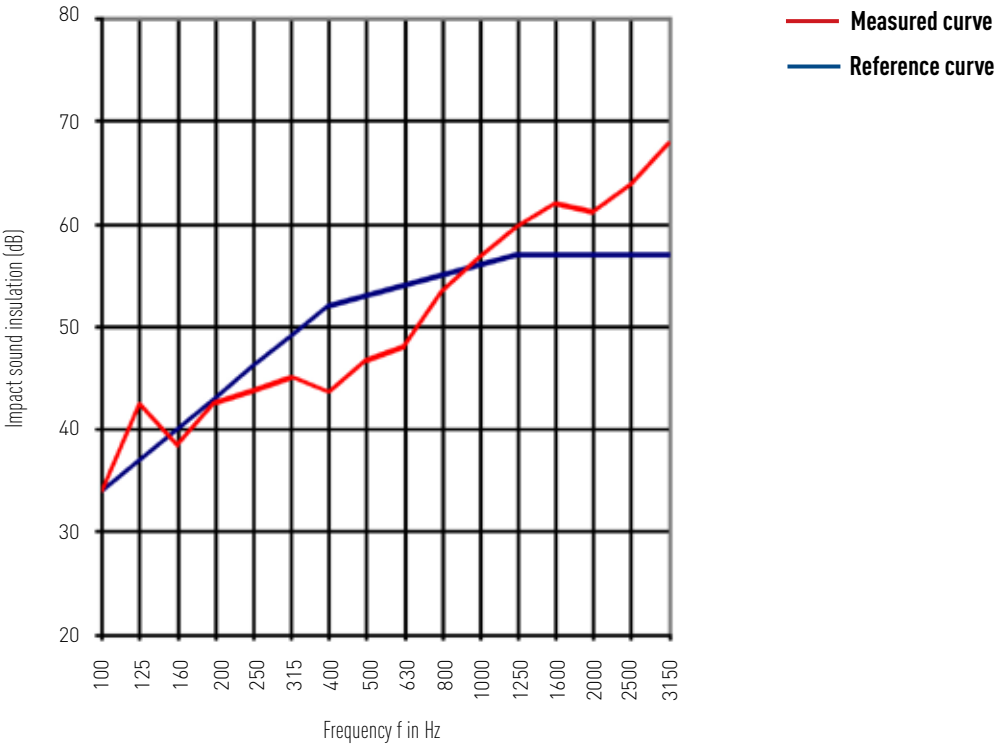
RESIDENTIAL BUILDING IN REGGIO EMILIA

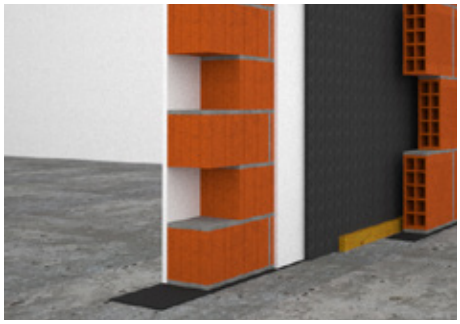


$R'_w (C;C_{tr}) = 53 (-2;-5)$ dB

No.	Layer	Material	Thickness (m)	Surface mass (kg/m²)
1	Finishing plaster	Premix	0,015	21
2	Wall 1	double UNI brick wall	0,12	140
3	Mortar	rustic	0,01	18
4	Insulation material	ISOLMANT POLIMURO	0,012	
5	Air gap	cavity	0,018	
6	Wall 2	perforated brick wall	0,12	72
7	Finishing plaster	Premix	0,015	21
		Total thickness	0,31	

Frequency (Hz)	L'_n (dB)
100	33,9
125	42,4
160	38,4
200	42,5
250	43,8
315	45,1
400	43,6
500	46,7
630	48,1
800	53,4
1000	56,8
1250	59,6
1600	62
2000	61,2
2500	63,8
3150	67,8





1

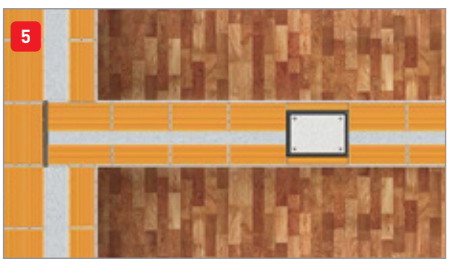
Installing Fascia Tagliamuro. Before starting the laying of all the partitions, including the internal counterfitting of the perimeter wall (if present), Isolmant Fascia Tagliamuro must be laid under the first brick layer. This high density, reticulated polyethylene foam accessory is specifically designed 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 1).

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 (figure 2). 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 (figure 3).

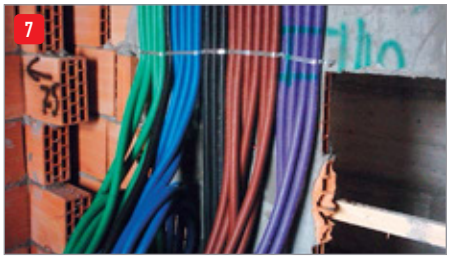
3

Installing Isolmant Polimuro. 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 Polimuro comes in rolls and must be installed by inserting this product' sheets like a "curtain" inside the air gap cavity between the boards. In addition, these sheets must be fixed at the top with a wooden frame joint to the ceiling. The sheets must then be overlapped using the special overlapping fabric, avoiding leaving parts of the wall uncovered (it is not necessary to seal them with Isolmant Fascia Nastro) and finally fix them to the adjacent wall using nylon bolts ("wal cladding type") (figure 4).



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. 5). 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.6). 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).



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 7).

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.

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