

ISOLMANT UNDERSPECIAL EVO BV

UNDERSCREED INSULATION

SPECIFIC FOR UNDERSCREED IMPACT SOUND INSULATION IN DOUBLE LAYER APPLICATIONS WITH ≥ 3 CM FINISHING SCREED. INTEGRATED VAPOUR BARRIER.

WHAT IS ISOLMANT UNDERSPECIAL EVO BV

Resilient polyethylene Isolmant layer sp. 1.5 mm joined on the lowerside to FIBTEC XF2 (special needle-worked fibre produced according to specifications designed to provide a better noise reduction). Isolmant UnderSpecial EVO comes with reflecting side that acts as vapour barrier. It provides excellent impact sound and airborne insulation for horizontal partitions. Thickness 4 mm.

SPECIFIC APPLICATIONS

Isolmant UnderSpecial EVO BV is specific for floating screeds as provided by UNI 11516:2013 standards with any type of slab. Particularly suitable for installation underneath the floor finishing screed (two-layer solutions) with reduced thickness screeds (30 mm to 50 mm) and in applications with reduced thickness underfloor heating or cooling systems (from 15 mm above the pipe/duct). In case of disjointing a floating screed from perimeter walls, it is recommended not to turn Isolmant UnderSpecial upside down but to use Isolmant Fascia Perimetrale. Install Isolmant UnderSpecial EVO BV with the fibre side facing down.

ADVANTAGES

- Excellent acoustic impact sound and airborne insulation.
- Reduced cracking due to Isolmant high density polyethylene layer.
- It can be used in both renovation and new construction.
- Low thermal conductivity.
- Unalterable over time.
- Of unlimited duration.
- Contact with water does not affect performance or characteristics.

- Resistant to mould or insects.

ADVANTAGES FOR INSTALLATION

- Easy installation.
- This product comes with adhesive to seal the overlapping fabric.

ISOLMANT Green Planet

- Volatile Organic Compounds free (VOC A+).
 - Environmentally friendly and recyclable.
 - Environmentally friendly production.
 - This product contributes to achieve credits for the environmental certification of a building according to LEED or ITACA standards.
 - This product can be disposed of according to EWC n. 170604.
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- Complies with the requirements defined by Italian CAM Construction for acoustic and thermal insulation materials regarding the percentage of recycled material and the absence of hazardous substances.



SUSTAINABLE



HEALTHY



ECOLOGICAL

ISOLMANT UNDERSPECIAL EVO BV TECHNICAL SPECIFICATIONS

> To be positioned with the fibre side facing down.

NOMINAL THICKNESS:	4 mm
DYNAMIC STIFFNESS:	$s' = 55 \text{ MN/m}^3$ ⁽¹⁾
IMPACT SOUND INSULATION:	$\Delta L_w = 24 \text{ dB}$ ⁽²⁾
AIRBORNE NOISE INSULATION:	$R_w = 54 \text{ dB}$ ⁽³⁾
EQUIVALENT AIR LAYER THICKNESS:	$S_d = > 40 \text{ m}$
COMPRESSION CLASS:	CP2 ⁽⁴⁾
CONDUCTIVITY:	$\lambda = 0,035 \text{ W/mK}$
THERMAL RESISTANCE:	$R_t = 0.111 \text{ m}^2\text{K/W}$
SPECIFIC HEAT CAPACITY	$c = 2100 \text{ J/kgK}$
VAPOUR RESISTANCE:	$\mu = 3600$
EMISSION OF VOLATILE ORGANIC COMPOUNDS:	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 certifications to guarantee their use in dedicated applications.
SIZE:	Rolls of: $1.00 \text{ m} \times 20 \text{ m} (h \times L) = 20 \text{ m}^2$ This product comes with adhesive to seal the overlapping fabric
PACKAGE:	Single rolls

(1) Isolmant laboratory test report No. 1003_0118

(2) Istituto Giordano test report no. 354860

(3) Value calculated according to UNI EN ISO 12354-1 and UNI TR 11175 on the following stratigraphy: 20+4 concrete slab with lightened concrete substrate and thick concrete flooring finishing screed. 3 cm

(4) Isolmant laboratory test report no. 1109

(5) Istituto Giordano test report no. 379689

ITEM SPECIFICATIONS

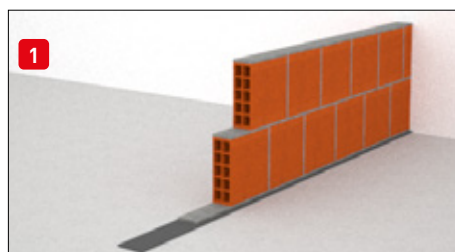
The resilient layer is made of reticulated expanded closed-cell polyethylene, with the upper side embossed and screen-printed joined on the lower side with a special needle-worked fibre that is conceived to enhance the acoustic performance (Isolmant UnderSpecial EVO BV). To be positioned with the fibre side facing down. Nominal thickness 4 mm. Dynamic stiffness 55 MN/m³.





1

Installing Fascia Tagliamuro. Before installing all the partitions, Isolmant Fascia Tagliamuro must be laid. This high density, reticulated polyethylene foam accessory is specifically designed to disjoint partitions and slabs, thereby helping to reduce the structural sound transmission from the walls to the slab. This product is available in different thicknesses and densities depending on the weight of the partitions (Fig. 1)



2

Disjointing of reinforced concrete structures. 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, with a 4/5 cm board or with plasterboard. With a reduced thickness element, it is possible to fix a strong plaster-holding net directly onto the elastic insulating material with nylon plugs, and then plaster it over, paying particular attention to the cracks (Fig. 2).



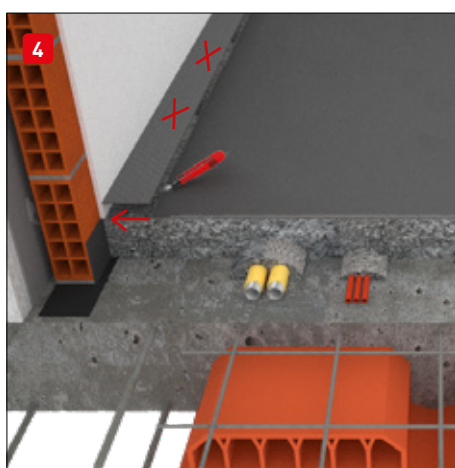
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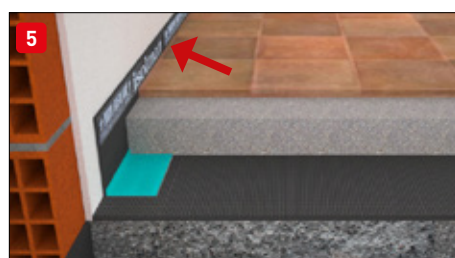
Isolmant UnderSpecial resilient layer installation EVO BV. Isolmant UnderSpecial does not have an anti-tearing layer and is therefore not recommended for single-layer bases (in this case, Isolmant BiPlus is recommended). Isolmant UnderSpecial EVO BV can be installed instead: 1) before pouring the finishing screed, directly on the structural floor, which must have a flat, even surface; 2) above the levelling layer for the systems, which must be made using suitable materials and recipes in order to guarantee adequate mechanical support and a flat, even surface; 3) below the underfloor heating/cooling panels and above the levelling layer of the systems, which must also be made using suitable materials and recipes to guarantee adequate mechanical support and a flat, even surface. The sheets of Isolmant UnderSpecial EVO BV must be accurately joined using the entire batten and sealed using the adhesive selvage on the sheet (Figure 3). It is also necessary to be careful to start flush with the wall with the polyethylene, avoiding leaving visible strips of fibre near the walls: the fibre, in fact, absorbs the cement and stiffens, generating a dangerous and continuous acoustic bridge. It is therefore necessary to trim only the fibre flush with the wall in order to guarantee the presence of both layers of product over the entire surface of the floor (Fig.).



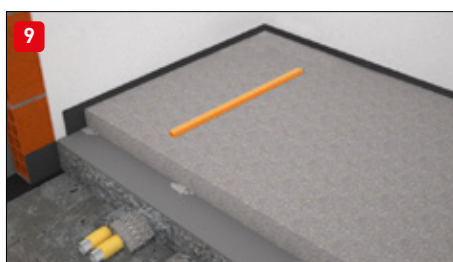
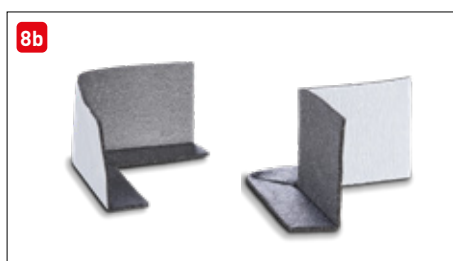
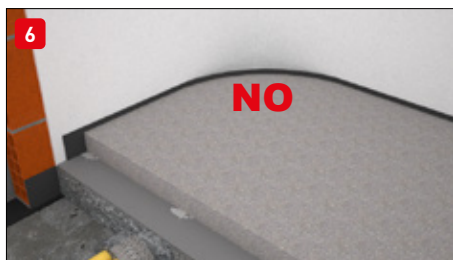
4

4

Installing Fascia Perimetrale. To avoid acoustic bridges, the use of Isolmant Fascia Perimetrale is recommended, to be laid along the entire perimeter of the room without interruption. The height of Isolmant Fascia Perimetrale must be chosen by the designer/contractor, taking into account the actual height at each site, in order to guarantee that the strip is about 2/3 cm higher than the flooring level. This excess must be trimmed after laying the floor (Fig. 5). The continuity of the installation must also be ensured along the thresholds of entrance doors and French windows, as well as in technical niches for housing the manifolds of the heating system, pillars, pilasters, doors and other wall movements. Specific accessories are available to facilitate this task: Isolmant Angoli e Spigoli e Isolmant Telaio Porte (Fig. 8a - Fig. 8b). It is also necessary to avoid gaps between the strip and the walls at the corners (dis.6) where



5



4

cementitious material can penetrate, as well as ensuring that the strip also adheres continuously along the slab-wall connection: the formation of the shell (Fig. 7) causes a reduction in the thickness of the screed resulting in a lack of flooring support at that point, risking cracking over time. In conclusion, before proceeding with the laying of the finishing screed, the contractor must be reasonably certain that he has created a perfect watertight tank in which the cement screed he is going to lay can float without establishing any rigid connection either with the load-bearing layers underneath or with the walls to its sides. Any uncovered points that could constitute an "acoustic bridge" must be covered with Isolmant Fascia Nastro.

5

Screed construction. The finishing screed must guarantee adequate mechanical resistance according to the actual laying and loading conditions. Appropriate safety measures must be taken in this regard, such as assessing the adequate consistency of the mix, curing times, the possible need to use collaborating elements (wire mesh or fibres), with reference to the thickness of the finishing screed, it is advisable to create a minimum thickness of no less than 3 cm in the case of laying Isolmant UnderSpecial EVO BV directly under the finishing screed and no less than 1.5 cm extrados pipe/mushroom in the case of laying Isolmant UnderSpecial EVO BV under panels for underfloor heating/cooling. In all cases, the screed must be well trodden (especially at the sides and corners), compacted throughout, smoothed and trowelled (by hand or by helicopter) to a high standard (Fig. 9). Particular attention must be paid to the curing phase in order not to compromise the consistency and compactness due to bleeding, differential drying, curling, cracking or crazing caused by excessive thermo-hygrometric shrinkage. When pouring the screed, special care must be taken not to tear or puncture the elastic material.

6

Installing flooring and skirting boards. It is essential to inform all site operators that the excess of the flanking strip must be trimmed only after the flooring has been laid and grouted (dis. 10) and before laying the skirting board. The direct contact of the flooring with the walls creates an acoustic bridge, which impedes the "floating" of the screed on the elastic underlay and causes a loss of insulation of several decibels. Therefore, the flooring should be joint to the flanking strip, ensuring the system elastic functioning. In particular, a tiled skirting board should not be laid on the flooring but should be raised by a few millimetres and grouted with an elastic silicone-based binder or a flexible mortar (Fig. 11). If the joint were rigid, it would prevent the floor from floating and would de-grout.

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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Via dell'Industria 12, Località Francolino 20074 Carpiano (Mi) Tel. +39 02 9885701 Fax +39 02 98855702
clienti@isolmant.it - www.isolmant.it - www.sistemapavimento.it - www.isolmant4you.it

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