

ISOLMANT UNDERPLUS BLACK.E

UNDERSCREED INSULATION

Specific for underscreed impact sound in double layer applications with finishing screed ≥ 3 cm.

WHAT IS ISOLMANT UNDERPLUS BLACK.E

Resilient Isolmant polyethylene layer joined on the underside to FIBTEC XF1 (special needle-worked fibre produced according to specifications designed to provide a better noise reduction). It provides excellent impact sound and airborne insulation for horizontal partitions. Thickness 7 mm.


SPECIFIC APPLICATIONS

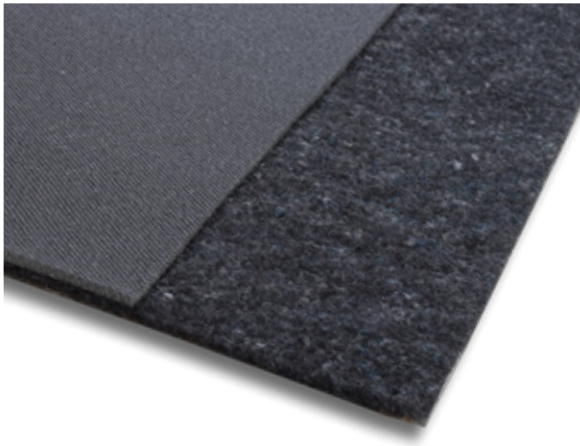
Isolmant UnderPlus Black.E specific for floating screeds as provided by UNI 11516:2013 standards with any type of slab. This product is recommended for applications under a finishing screed (double layer solution), it requires a finishing screed at least 3 cm thickness.

In case of disjoining a floating screed from perimeter walls, it is recommended not to turn Isolmant Underplus Black.E upside down but to use Isolmant Fascia Perimetrale.

Install Isolmant UnderPlus Black.E with the fibre side facing down.



 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 UNDERPLUS BLACK.E

- **Volatile Organic Compounds free** (VOC A+).
- **Recycled content certified by ICMQ**
Test report no.P492
- Manufactured with **low environmental impact**.
- Contributes to achieve credits for the **environmental certification** of a building according to **LEED or BREEAM** standards.
- This product can be disposed of according to **EWC n. 170604**.



Isolmant UnderPlus Black.E meets the sustainability criteria of the main environmental protocols as shown in the following table:

CAM	✓
ITACA	✓
WELL	✓
BREEAM	✓
LEED	✓

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.

RECYCLED CONTENT

ISOLMANT UNDERPLUS BLACK.E	PE ISOLMANT	FIBTEC XF1
Percentages of the product components	30%	70%
Percent recycled by component	0%	70%
<i>Minimum value required by Italian CAM</i>	<i>NA</i>	<i>50%</i>



ADVANTAGES

- Excellent acoustic impact sound and airborne insulation.
- Suitable for use in both renovation and new construction.
- Low thermal conductivity.
- Inalterable over time.
- Unlimited durability.
- Contact with water does not compromise performance or characteristics.
- Resistant to mould or insects

ADVANTAGES FOR INSTALLATION

- Easy to lay products.
- Product with overlaps.
- Easy to trim: can be easily cut with a utility knife or box cutter.

ISOLMANT UNDERPLUS BLACK.E > TECHNICAL SPECIFICATIONS

> To be positioned with the fibre side facing down.

NOMINAL THICKNESS:	7 mm
DYNAMIC STIFFNESS	$s'_t = 11 \text{ MN/m}^3$ ⁽¹⁾ $s' = 36 \text{ MN/m}^3$ ⁽¹⁾
IMPACT SOUND INSULATION:	$\Delta L_w = 28 \text{ dB}$
"IN SITU" IMPACT SOUND INSULATION:	$L'_{n,w} = 55 \text{ dB}$ ⁽²⁾
COMPRESSION CLASS	CP2 ⁽³⁾
CONDUCTIVITY:	$\lambda = 0.035 \text{ W/mK}$
THERMAL RESISTANCE	$R_t = 0.200 \text{ m}^2\text{K/W}$
SPECIFIC HEAT CAPACITY	$c = 2100 \text{ J/kgK}$
VAPOUR RESISTANCE	$\mu = 3600$
EMISSION OF VOLATILE ORGANIC SUBSTANCES:	VOC A+ ⁽⁴⁾
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: 1.50 m x 25 m (h x L) = 37.5 m ² 1.50 m x 50 m (h x L) = 75 m ² Product with overlaps. After overlapping the sheets they should be sealed by means of Isolmant Fascia Nastro or Isolmant Nastro Telato.
PACKAGE:	Single rolls

(1) Istituto Giordano test report No. 351334

(2) Value measured on site - see structure page 5 of this data sheet

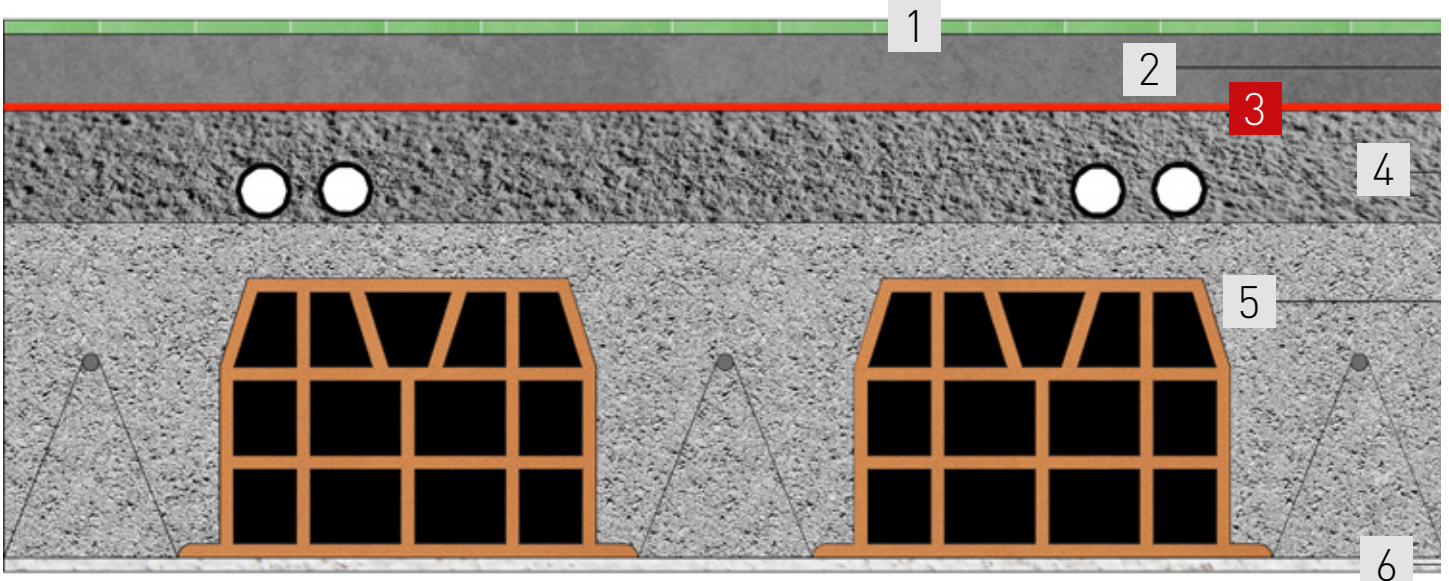
(3) Isolmant laboratory test report No. 1005_1410

(4) Istituto Giordano test report no. 369384

ITEM SPECIFICATIONS

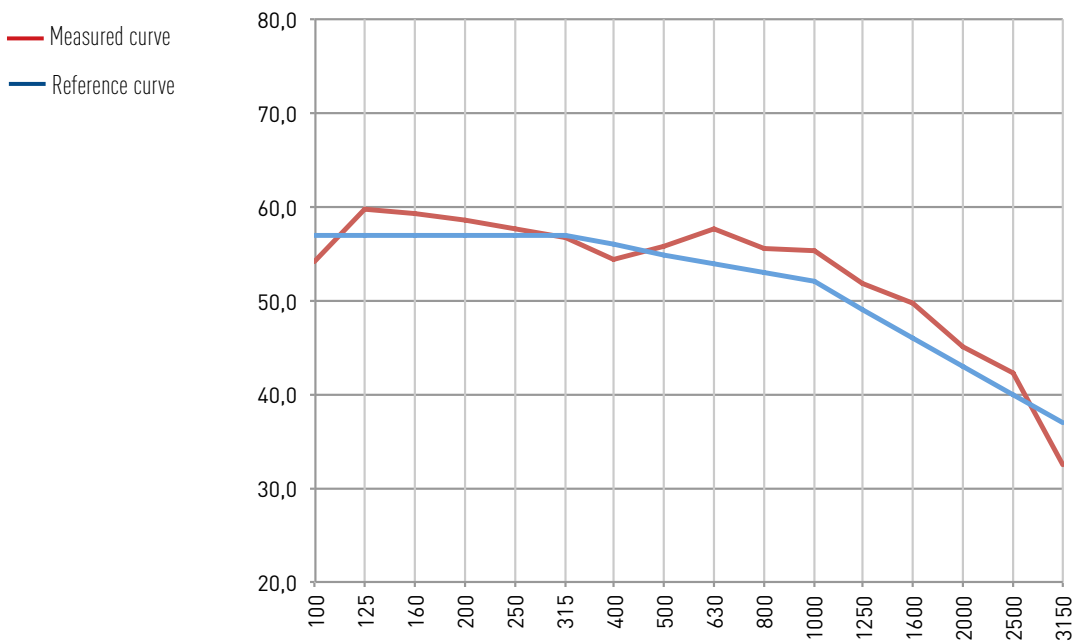
Resilient layer is made of reticulated expanded closed-cell polyethylene, with the upper side embossed and screen-printed joined on the under sidewith a special needle-worked fibre that is conceived to enhance the acoustic performance (Isolmant Underplus Black.E). Nominal thickness 7 mm. Dynamic stiffness $s'_t = 11 \text{ MN/m}^3$ $s' = 36 \text{ MN/m}^3$ (certified values). Impact sound insulation $\Delta L_w = 26 \text{ dB}$, VOC A+ and recycled content certified by ICMQ. To be positioned with the fibre side facing down. Product with overlaps.

RESIDENTIAL UNITS IN IMOLA (BO)



No.	Layer	Material	Thickness (m)	Surface mass (kg/m ²)
1	Flooring	Wooden flooring	0.01	
2	Supporting screed	Sand and cement	0.05	90
3	Resilient material	Isolmant UNDERPLUS BLACK.E	0.006	
4	Levelling Screed	Lightweight concrete	0.07	28
5	Structural slab	Concrete	0.25	300
6	Plaster	Premix	0.01	14
Total thickness:			0.4	

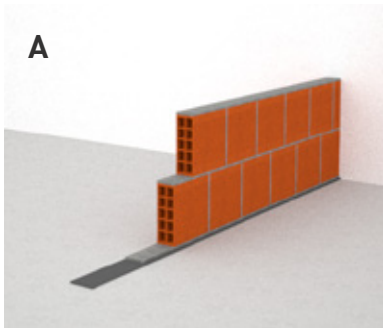
$L'_{n,w} (CI) = 55 (-2) \text{ dB}$



Frequency [Hz]	L'_n [dB]
100	54.2
125	59.8
160	59.2
200	58.5
250	57.6
315	56.8
400	54.4
500	55.9
630	57.6
800	55.7
1000	55.3
1250	51.8
1600	49.8
2000	45.1
2500	42.2
3150	32.5

STEP 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. A)

STEP 2

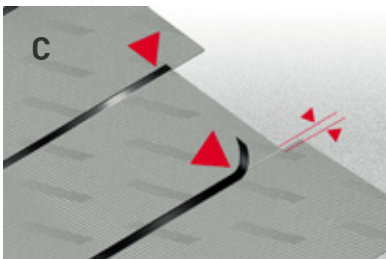
DISJOINT OF REINFORCED CONCRETE STRUCTURES

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 coated plaster panels. 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 (dis. B).



STEP 3

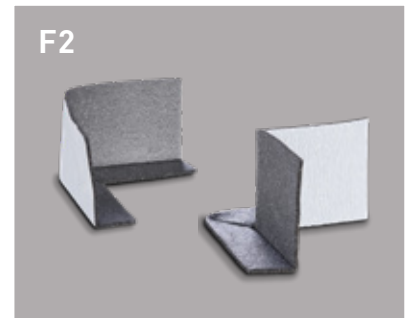
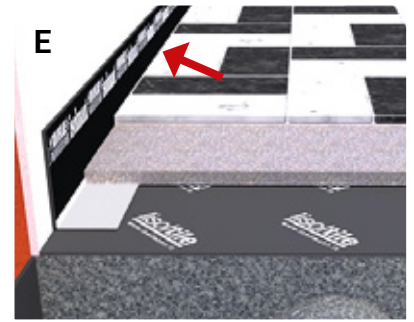
INSTALLING ISOLMANT UNDERPLUS BLACK.E RESILIENT LAYER

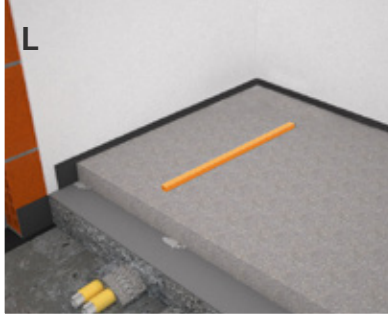


Isolmant UnderPlus Black.E does not have an anti-tearing layer and is therefore not recommended for single-layer bases (in this case, Isolmant BiPlus is recommended). Before installing the underlay, a levelling screed must be laid using suitable materials and recipes to ensure adequate mechanical support and a plain and uneven surface. Then the sheets of Isolmant Black.E can be laid, which must be carefully joined using the special overlapping fabric and sealed with Isolmant Nastro Telato or Isolmant Fascia Nastro (fig. C). It is also necessary to be careful to start flush with the wall with the polyethylene, avoiding leaving strips of fibre only visible 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).

STEP 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 band is about 2/3 cm higher than the flooring level. This excess must be trimmed after laying the floor (fig. E). 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. F1 - fig. F2). It is also necessary to avoid a gap between the band and the walls at the corners (fig. G) where cementitious material can penetrate, as well as ensuring that the perimeter band also adheres continuously along the slab-wall connection: the formation of the shell (fig. H) 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.





SCREED CONSTRUCTION

STEP 5

The finishing screed must guarantee adequate mechanical resistance according to the actual laying and loading conditions. Appropriate safety measures must be taken, such as assessing the adequate consistency of the mix, the curing time, the possible need to use collaborating elements (wire mesh or fibres), the sufficient compactness of the surface and the possible surface treatment with consolidating products (as indicated by the manufacturer of the screed and the reference standards). With regard to the thickness of the finishing screed, we recommend a minimum thickness of no less than 4 cm. 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 (dis. I). When pouring the screed, special care must be taken not to tear or puncture the elastic material.

STEP 6 INSTALLING FLOORING AND SKIRTING BOARDS

It is essential to inform all site operators that the excess of the perimeter band must be trimmed only after the flooring has been laid and grouted (fig. L) 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 perimeter band, ensuring the system elastic functioning. In particular, a skirting board made of tile 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. M). 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 and bad weather.



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