

# ISOLMANT **FIBRA HD**

## UNDERSCREED INSULATION

High density panel specifically designed for underscreed sound and thermal insulation in structures with dry installation


### WHAT IS ISOLMANT FIBRA HD

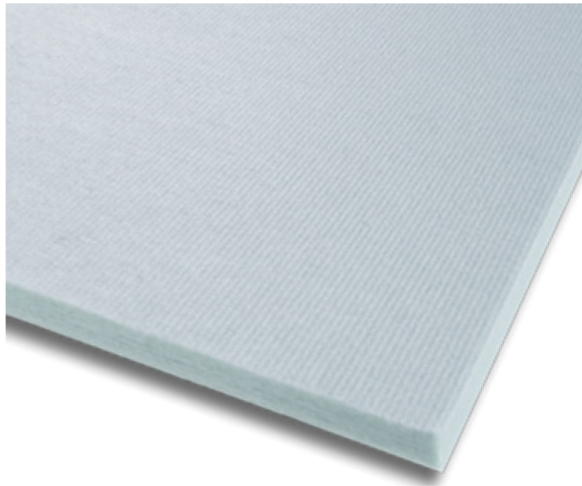
Resilient panel for impact sound reduction, made of HD polyester fibre FIBTEC PHD (140 kg/m<sup>3</sup>) for impact sound insulation, in particular with dry screed system. Non toxic, ecological, with unlimited duration. Thickness 10 mm.

### SPECIFIC APPLICATIONS

Isolmant Fibra HD is specifically designed for the creation of "floating screeds" in accordance with UNI 11516:2013, in the presence of any type of slab, in particular for the creation of dry systems with granular substrates and gypsum fibre, fibre cement or wood-based panels. It is also suitable for laying under traditional sand and cement screed after a PE separating film has been laid before casting. The screed should ensure adequate mechanical resistance depending on the effective load and laying conditions (specifications given by screed supplier). In case of disjoining a floating screed from perimeter walls, it is recommended not to turn upside down but to use Isolmant Fascia Perimetrale.



 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 UNDERSPECIAL

- **Volatile Organic Compounds (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 CER 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.

**Green Planet is our sustainable development protocol** that includes all our commitments to increase process, environmental, social and corporate responsibility.

**A set of sustainable actions, goals and behaviors in agreement with** our mission, our ethical choices and the **Sustainable Development Goals from 2030 Agenda**.

PRODUCT AND PRODUCTION  
PROCESS SUSTAINABILITY

ENVIRONMENTAL  
SUSTAINABILITY

CORPORATE  
RESPONSIBILITY

SOCIAL  
RESPONSIBILITY

Find out more  
at [Isolmant.com](https://isolmant.com)



## **ADVANTAGES**

- Suitable for use in both renovation and new construction.
- High density which makes it suitable for dry subfloors.
- Low thermal conductivity.
- Unalterable over time.
- Unlimited durability, non-toxic, ecological.
- Impervious to mould or insects.

## **ADVANTAGES FOR INSTALLATION**

- Easy to install.
- Lightweight and easy to handle product.

## ISOLMANT FIBRA HD > TECHNICAL SPECIFICATIONS

NOMINAL THICKNESS:	10 mm
DENSITY:	140 kg/m <sup>3</sup>
DYNAMIC STIFFNESS:	$s' = 13 \text{ MN/m}^3$ <sup>(1)</sup>
REFLECTED WALKING SOUND INSULATION: (DRY SCREED)	$\Delta L_w = 28 \text{ dB}$ <sup>(2)</sup>
REFLECTED WALKING SOUND INSULATION: PUORED SCREED	$\Delta L_w = 27 \text{ dB}$ <sup>(3)</sup>
REFLECTED WALKING SOUND INSULATION:	$L'_{nw} = 55 \text{ dB}$ <sup>(4)</sup>
AIRBORNE NOISE INSULATION:	$R_w = 52 \text{ dB}$ <sup>(5)</sup>
COMPRESSION CLASS	CP2 <sup>(6)</sup>
CONDUCTIVITY:	$\lambda_c = 0.032 \text{ W/mK}$
THERMAL RESISTANCE	$R_t = 0.313 \text{ m}^2\text{K/W}$
SPECIFIC HEAT CAPACITY	$c = 1200 \text{ J/kgK}$
VAPOUR RESISTANCE	$\mu = 3$
EMISSION OF VOLATILE ORGANIC COMPOUNDS:	VOC A+ <sup>(7)</sup>
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:	Panels of 1.00 m x 1.20 m = 1.20 m <sup>2</sup>
PACKAGE:	Packs of 15 panels (equal to 18 m <sup>2</sup> )

<sup>(1)</sup> Istituto Giordano test report no. 323392

<sup>(2)</sup> Istituto Giordano test report no. 331718

<sup>(3)</sup> Value calculated according to UNI EN ISO 12354-2 and UNI TR 11175 standards on the following stratigraphy: installing Isolmant Fibra HD + thick concrete floor finishing screed. 5 cm

<sup>(4)</sup> Value measured on site - see structure page 3 of this data sheet

<sup>(5)</sup> Value certified according to current UNI EN ISO 12354-1 and UNITR 11175 standards on the following stratigraphy: 2.5 cm thick wooden floorboard + 6 cm thick reinforced concrete hood + 4 cm thick wood fibre thermal insulation + Isolmant Fibra HD + gypsum fibre board thickness 2 cm + linoleum flooring

<sup>(6)</sup> Test report No.1005\_1410

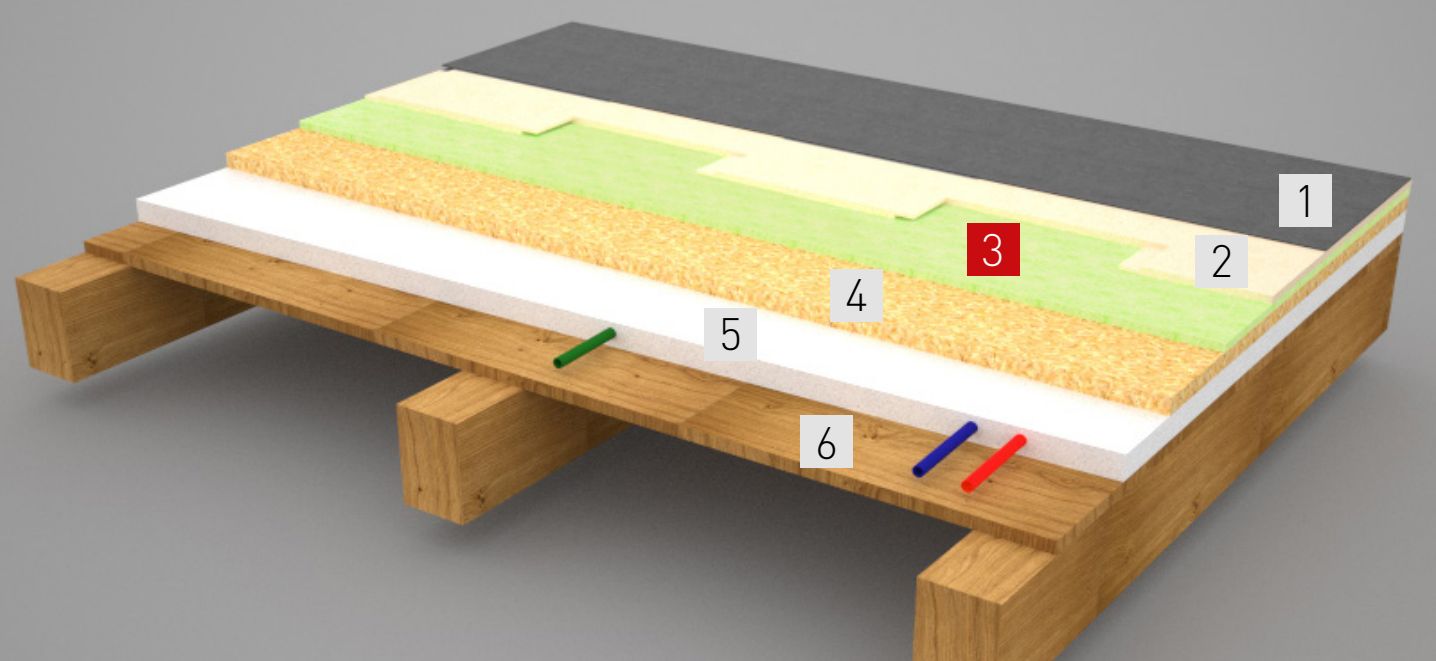
<sup>(7)</sup> Istituto Giordano test report no. 381824

## ITEM SPECIFICATIONS

Resilient panels made of HD polyester fibre FIBTEC PHD (140 kg/m<sup>3</sup>), with high acoustic and thermal. Non toxic, ecological, with unlimited duration. Dynamic stiffness:  $s' = 13 \text{ MN/m}^3$ . Panel thermal resistance:  $R_t = 0.313 \text{ m}^2\text{K/W}$ . Nominal thickness 10 mm.



RESIDENTIAL BUILDING IN ROVERE DELLA LUNA (TN)

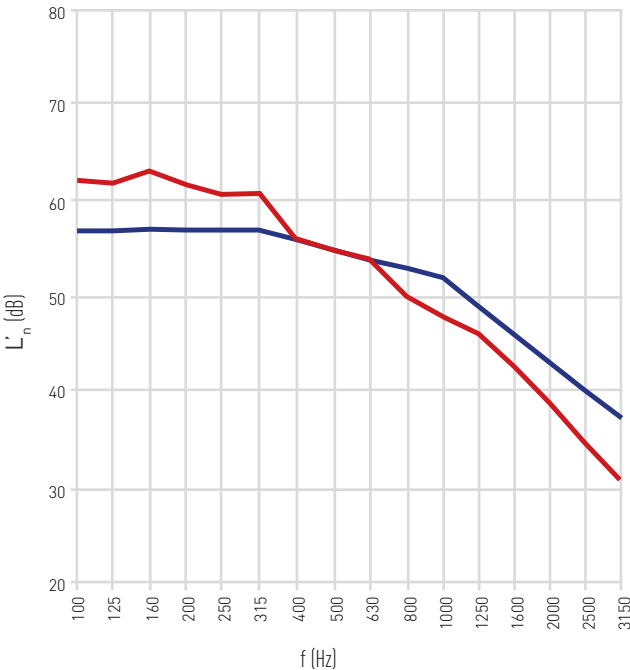


No.	Layer	Material	Thickness (m)	Surface mass (kg/m²)
1	Flooring	linoleum	0.005	
2	Supporting screed	gypsum fibreboard	0.02	23
3	Resilient material	Isolmant FIBRA HD	0.01	
4	Thermal insulation	wood fibre panel	0.04	5.6
5	Levelling Screed	marble grit	0.06	90
6	Structural slab	wooden flooring	0.025	15
Total thickness:			0.16	

$L'_{n,w}(C_l) = 55 (-3;) \text{ dB}$

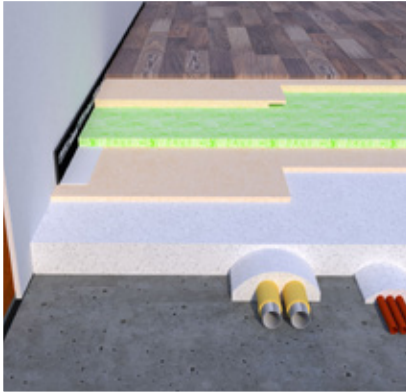
FREQUENCY IMPACT SOUND INSULATION

— Measured curve  
— Reference curve



Frequency (Hz)	L' <sub>n</sub> (dB)
100	62,1
125	61,9
160	63
200	61,9
250	60,7
315	60,7
400	56,1
500	55
630	54,1
800	49,9
1000	47,9
1250	46,1
1600	42,7
2000	38,7
2500	34,4
3150	30,5

## FASI PRELIMINARI COMUNI



### INSTALLING FASCIA TAGLIAMURO

#### STEP 1

All partitions must be laid before the dry screeds. Isolmant Fascia Tagliamuro must be installed. 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.

### DISJOINTING OF REINFORCED CONCRETE STRUCTURES

#### STEP 2

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.

## INSTALLATION WITH DRY SCREEDS IN DOUBLE LAYER SOLUTIONS

### INSTALLING FASCIA PERIMETRALE

### STEP 3

To avoid acoustic bridges, we recommend the use of Isolmant Fascia Perimetrale, that comes in the package before the granular levelling layer of the systems. The height must be determined taking into account the actual thickness of the package (substrate, HD Fibre, dry screed, flooring) so that there is an excess of approximately 2/3 cm of strip after the floor is laid. This excess must be trimmed after laying the floor. 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 and Isolmant Telaio Porte. It is also necessary to prevent gaps from remaining between the strip and the walls at the corners where cement material could slip in, as well as ensuring that the flanking strip adheres continuously even along the slab-wall connection: the formation of the gap causes a reduction in the thickness of the screed, which lacks the support of the slab 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.

### LAYING OF THE GRANULAR LEVELLING LAYER

### STEP 4

Once the installations have been laid, the granular layer must be levelled out to the desired height, following the manufacturer's instructions for correct laying, and a flat, rough and perfectly horizontal surface must be obtained, ensuring that there is at least 1 cm of fill above the pipes. For floors with wooden boards, it is recommended that the board be provided with an anti-vibration separating layer - such as Isolmant Telogomma - taking care to tape the joints of the sheets with Isolmant Nastro Telato in order to prevent the granular levelling agent from passing through the joints.

### INSTALLING ISOLMANT FIBRA HD

### STEP 5

Install Isolmant Fibra HD panels well side by side, with staggered joints, taking care to completely cover the entire laying surface and guarantee the continuity of the resilient layer.

### INSTALLING DRY LINING SLABS (GYPSUM FIBRE, FIBRE CEMENT OR WOOD-BASED PANELS)

### STEP 6

It is advisable to install the slabs on Isolmant Fibra HD taking care to offset the joints with respect to the panels of resilient material below. Please refer to the manufacturer's instructions for correct installation and for determining the thickness of the slabs according to the loads and intended use of the room.

### INSTALLING FLOORING AND SKIRTING BOARDS

### STEP 6

For the type of flooring and laying methods on dry systems, please refer to the instructions of the manufacturer of the substrate. Before installing the skirting board, trim the excess perimeter strip only after the floor has been laid and grouted. 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. If the joint were rigid, it would prevent the floor from floating and would de-grout.



## INSTALLATION WITH POURED SCREED IN DOUBLE LAYER SOLUTIONS

### LAYING THE LIGHTENED SUBSTRATE

#### STEP 3

Lightened substrate must incorporate all pipes and plant networks until it has a smooth surface free of roughness and imperfections. The levelling screed of the installations must be made of suitable materials to ensure adequate mechanical support. Before installing Isolmant Fibra HD, check that the substrate has dried properly.

### INSTALLING FASCIA PERIMETRALE

#### STEP 4

It is recommended to use this product Isolmant Fascia Perimetrale Tecnica Doppio Spessore. The strip must be perfectly adherent to the surfaces throughout the development of the room. The height of the strip must be determined taking into account the actual height of the building site, so that after the floor has been laid there is an excess of approximately 2/3 cm of strip to be trimmed. Continuity must also be ensured along the thresholds of entrance doors and French windows, as well as at the technical niches for housing the manifolds of the heating system. Also ensure that the flanking strip adheres continuously along the slab-wall connection. In the presence of pilasters, pilaster strips, doors and other wall movements, the strip should be modelled without interruption to faithfully follow the perimeter of the rooms, using specific preformed accessories, such as Isolmant Angolo/Spigolo e Telaio Porte. Before laying the finishing screed, make sure that you have created a perfect watertight "basin", so as to avoid any rigid contact between the floor screed to be laid and the perimeter walls. Any uncovered points must be adequately covered (e.g. with Isolmant Fascia Nastro).

### INSTALLING ISOLMANT FIBRA HD

#### STEP 5

Install Isolmant Fibra HD panels well side by side, with staggered joints, taking care to completely cover the entire laying surface and guarantee the continuity of the resilient layer. In order to prevent the Isolmant Fibra HD from coming into contact with the water in the screed mix, it is necessary to spread a PE separating film over the panels to guarantee perfect waterproofing, also in correspondence with the perimeter strip. Any damage to the PE film must be avoided when pouring the screed.



### 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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