SOUNDPROOFING FOR FLOATING PARQUET

NEW FOR 2009

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Sweep away noise from your floor

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Soundproofing for floating parquet

The new isolDRUM range comes from Isolmant, which has been present on the Italian thermal insulation and soundproofing market in the building sector for the past 30 years. The health of people living and working in the buildings has, in fact, been an issue which has been close to our heart for a long time. For this reason, we have developed a wide range of products for thermal insulation and soundproofing of floors, walls and ceilings.

We have always worked together with the most important construction companies, with more than 2000 building dealers, with engineers and architects who deal with acoustic design and with the most important laboratories and research institutes, both in Italy and abroad.

Today's challenge, though, is just for you!

The products from **the Risanamento Acustico** (Acoustic Renovation) range have been designed just for you.

For you if you need to renovate your house or office, or even just update the style with new **wooden flooring, pre-finished and ready** to lay over the existing finish. This solution, which has been the subject of great development recently, requires soundproofing in order to ensure the wellbeing of those living around it.

A new range of products from the Isolmant family which we have called isolDRUM has been designed for this type of application.

Drum Sound, in fact, is the technical definition which is given to all those sounds which are generated on new, pre-finished wooden flooring due to the footsteps of those living or working in the room and are reflected within the rooms themselves. These damage the wellbeing of people who want to relax or the concentration of people who have to work.

THE PRODUCTS FROM THE isolDRUM RANGE

The range of products for soundproofing against Drum Sound under pre-finished parquet is composed of:

isolDRUM N soundproofing mat made of "HQPO"-type polythene, with a high density and is approximately 1mm thick, embossed and screen-printed.
Available in 1m x 20 m linear rolls equal to 20 m2 per roll.

isolDRUM FILM soundproofing mat made of "HQPO"-type polythene which is approximately 2 mm thick, embossed, combined with a protective screen on the bottom to prevent vapour from passing through. Product equipped with selvage for overlapping of the sheets.
Available in 1m x 20 m linear rolls equal to 20 m2 per roll.

isolDRUM FIBER soundproofing mat made of "HQPO"-type polythene which is approximately 3 mm thick, combined with a protective screen on the bottom to prevent vapour from passing thorough. Product equipped with selvage for overlapping of the sheets.
Available in 1m x 20 m linear rolls equal to 20 m2 per roll.

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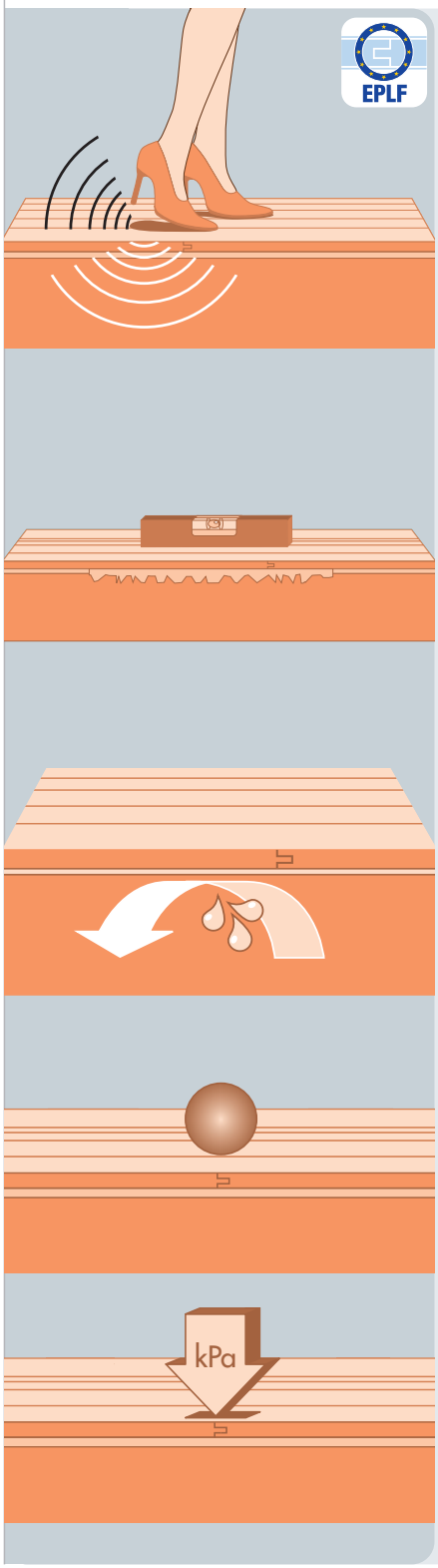
ISOLDRUM
product performance



1 Acoustic performance

While the measurement of soundproofing against footfall between one room and the one below it is evaluated on the basis of a parameter defined as ΔLw which represents in dB, the capacity of the floating floor system to soundproof, Drum Sound is measured in classes.
The EPLF – Association of European Producers of Laminate Flooring - has proposed a classification based on the human perception of the intensity and agreeableness of a series of soundproofed flooring solutions which separates the products into three classes referred to as A, AA (double A) and AAA (triple A). The greater the quantity of letters, the higher the quality of the soundproofing (which can also be modified with a + or - sign).

2 Thickness/adaptability

The thickness and mouldability of this soundproofing layer under the parquet must ensure correct noise absorption and, above all, "encapsulate" any granulosity of the base in order to prevent the formation of resonance boxes under the finish.

3 Protection from rising damp

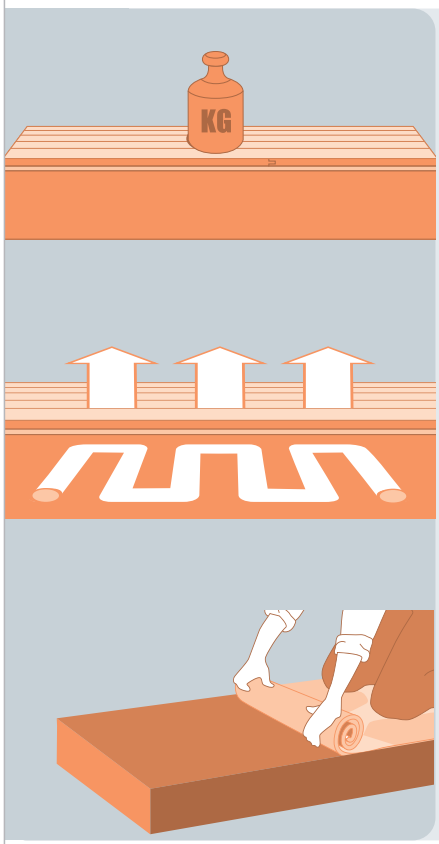
In cases where the flooring is constructed on newly cast supports or in cases where there could be a risk of residual damp (even concealed) in the layers beneath the flooring, it is important to choose insulation which possesses specific characteristics in order to prevent water from reaching the wooden finishes which are badly affected by damp. This feature does not apply to applications on bases which are completely dry.

4 Resistance to impact

The material used for soundproofing under parquet must be in possession of the requirements envisaged by standards regarding resistance to impact due to falling objects without excessive deformation and without causing damage to the flooring itself.

5 Resistance to compression

The system composed of pre-finished flooring and soundproofing must guarantee the necessary resistance to compression. When the flooring is subjected to a concentrated load (table, chairs, bookcase), it must not suffer excessive deformation leading to breakage (even of the joining mechanism).



6 Creep

In addition to the elastic behaviour of the insulating material, it is very important to consider the crushing which can affect it over time when subjected to a load distributed in a permanent manner. The terms used are deformation or fatigue or creep and all underfloor insulation must ensure that performance levels are maintained in the long term.

7 Thermal resistance

In just a few millimetres, soundproofing is not able to provide a considerable contribution to the thermal insulation of the flooring but it can contribute to reducing the "cold floor" sensation, protecting the wood from excessive changes in temperature. The low thermal resistance of the layer therefore makes it suitable even in solutions with underfloor heating/air-conditioning systems.

8 Other characteristics

It is also advisable for the soundproofing under the parquet to be inert, non-toxic, odourless, comfortable to handle, free from harmful substances, easy to transport and simple to install.

Properties	Reference standard	ISOLDRUM N	ISOLDRUM FILM	ISOLDRUM FIBER	Unit of measurement
Thickness	ISO 1923	1	2	3	mm
Drum Sound	EPLF	AA+	A+	A	-
Soundproofing against footfall ΔL_w (under 7 mm pre-finished parquet)	ISO 140/717	16	20	20*	dB
Damp protection film	ISO 1663	NO	SI	SI	-
Resistance to impact - Large Ball Test (under 8 mm pre-finished parquet)	EN 13329/EN 438-2	400*	1400	-	mm
Resistance to compression (0.5 mm of deformation)	ISO 844	120	32	-	KPa
Creep - Deformation (max load with def ←10% in 10 years)	EN 1606	15	2	2*	KPa
Thermal Resistance at 10°C**	EN 12664	0,029	0,059	0,086	m^2K/W
Roll format	-	1m x 20m	1m x 20m	1m x 20m	m

* Value estimated in advance whilst waiting for confirmation by means of certification. - ** Max allowed value for heated flooring: 0.15 m2K/W.
N.B.: the data shown in this table represents the approximate values of the properties of the products and must be considered as an approximate general reference only. .

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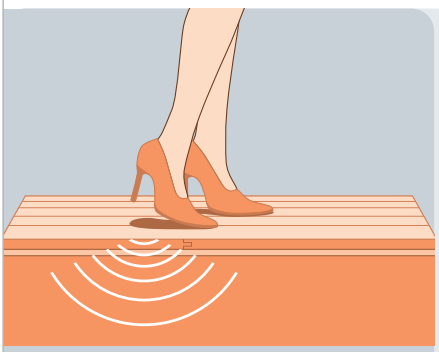
Soundproofing against DRUM SOUND

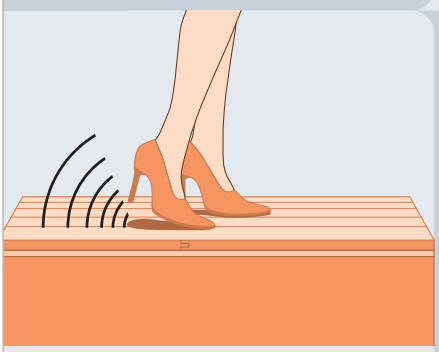


Footfall noise is transmitted to adjacent rooms.

In order to deal with the problem correctly from a technical viewpoint, it is necessary to make two important points.

1 Soundproofing against footfall (transmitted noise)

Footfall noises which are generated inside a room are transmitted **through solid structures** into adjoining rooms.
It occurs when you can hear the neighbours upstairs walking about or the vibrations due to the movement of tables and chairs and any other source of impact-related noise which, originating in other rooms, propagates throughout the whole structure.
Soundproofing against footfall requires a **structural intervention** on the floor of the living unit designed to create "floating flooring", i.e. a construction system which envisages the insertion of a soundproofing mat under the finishing screed on which the screed itself can "float", dissipating the "noise" energy in the form of "movement". This intervention must be carried out by a **specialised firm** and allows the footfall noise levels recorded in the room below to comply with the requirement envisaged by the law.



Drum Sound reflects within the room itself.

2 Soundproofing against Drum Sound (reflected sound)

Drum Sound refers to all **noises inside** a room generated by impact-related sources situated in the room itself. For example the clicking of heels of people walking, objects falling onto the floor and any other type of noise which is generated due to impact with the floor of the room itself. This phenomenon is very common in rooms in which a pre-finished wooden floor is installed. This finish, very widespread and very popular thanks to the countless aesthetic solutions but above all thanks to the practical and inexpensive nature of the intervention, requires suitable soundproofing against **Drum Sound**.
Intervention in order to soundproof against Drum Sound is **much more simple** than soundproofing the horizontal partition and envisages positioning a suitable specific material under the wood finish. Caution! This method is not a way of isolating the neighbour downstairs but of **generating acoustic comfort** inside our own rooms.

N.B.: In addition to their brilliant performance as regards absorbing Drum Sound, the products from the isolDRUM range also allow excellent levels of footfall noise abatement to be achieved in terms of ΔL_w.

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What is DRUM SOUND?

Floating parquet flooring

Floating parquet (also known as "pre-finished" or "laminated" parquet) is composed of a series of layers of wood, technically designed to guarantee high levels of stability and excellent resistance of which the precious wood is only the last "sheet", the surface layer, in view. In this way, it is possible to offer the customer all the aesthetic pleasure of wooden flooring without using up excessive natural and economic resources. The dry 'slot together' laying method and the ready-to-use finish (without the requirement for resins or planing) provide further saving as regards time and convenience during the laying phase.

The term **"Drum Sound"** refers to a particular family of noises which are generated by footfall or objects falling on the floor and are **reflected within a room**, creating a disturbance for people living or working in the room itself. Drum Sound is a common occurrence in rooms in which **pre-finished** (or "floating") **parquet** has been laid.
This type of finish is becoming more and more popular both in Italy and abroad thanks to the countless possibilities of formats and chromatic solutions but above all due to economic accessibility.

The dry laying of a soundproofing mat under the floating parquet becomes necessary in order to prevent Drum Sound from occurring.

In residential buildings, and even more so in offices, with laminated wood flooring, the sound of heels clicking echoes all around the environment, disturbing rest or the concentration of people who are working.
The objective of the isolDRUM range of products is to reduce this type of noise, generating acoustic comfort in the rooms and completing the **well-being renovation process.**

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