

ACOUSTIC

SOLUTIONS

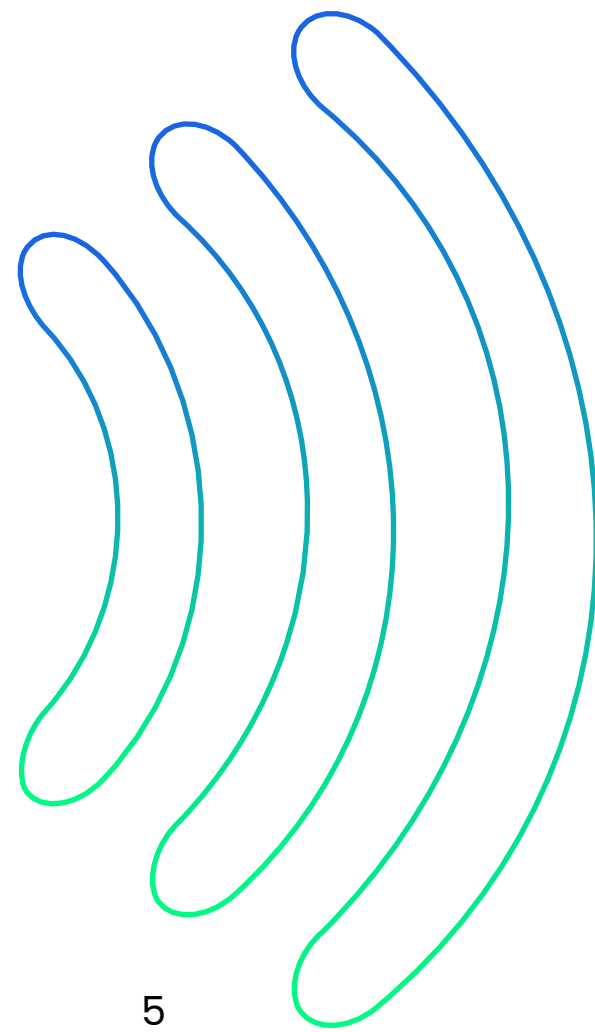


PAVIGYM
THE BASIS OF FITNESS



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Who we are.



Pavigym is a specialist in acoustic, noise and vibration control as well as a leading international producer and supplier of quality and durable gym floors.

Pavigym has over 56 years' experience in this highly specialist field; a track record proven by the long line of gym flooring and acoustics projects it has delivered within the fitness industry.

Working with architects, consultants and contractors, Pavigym can provide advice at design stage and help you choose the flooring and acoustic solution that better meets your needs.

Thanks to our partnership with acoustics market-leading manufacturers, including Getzner, and Pavigym fit-for-purpose floors, we can offer you the best noise and vibration solution no matter how demanding the soundproofing need.



getzner
engineering a quiet future

Why acoustic?

1. The noise: a problem for the fitness industry.

Acoustic problems can be a nightmare for gyms, but the good news is that avoiding them can be easy if you choose the right products.

Careful selection of the final flooring is essential when designing the fitness facility in order to avoid those noise and vibrations. Weight drops, jumps, heavy equipment impacts... this is the everyday of a gym flooring. Therefore, before choosing your flooring solution, take into account the effective control of noise and vibration to avoid damages on the building structure, as well as legal problems with the neighbours and next-door businesses.

Pavigym Acoustic solutions are designed to fulfil all the needs of fitness facilities, regardless of the type of activity or building.

The best part? Unlike other acoustic solutions, Pavigym products are designed to guarantee user safety and ensure the best comfort for the athletes while protecting the building and the subfloor.



Nowadays, gyms can be located anywhere: next to an office building, below some apartments or even in the top floor of a skyscraper. The noises and vibrations produced when exercising, such as weight impacts or jumps, can be very annoying for neighbours.

Gyms have to take special care with impact noise.

People want to have gyms nearby, thus gyms have to co-exist with other businesses or residential areas that cannot tolerate certain levels of noises or vibrations. Due to their nature, fitness activities generate a high level of structure-borne vibration and noises, particularly at low frequencies.

When selecting the flooring, it is essential to check that the isolation it provides is enough for the needs of the gym.

Don't put your business at risk and choose the right acoustic isolation!

2. Not all noises are the same.

Each type of noise has a different nature. Therefore, it is not the same to provide acoustic isolation for a theatre or a cinema than for a fitness facility.

Let's see why impact noise is the one you need to worry about when looking for acoustic solutions:

Air-borne noise

This is the type of noise that is produced when people speak or music plays: the air vibrations propagate as waves, exciting components such as the walls and ceiling. That is why noises can be heard in the adjacent rooms.

Although this is an important type of noise, this is not the main problem for fitness facilities.

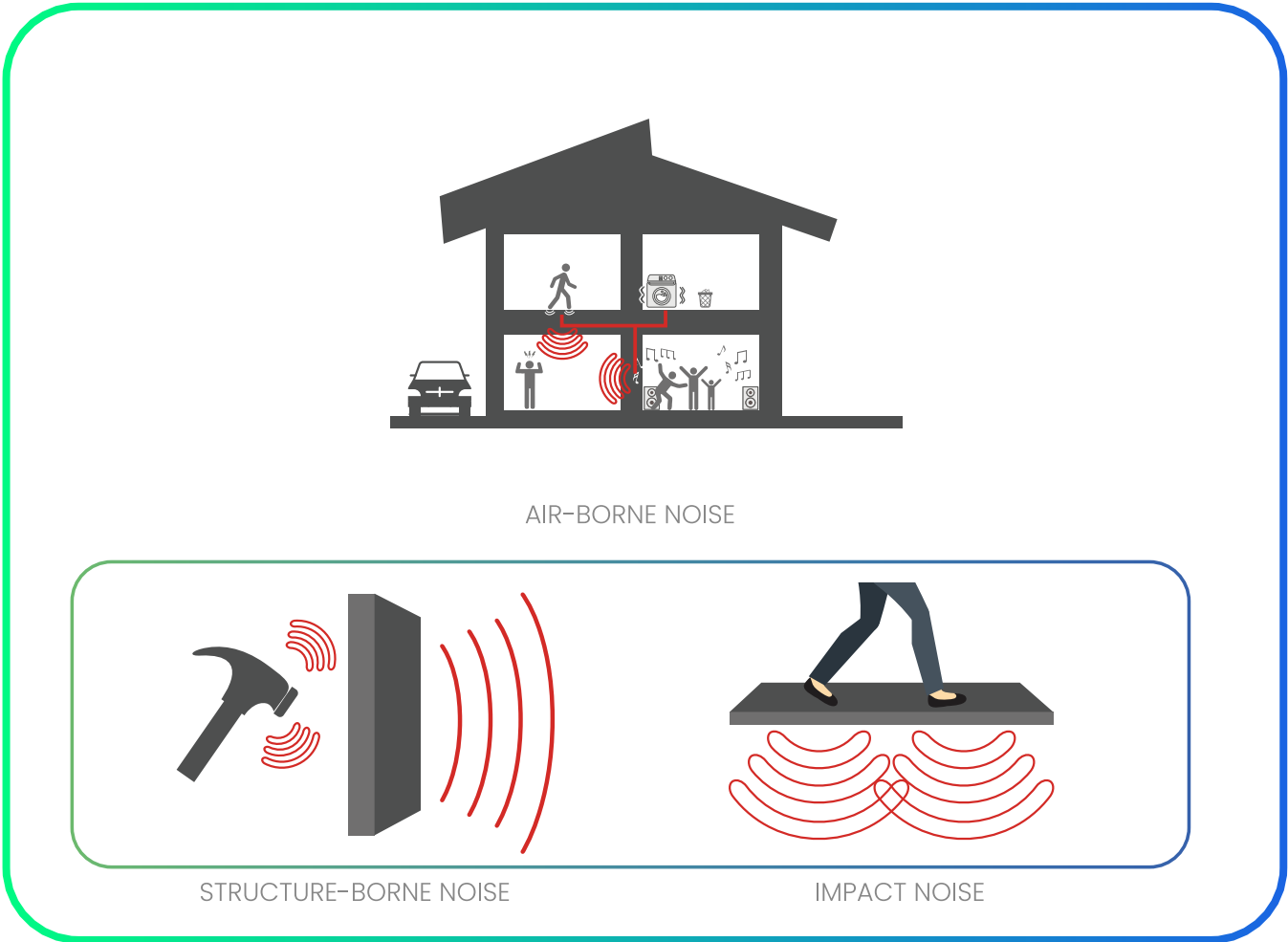
Structure-borne noise

This is the type of noise produced inside the building structure: water pipes in a wall, hammering or drilling or household appliances.

Impact noise

It is considered as part of the structure-borne noise and it is generated by steps, moving objects or dropping weights, for example.

This sound is transmitted directly to the structure of the building through the floor and walls. Therefore, this type of noise can also be heard in the adjacent rooms. For fitness facilities, this is the kind of noise that causes problems and damages the building.



In the case of fitness space, it is important to distinguish the frequency of the sounds. (because there will be different activities, e.g. weight lifting, cardio, Group-x,... and therefore, different sound frequencies to avoid.) Low-frequency noises are the main nightmare for gym owners, so these are the ones our products act on.



3. Understanding how frequencies work.

Sounds and noises are a consequence of vibrations. There are different types of vibrations and frequencies.

For a person with normal hearing, when it comes to pitch, **the human hearing range starts at a low level of around 20 Hz.** That is about the same as the lowest key on a pipe organ.

On the other side of the human hearing range, **the highest possible frequency heard without discomfort is 20,000Hz.**

While 20 to 20,000Hz form the absolute limits of the human hearing range, **our hearing is most sensitive in the frequency range of 2,000 – 5,000 Hz.**

Between 0 and 20hz the humans cannot hear any sounds.

But even **low frequencies out of the hearing rage can be also causing vibration problems.** Therefore, the key to reduce noise and avoid vibrations is to absorb low frequencies before they appear one way or another.

Pavigym solutions start absorbing from 10 Hz, even before the noise became perceptible... So the sound becomes silence!

When frequencies are low, worrying becomes high.



Benefits of Pavigym acoustic line



We are specialists in fitness flooring and acoustic solutions.

Pavigym offers a complete solution for the fitness industry. An acoustic isolation will not work if installed with the wrong flooring. **We have developed 360° solutions that are designed especially for fitness facilities.**

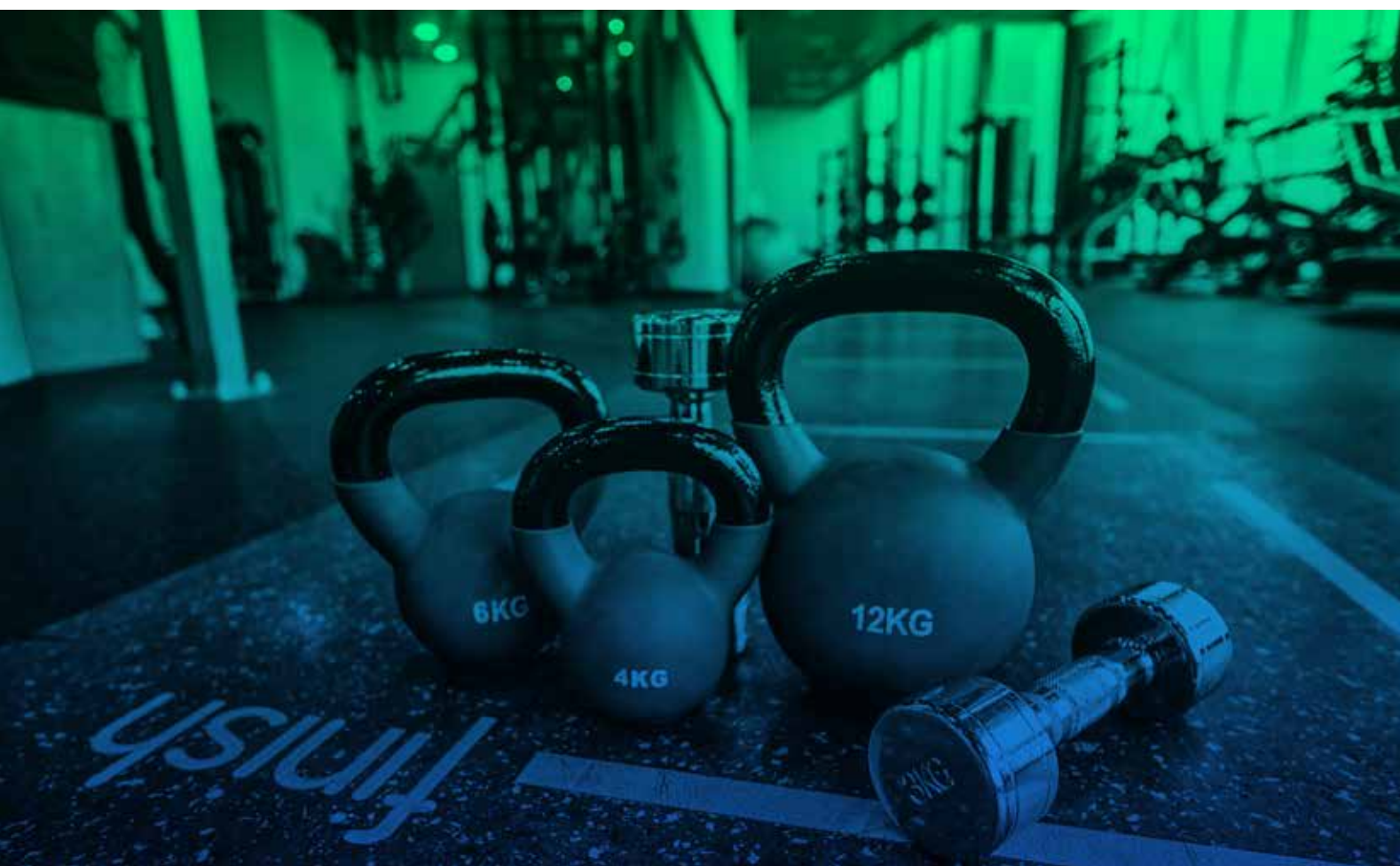
With Pavigym floorings and the correct acoustic solution, you will get the noise and vibration isolation you are looking for!

Benefits for gym owners

- **Adapted to fitness:** Most acoustic absorbents do not isolate low-frequency noises (the noises produced by weight drops). These low frequencies are the ones we need to take into account, so it is essential to choose a fitness-specific acoustic solution.
- **Easy-to-install:** Our solutions are easy-to-install, perfect for leased facilities.
- **For all buildings:** Pavigym acoustic range adds little weight to the building structure, making it perfect for all types of construction, no matter the age of the building.
- **Heavy weights:** Our solutions withstand up to 5 tons per square metre.
- **Durability:** we offer solutions that will resist throughout the years. They won't warp or lose effectiveness because of heavy weight impacts.

Benefits for gym users

- **Injury prevention:** Thanks to their composition, our solutions are stable and prevent equipment from bouncing.
- **Stable:** some acoustic solutions are too soft and make weightlifting difficult. Our solutions combine stability with the best acoustic isolation.
- **Free from contaminants:** both our flooring and our acoustic solutions are VOC free.



It does not
matter how
noisy your
problem is...
We have the
solution!

Pavigym acoustic products

Every gym has different problems and needs. We have an extensive range of products designed to meet even the most demanding infrastructure requirements.

Most acoustic solutions have a big quantity of air, thus they become too soft for weightlifting exercises and can cause injuries. However, Pavigym acoustic products have the perfect balance between stability and isolation.

How do acoustic solutions work?

To get isolation, there are some key factors:

F
(Frequency)

Our acoustic solutions are designed to reduce the **f (frequency)** as much as possible, absorbing sound and vibrations.

M
(Mass)

The higher the **M** (mass of the absorbent), the higher the level of absorption

K
(Cushioning)

The lower the **K** (the ability to deform), the better for users as it provides more **stability**.

$$f_0 = \frac{1}{2\pi} \sqrt{k/m}$$



The best acoustic
solutions
recover quickly,
providing
stability, better
absorption and
more resistance.



Check our options!

Our acoustic solutions have been tested in weightlifting environments to check that they do not harm the performance of the athletes.

1. COST-EFFECTIVE ACOUSTIC SOLUTIONS.

Impact absorption for all budgets.

With these cost-efficient options, there will be no excuses!

Recycled rubber + PAVIGYM Flooring:

ACOUSTIC **UNDERLAY550**
ACOUSTIC **UNDERLAY+SILENT**

2. UNEQUALED PERFORMANCE SOLUTIONS.

Quality and durability for different types of impacts.

Choose the one that better fits your need.

Microcellular Polyurethane

ACOUSTIC **ABSOUND**Essential
ACOUSTIC **ABSOUND**Mid

Recycled PU Foam + PAVIGYM Flooring:

ACOUSTIC **OPTIFOAM**

3. MAXIMAL ISOLATION SOLUTIONS.

Superior soundproof solutions for those buildings with highly demanding acoustic needs.

The option you need when noise and vibration isolation is a key factor for your business. The perfect solution for the highest challenging soundproofing requirements:

Microcellular Polyurethane

ACOUSTIC **ABSOUND**Ultimate

Microcellular polyurethane + OSB
+ cement board + OSB + Abdound
Essential +PAVIGYM Flooring:

ACOUSTIC **FLOATING**Flooring

NOT ONLY ABSORPTION IS IMPORTANT.

When looking for the perfect acoustic isolation solution, **durability is a key factor.**





The acoustic solution you need **for each area.**

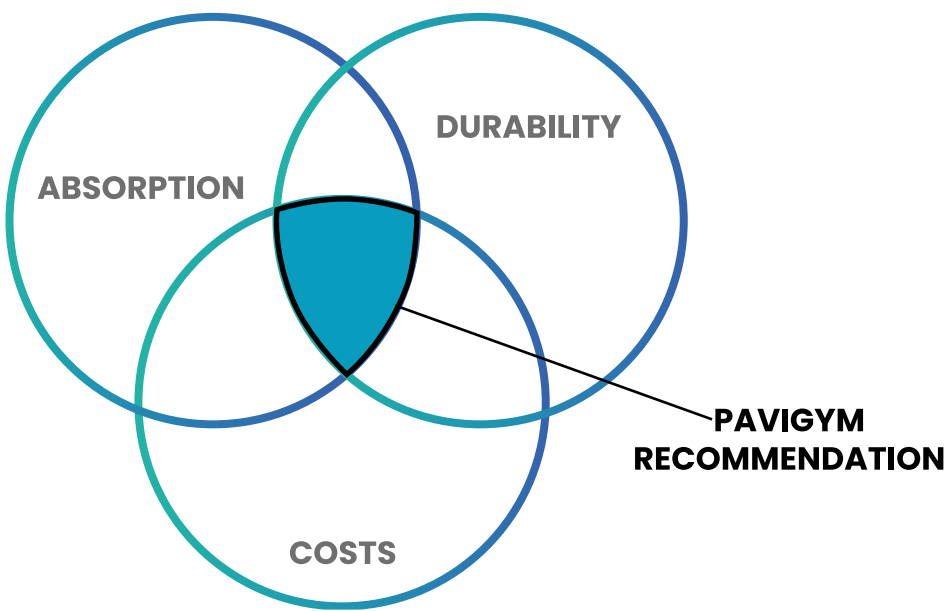
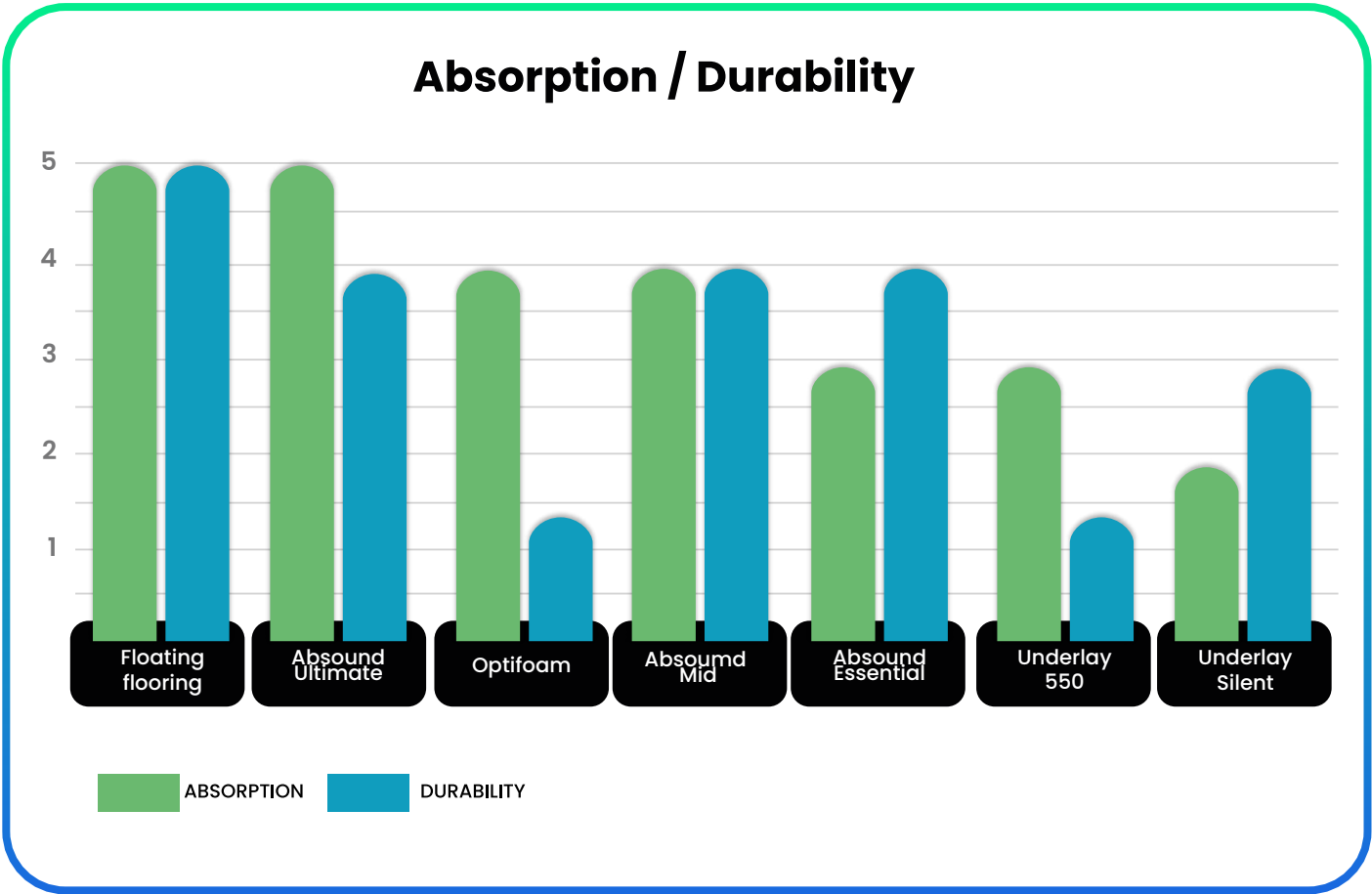
Each gym area has its particular acoustic isolation needs and within the same facility there are usually different zones of activity. For that reason, we recommend different solutions according to the specific activity and use that the area will have.

Flooring is also an essential part of the isolation, so all our products are prepared to absorb noise and vibrations when working together.

Different combinations of flooring and acoustic solutions return different results, depending on each building structure.

Even if some combinations are more recommended than others, all our acoustic range can be combined with our flooring solutions.

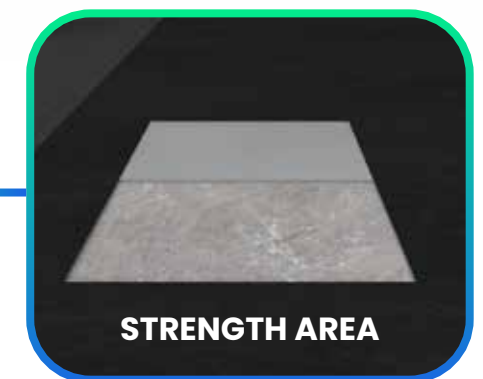
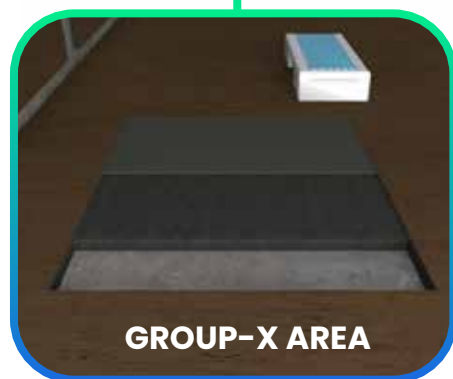
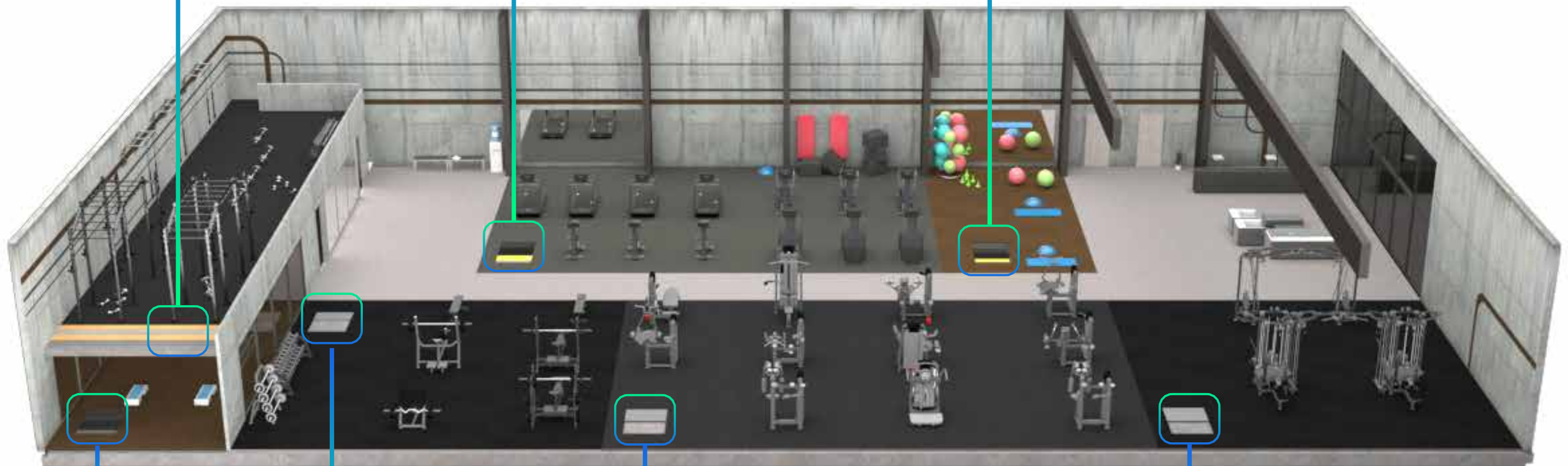
Durability, absorption and price are the key factors to decide your acoustic solution. This is our recommendation for each area!



	HEAVY WEIGHTS (High- Very high impact absorption)	STRENGTH AREA (Medium-high impact absorption)	CARDIO & GROUP-X (Low impact absorption)	
	S&S	ENDURANCE EXTREME	PERFORMANCE+	MOTION
FLOATING FLOORING	★★★★★			
ABSOUND ULTIMATE	★★★★★			
OPTIFOAM	★★★★	★★★		★★★
ABSOUND MID	★★★★	★★★★		
ABSOUND ESSENTIAL	★★★	★★	★★	
UNDERLAY 550	★★	★		★
UNDERLAY SILENT	★	★		★



**Different needs,
different solutions.**





Heavy weight / cross training / weightlifting + 50kg

Weightlifting and cross training often require extra isolation due to the training characteristics. Olympic bars can cause discomfort when dropped and even heavy dumbbells can be a serious problem for the building and neighbours.

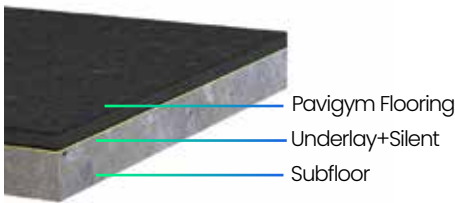
With Pavigym acoustic, you can control vibrations, minimize low-frequency impact noises and reduce the transmission of structure-borne noises.

Our Pavigym Flooring recommendation:

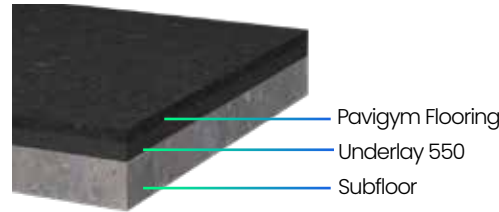


Our recommended Pavigym Acoustic solutions:

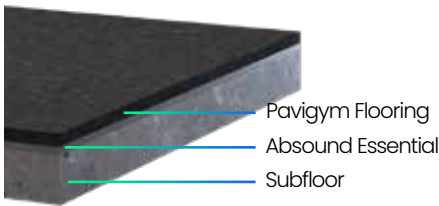
UNDERLAY+SILENT



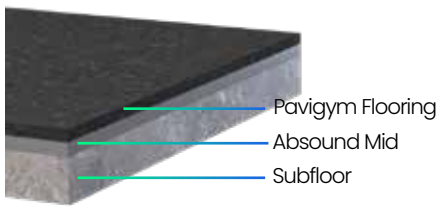
UNDERLAY550



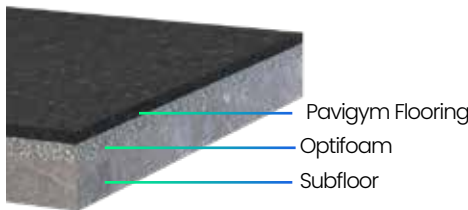
ABSOUND Essential



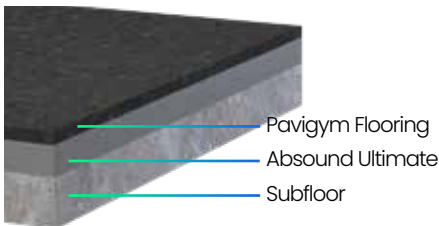
ABSOUND Mid



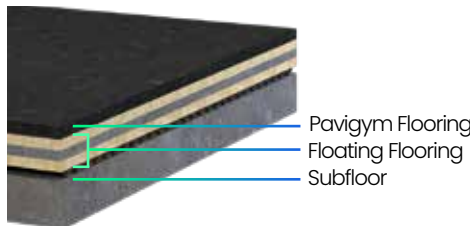
OPTIFOAM



ABSOUND Ultimate

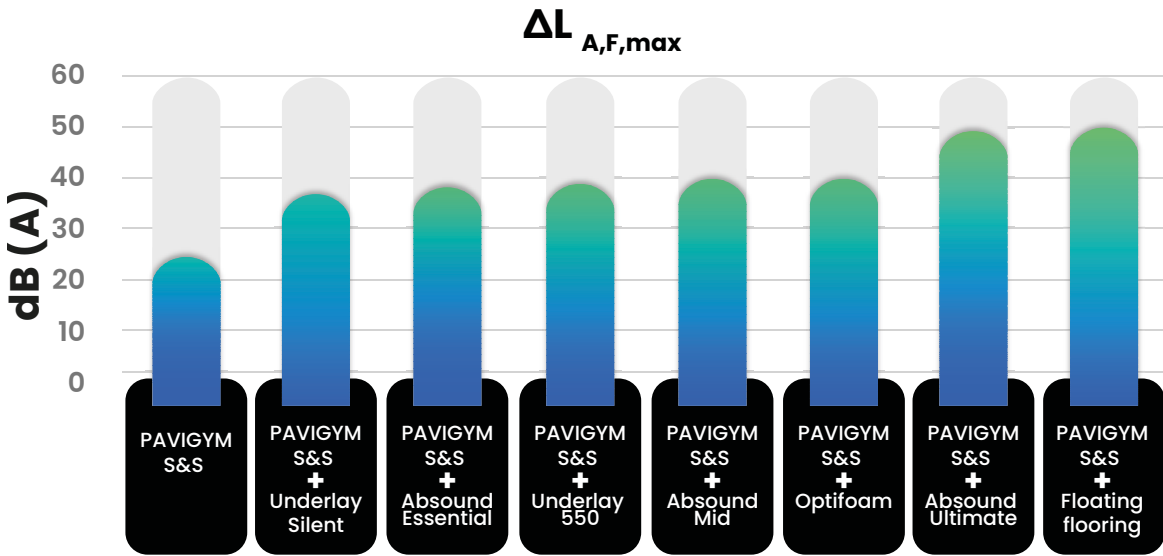


FLOATING Flooring



ABSORPTION VALUES

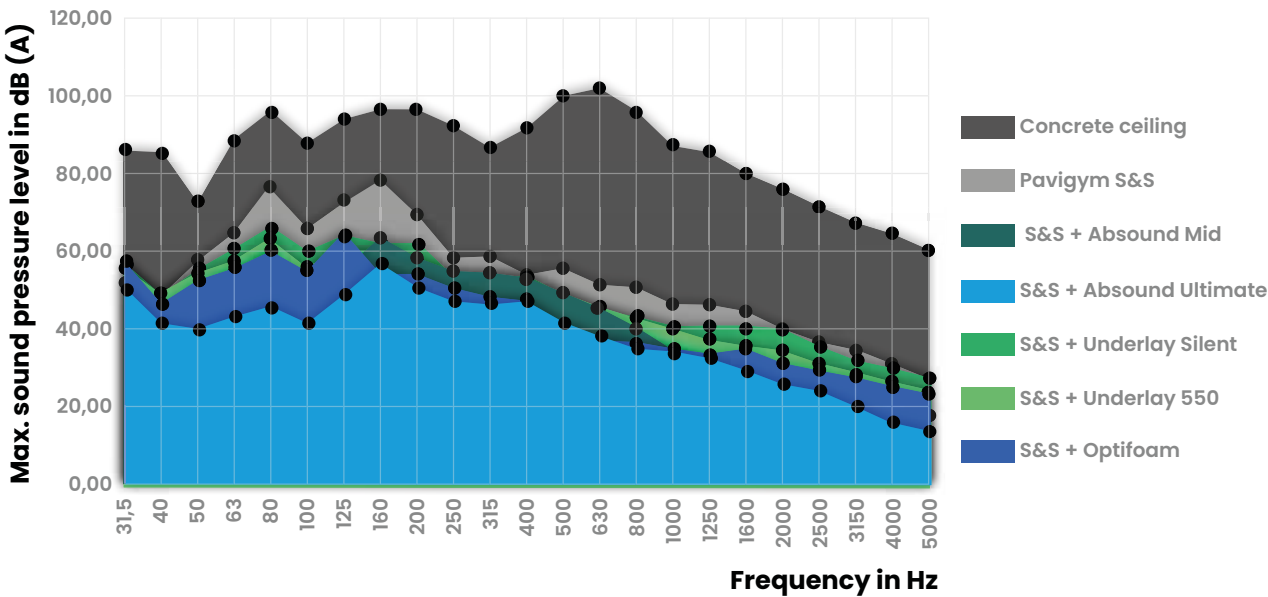
- Max sound pressure level based on EN ISO 10140-3
- 50 Kg dropped from 50 cm.



PAVIGYM S&S + Absorbents

FREQUENCY SPECTRUM

Depending on the frequency of the sounds, each combination of products has a different level of absorption.





Strength area

Strength areas are critical because weight drops can cause noises or damage the structural flooring. Gym users should not be worrying about these issues, because they just want to train hard. Your neighbours should not be worrying about loud noises all day long, because they just want to live peacefully.

The only way to achieve this is choosing an acoustic solution with a medium-high impact absorption that will avoid vibration and noises.

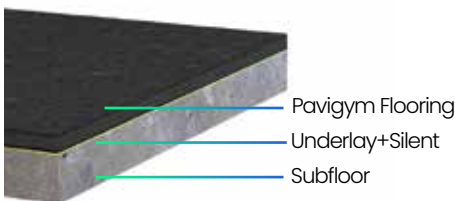
Keep the noises low, no matter how hard they train!

Our Pavigym Flooring recommendation:

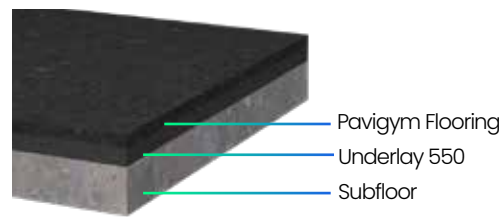


Our recommended Pavigym Acoustic solutions::

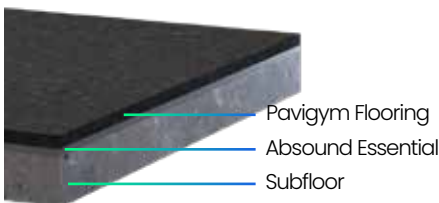
ACOUSTIC UNDERLAY+SILENT



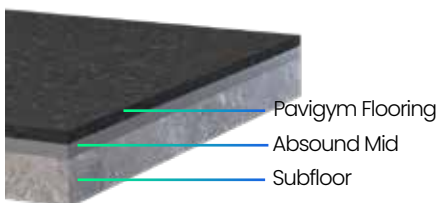
ACOUSTIC UNDERLAY550



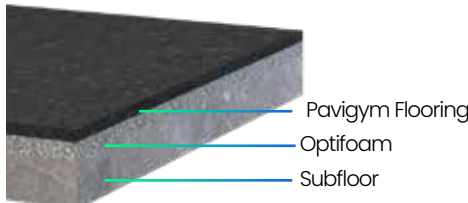
ACOUSTIC ABSOUND Essential



ACOUSTIC ABSOUND Mid

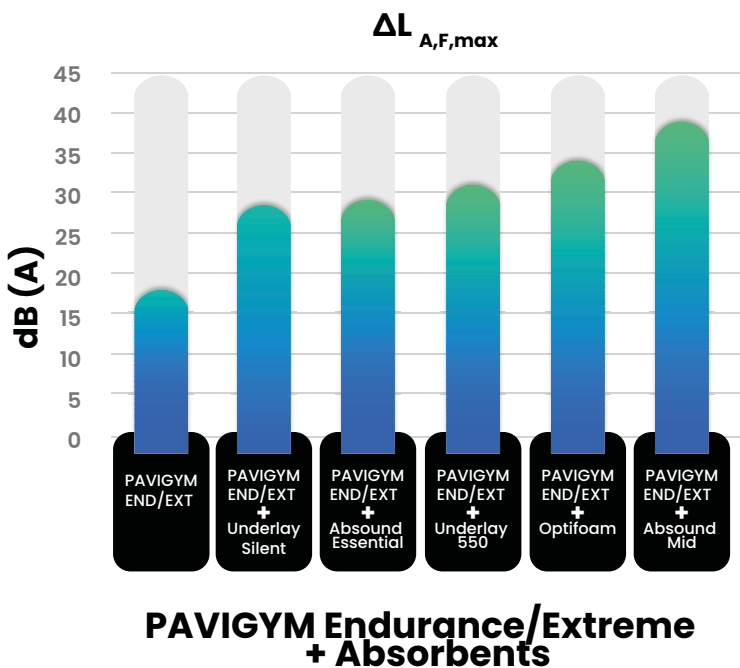


ACOUSTIC OPTIFOAM



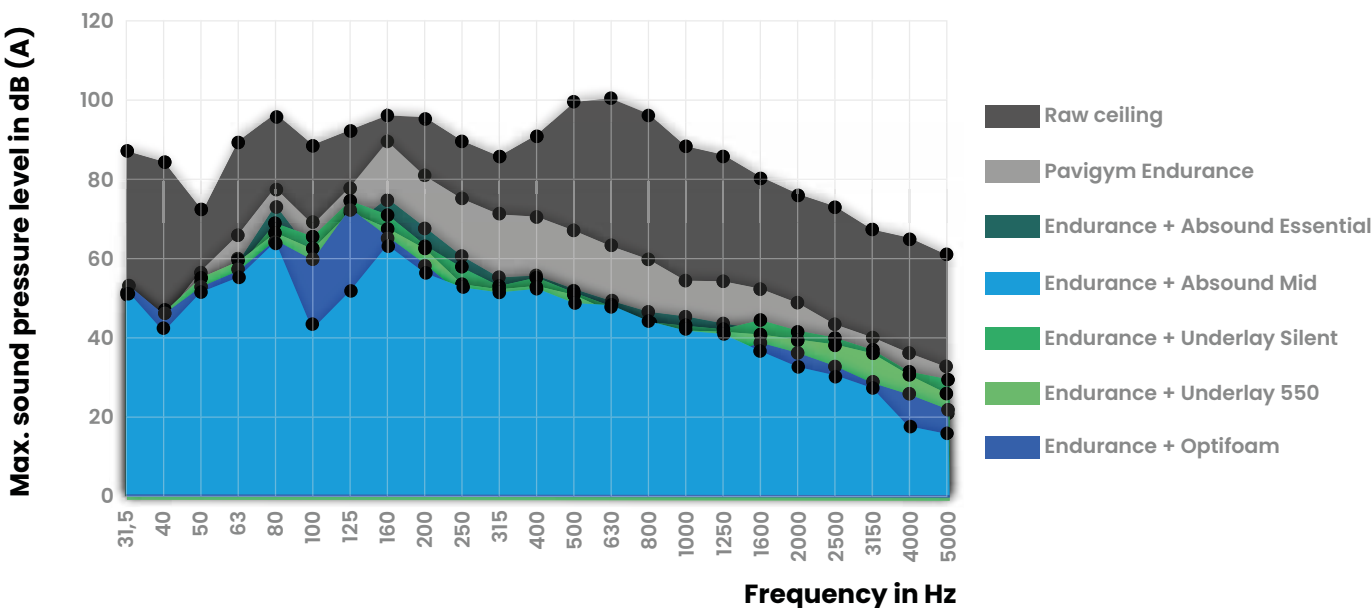
ABSORPTION VALUES

- Max sound pressure level based on EN ISO 10140-3
- 50 Kg dropped from 50 cm.



FREQUENCY SPECTRUM

Depending on the frequency of the sounds, each combination of products has a different level of absorption.





Other areas

Treadmills, jumps, low weight impacts... there are other areas of the gym that require acoustic isolation too. For cardio areas and group-x rooms we offer the best solutions for you, for your customers... and for your neighbours!

If you want to keep noises to the minimum level, pay attention to all gym areas!

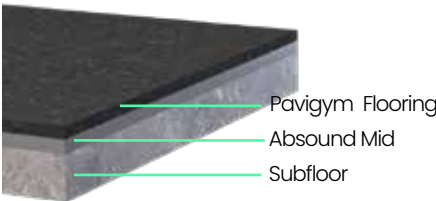


Cardio

Our Pavigym Flooring recommendation:



Our recommended Pavigym Acoustic solutions:

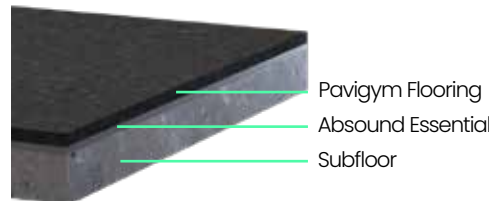


Group-X

Our Pavigym Flooring recommendation:



Our recommended Pavigym Acoustic solutions:



How to choose your acoustic isolation?



Each building is unique, so it is the suitable acoustic solution.

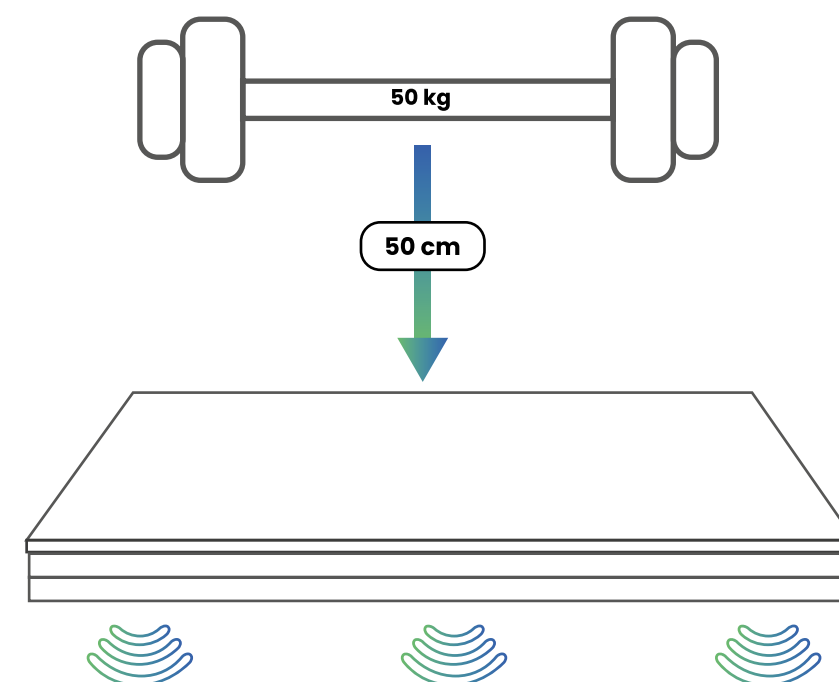
Pavigym acoustic solutions are expressly thought for fitness centres and gyms. They are specifically designed to absorb the impact of big shocks and weight drops.

Our technical department will analyse your case to provide you the specific and tailored soundproof solution that best suits your needs (and wallet).

If possible, we recommend testing on site all solutions, since the building structure strongly affects the final absorption:

All the floorings have been tested simulating real weightlifting conditions.

To check the isolation level, a 50kg barbell has been dropped from a height of 50cm.





Acoustic International Standards

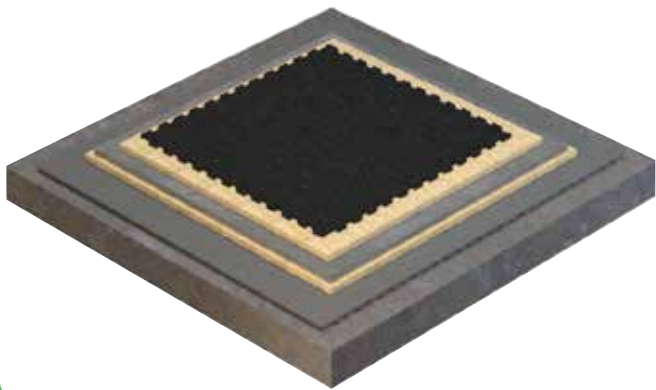
All our acoustic solutions have been tested under the requirements and specifications described in the international standard related to sound isolation of building elements.

PAVIGYM FLOORING SOLUTIONS

	PAVIGYM ENDURANCE S&S	PAVIGYM ENDURANCE	PAVIGYM PERFORMANCE+	PAVIGYM MOTION
Impact Sound Improvement (UNE EN ISO 10140-3)	21 dB	15.4 dB	16.4 dB	17.2 dB
L _{A, F, max} 50 KG, 0,5M (BASED ON UNE EN ISO 10140-3)	24.8 dB	17.8 dB	17.7 dB	-

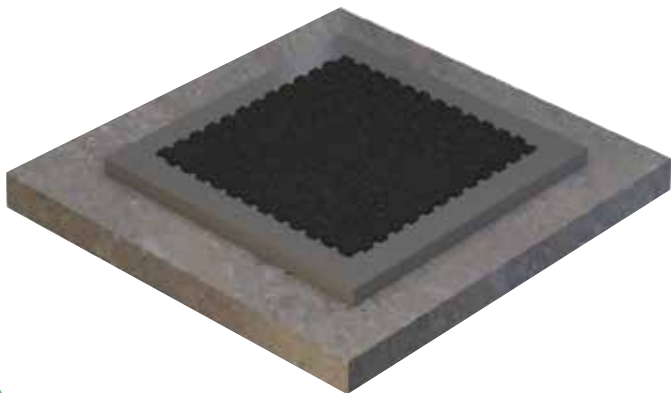
PAVIGYM FLOORING SOLUTIONS + ABSORBENTS

ACOUSTIC FLOORING



COMBINED WITH:	L _{A, F, max} 50 KG, 0,5M (BASED ON UNE EN ISO 10140-3)
PAVIGYM ENDURANCE S&S	49.9 dB (A)

ACOUSTIC ABSOUNDUltimate



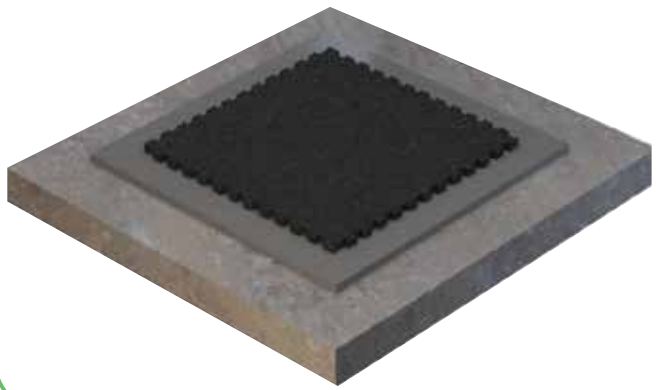
COMBINED WITH:	L _{A, F, max} 50 KG, 0,5M (BASED ON UNE EN ISO 10140-3)
PAVIGYM ENDURANCE S&S	46.9 dB (A)

ACOUSTIC OPTIFOAM



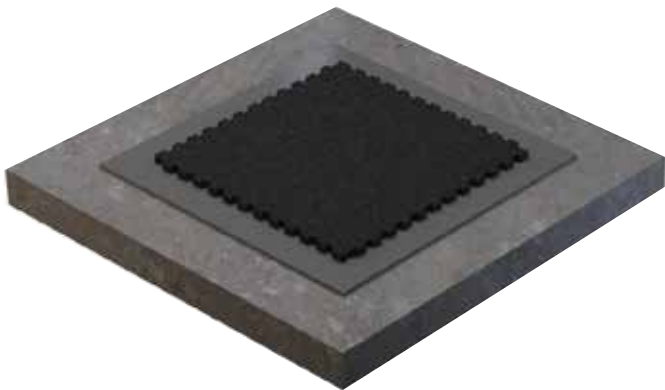
COMBINED WITH:	L _{A, F, max} 50 KG, 0,5M (BASED ON UNE EN ISO 10140-3)
PAVIGYM ENDURANCE S&S	39.8 dB (A)
PAVIGYM ENDURANCE	33.9 dB (A)
PAVIGYM MOTION	36.5 dB (A)

ACOUSTIC ABSOUNDMid



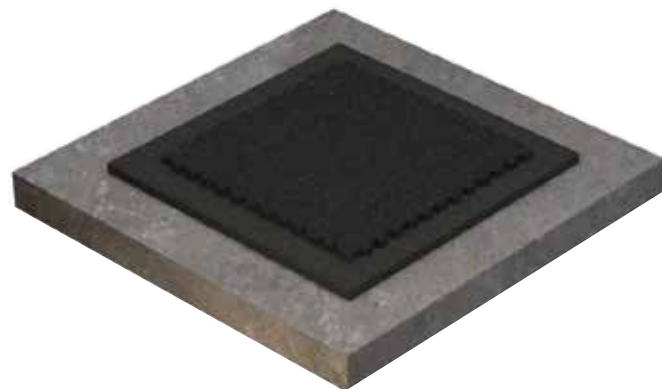
COMBINED WITH:	L _{A, F, max} 50 KG, 0,5M (BASED ON UNE EN ISO 10140-3)
PAVIGYM ENDURANCE S&S	39.5 dB (A)
PAVIGYM ENDURANCE	38.5 dB (A)





ACOUSTIC ABSOUNDEssential



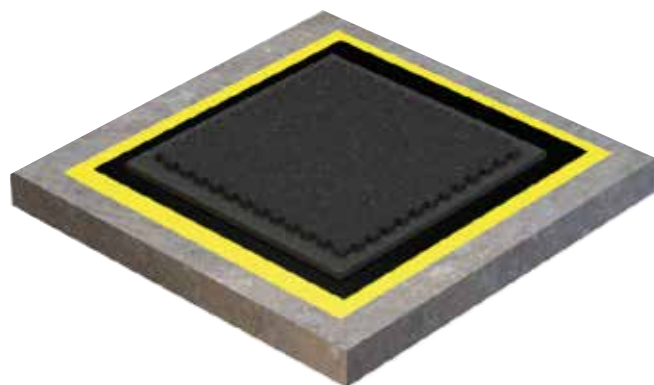
COMBINED WITH:	L _{A, F, max} 50 KG, 0,5M (BASED ON UNE EN ISO 10140-3)
PAVIGYM ENDURANCE S&S	37.0 dB (A)
PAVIGYM ENDURANCE	29.2 dB (A)
PAVIGYM PERFORMANCE+	29.8 dB (A)





ACOUSTIC
UNDERLAY550



COMBINED WITH:	 $L_{A,F,max}$ 50 KG, 0,5M (BASED ON UNE EN ISO 10140-3)
 ENDURANCE S&S	38.1 dB (A)
 ENDURANCE	31.0 dB (A)
 MOTION	33.5 dB (A)

ACOUSTIC
UNDERLAY+SILENT



COMBINED WITH:	 $L_{A,F,max}$ 50 KG, 0,5M (BASED ON UNE EN ISO 10140-3)
 ENDURANCE S&S	35.9 dB (A)
 ENDURANCE	28.7 dB (A)
 MOTION	30.0 dB (A)

ACOUSTIC
SOLUTIONS



Installation

Keep it quiet, keep it simple.

Ease of installation is key when choosing the best flooring and acoustic solution for your facility. Our solutions have been specially designed to make things easier for you, no matter if you are tight on time or your venue is leased.

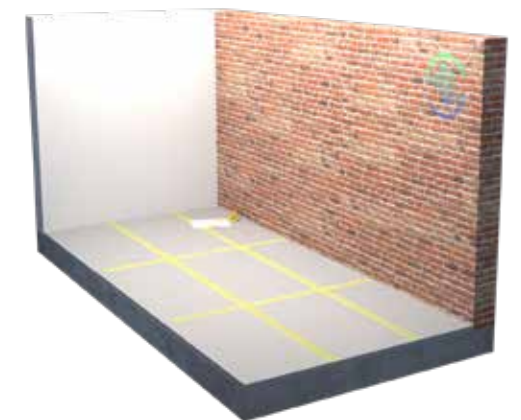
They do not require adhesive, only tape and a cutter

They are loose laid and easy to remove

**The installation of our floating flooring solution may require more time, since it provides extra isolation. Each layer is installed independently. You may need some extra tools.*



1. Install your Pavigym Acoustic layer.



2. Fix Pavigym Acoustic with tape.



3. Install your Pavigym Flooring Solution on top.



4. Your installation is completed and perfectly isolated.

Sustainability and environment



Pavigym commitment is to offer high quality floorings made of environmentally safe products.

Pavigym is committed to environment protection throughout the whole life cycle of the products, processes and activities, by means of a continuous life cycle impact assessment, both ecological and human health impacts, as well as social and economic impacts.

Recycled materials

Some of our recycled products are made from leftover rubber from others. We offer recycled foam and recycled rubber options.

Recyclable products

The rubber in our products is 100% recyclable. In addition, their modular characteristic (no adhesive needed to install) allows to re-install the tiles, optimizing the use of our products.

Smart production

Our floors have an extended lifecycle that minimizes environmental impact and reduces waste.

Certified suppliers

All our raw materials are sourced from certified suppliers and are classified and certified in the REACH register.

Energy efficiency

Pavigym is deeply involved in the energy consumption reduction. Our production process is sustainable, low carbon, resource efficient and competitive, thus contributing to a reduction in CO2 emissions.

Environmental certifications

Committed to a continuous quality process and the environmental improvement, Pavigym has achieved the following certifications and awards:

- First Circular Economy award
- ISO 9001 Certification – International quality and process control standard
- ISO 14001 Certification – Standard for and Environmental Management System



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