

PAVIGY/M

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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 deliver 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.





Why acoustic?

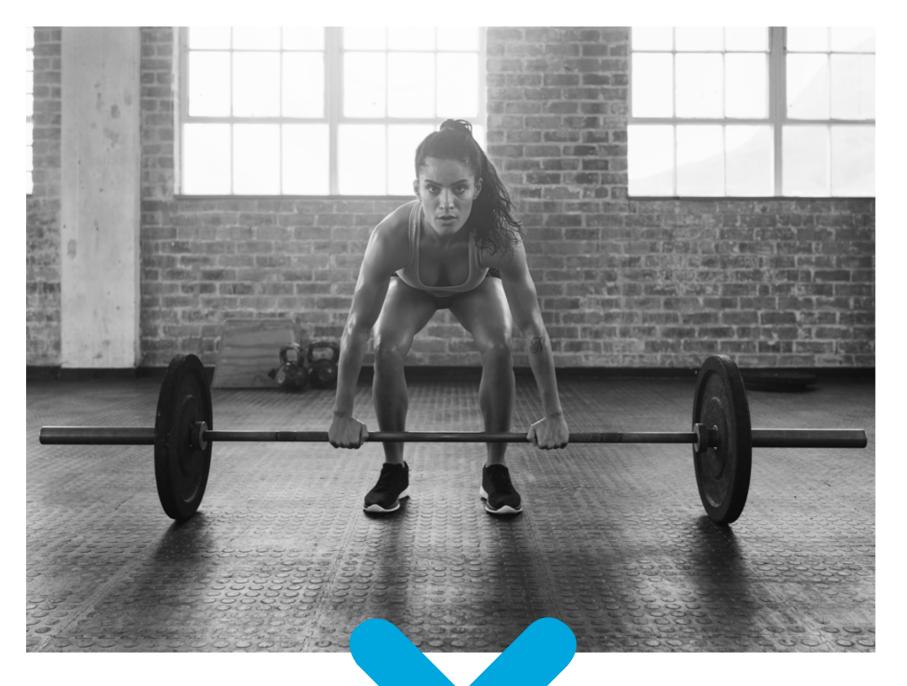
1. The noise: a problem for the fitness industry.

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** insulation it provides is enough for the needs of the gym.

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

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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.

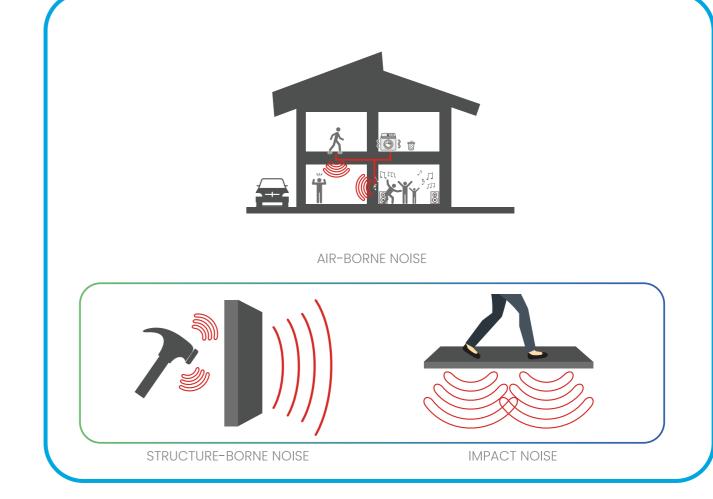
Structure-borne noise

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

Impact noise

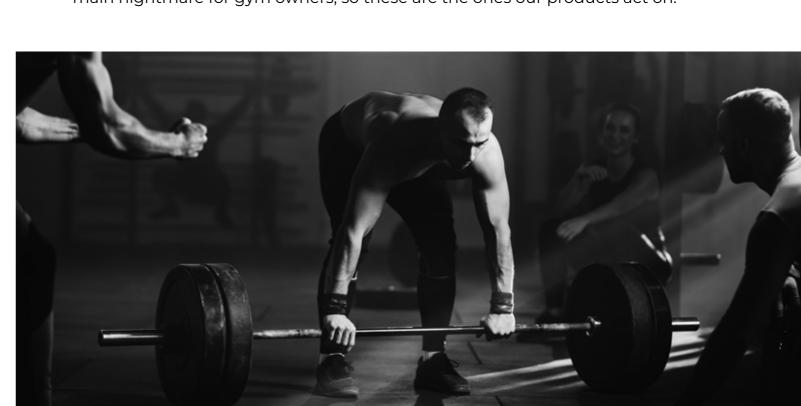
It is considered as part of the structure-borne noise and it is generated by steps, moving objects or dropping weights, for example.

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 range can be also causing vibration problems.

Therefore, the key to reduce noise and avoid vibrations is to insulate low frequencies before they appear one way or another.

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

When frequencies are low, worrying becomes high.

How do acoustic solutions work?

Most acoustic solutions have a big quantity of air, thus they become too soft for weightlifting exercises and can cause injuries. However, Pavigym acoustic range have the perfect balance between stability and insulation. To get insulation, there are some key factors:

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



The higher the M (mass of the absorbent), the higher the level of insulation

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



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





Benefits of Pavigym acoustic solutions.

Pavigym offers two full ranges of acoustic solutions designed to fulfill all the needs of fitness facilities, regardless of the type of activity or building.

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

How do we test our products?

Pavigym acoustic solutions are expressly thought for fitness centres and gyms. They are specifically designed to insulate 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 insulation:

All the floorings have been tested simulating real weightlifting conditions.

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

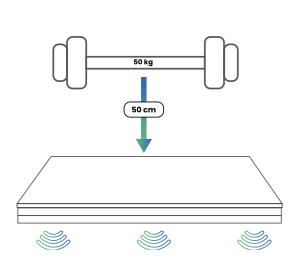
We are specialists in fitness flooring and acoustic solutions.

Benefits for gym owners

- Adapted to fitness: Most acoustic absorbents do not insulate 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 insulation.
- Free from contaminants: both our flooring and our acoustic solutions are VOC free.



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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.

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

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



Neutralize the impact noise and vibrations.



Protect the subfloor.



Tested and certified. Fulfil insulation regulations in each country.



Provide a solution to the impact noise problems for each situation.



Solve a big problem with a simple solution

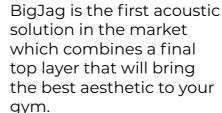


Long-lasting and maintenance-free.

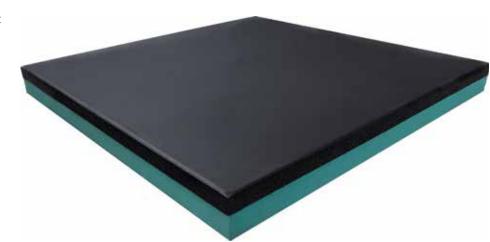




Aesthetics, durability and stability combined with the highest acoustic insulation in this ALL-IN-ONE solution.



Easy installation, no adhesive or added layers of insulation required, meaning a cost-effective installation.



The best acoustic properties from a single product with such a premium finishing!

BigJag provides the highest acoustic performance and an optimum subfloor protection.

Available in 3 different thicknesses and providing 3 different insulation values, BigJag is designed for any type of fitness facility.



BigJag 50

Microcellular Polyurethane + PAVIGYM final layer 100x100cm, 50mm



38 dB (A)



BigJag 70

Microcellular Polyurethane + PAVIGYM final layer 100x100cm, 70mm



42,4 dB (A)

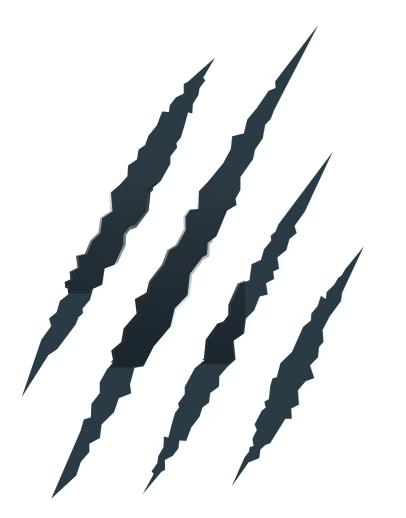


BigJag 90

Microcellular Polyurethane + PAVIGYM final layer 100x100cm, 90mm



47 dB (A)

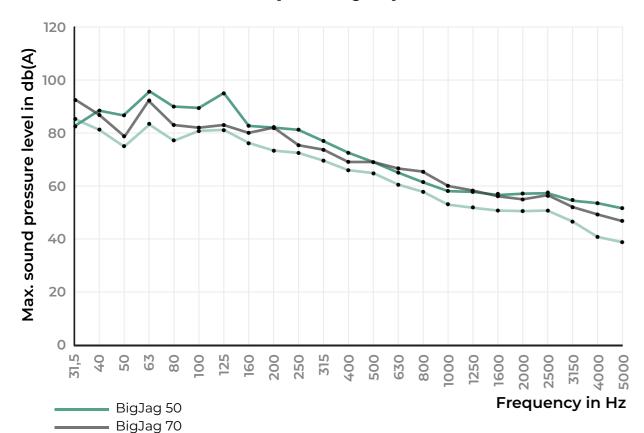




BigJag 90

Acoustic Tests

Frequency spectrum



Installation

- 1. BigJag tiles are straight cut, so they should be installed in a staggered pattern (alternatively if the surface is less than 20m², it could be installed in crosshairs).
- 2. Lay the perimeter tiles last, leaving the corresponding expansion gap (5-10mm).

 The expansion gap should run along the entire

perimeter of the room, around the columns and all construction elements that restrict the expansion of the flooring.

- 3. Before finishing the perimeter and starting with the cuts, check the final appearance of the installation and check for any anomalies. Remember that you can interchange the position of the tiles to improve the final appearance of the flooring in terms of colour and reflections.
- 4. The tiles will not be glued, but we recommend gluing the perimeter with a bead of silicone/sicaflex between the tiles.





Forget about complex installations with multiple layers!



ACOUSTIC

INSULATION LAYERS

A full range of insulation layers to choose from and overlay.

Check our options!

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

1. COST-EFFECTIVE ACOUSTIC SOLUTIONS.

Impact insulation for all budgets.

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

Recycled rubber + PAVIGYM Flooring:



2. UNEQUALED PERFORMANCE SOLUTIONS.

Quality and durability for different types of impacts.

Choose the one that better fits your need.

Microcellular Polyurethane

ABSOUNDESSENTIAL ACOUNTIC ABSOUNDMICE

Recycled PU Foam + PAVIGYM Flooring:

OPTIFOAM

3. MAXIMAL INSULATION SOLUTIONS.

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

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

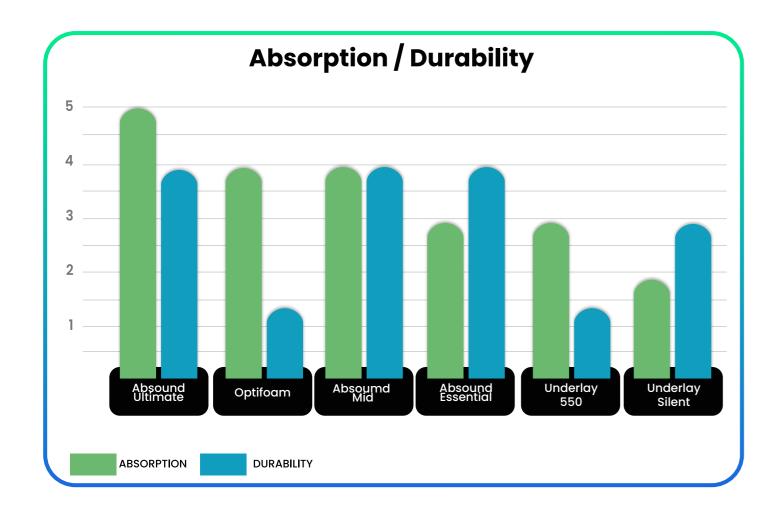
Microcellular Polyurethane

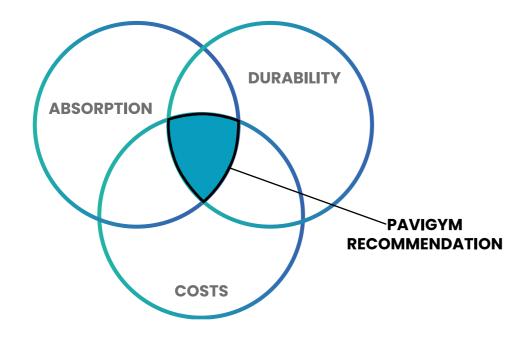
ABSOUNDUItimate



NOT ONLY INSULATION IS IMPORTANT.

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





The acoustic solution you need for each area.

Each gym area has its particular acoustic insulation 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 insulation, so all our products are prepared to insulate noise and vibrations when working together.

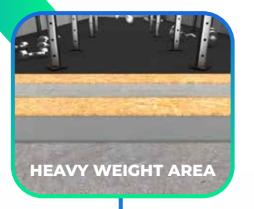
Different combinations of flooring and acoustic solutions return different results, depending on each building structure.

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

Durability, insulation and price are the key factors to decide your acoustic solution.

This is our recommendation for each area!

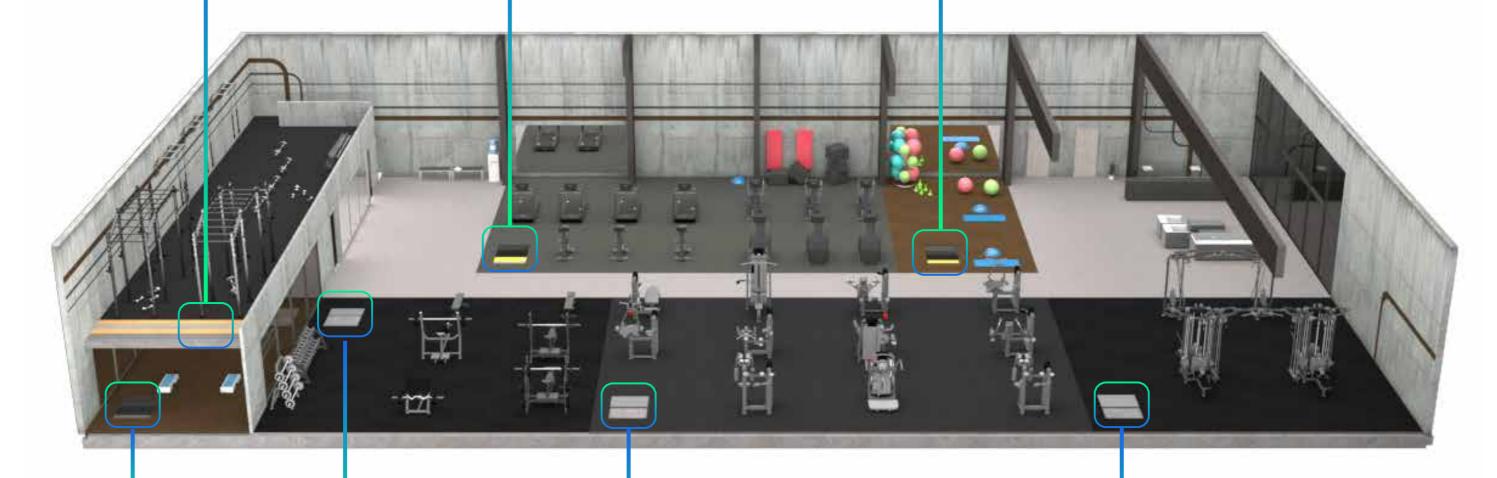
	HEAVY WEIGHTS (High- Very high impact absorption)	STRENGTH AREA (Medium-high impact absorption)	CARDIO & GROUP-X (Low impact absorption)	
	s&s	ENDURANCE EXTREME	PERFORMANCE+	мотюм
ABSOUND ULTIMATE	***			
OPTIFOAM	本本本本	444		444
ABSOUND MID	本本本本	中中中		
ABSOUND ESSENTIAL	**		44	
UNDERLAY 550	44	*		*
UNDERLAY SILENT	*	*		*

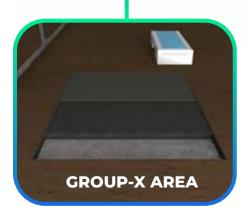


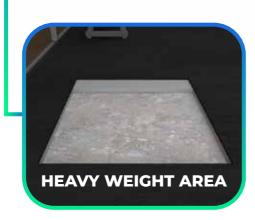


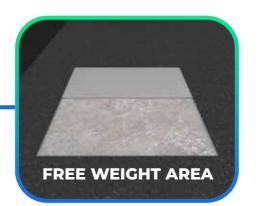


Different needs, different solutions.













Heavy weight / cross training / weightlifting + 50kg

Weightlifting and cross training often require extra insulation 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.

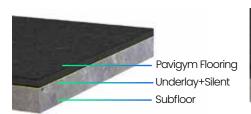
Our Pavigym Flooring recommendation:



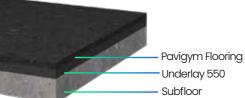


Our recommended Pavigym Acoustic solutions::

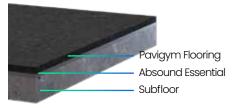
UNDERLAY+SILENT



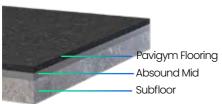
UNDERLAY550



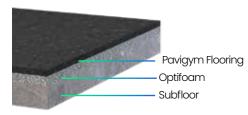
ABSOUNDEssential



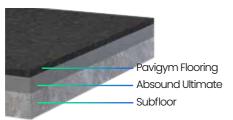
ABSOUNDMIC



OPTIFOAM

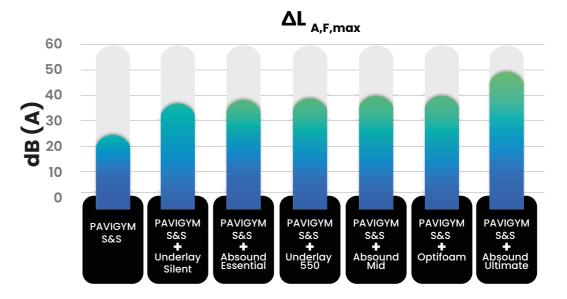


ABSOUNDUltimate



INSULATION VALUES

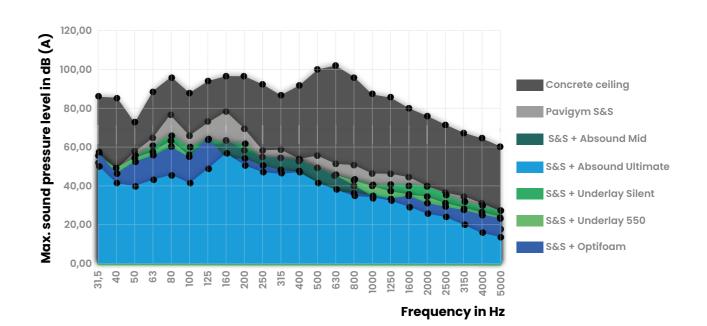
- Max sound pressure level based on EN ISO 10140-3
- 50 Kg dropped from 50 cm.



PAVIGYM S&S + Absorbents

FREQUENCY SPECTRUM

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



24 25



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 insulation that will avoid vibration and noises.

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

Our Pavigym Flooring recommendation:

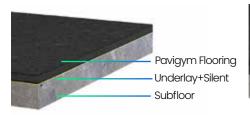


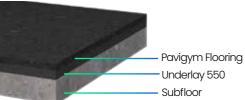


Our recommended Pavigym Acoustic solutions::

UNDERLAY+SILENT

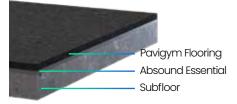


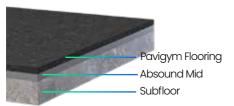




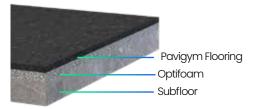
ABSOUNDEssential

ABSOUNDMIC



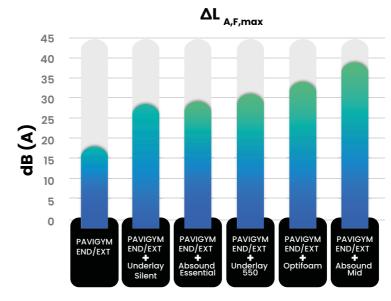


OPTIFOAM



INSULATION VALUES

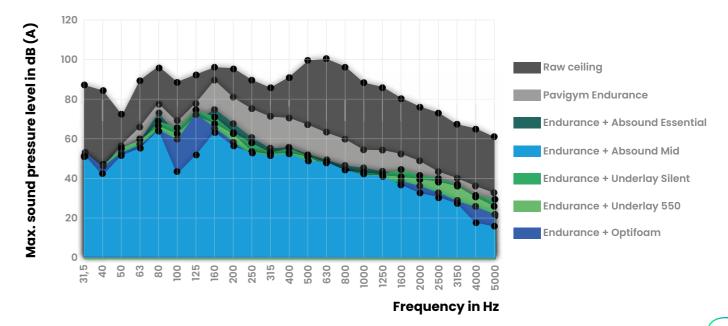
- Max sound pressure level based on EN ISO 10140-3
- 50 Kg dropped from 50 cm.



PAVIGYM Endurance/Extreme + Absorbents

FREQUENCY SPECTRUM

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





Other areas

Treadmills, jumps, low weight impacts... there are other areas of the gym that require acoustic insulation 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!



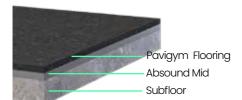
Cardio

Our Pavigym Flooring recommendation:



Our recommended Pavigym Acoustic solutions:

ABSOUNDMid



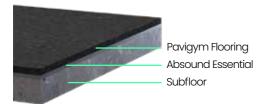


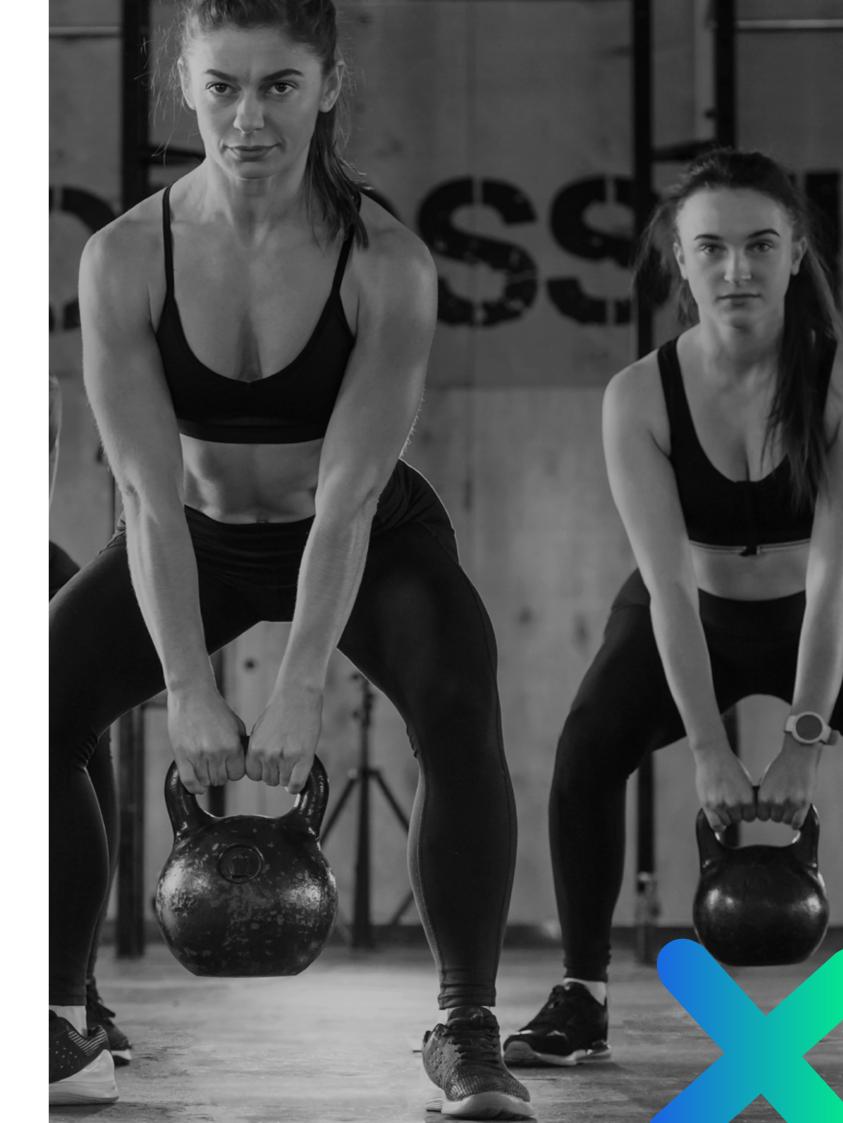
Our Pavigym Flooring recommendation:



Our recommended Pavigym Acoustic solutions:

ABSOUNDEssential







Acoustic International Standards

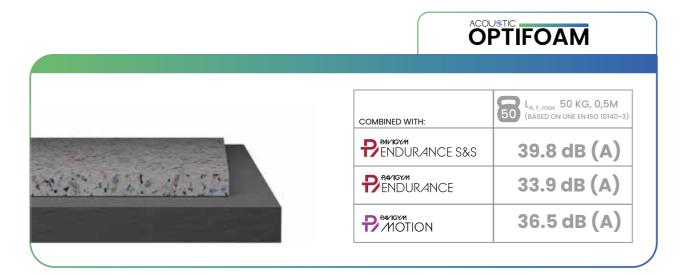
All our acoustic solutions have been tested under the requirements and specifications described in the international standard related to sound insulation of building elements.

PAVIGYM FLOORING SOLUTIONS

	PAUIGYM ENDURANCE S&S	PANISYM ENDURANCE	PERFOR/MANCE+	PAINGYM /NOTION
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 Insulation Layers Installation

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.

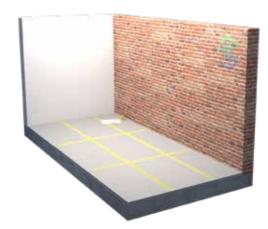
They do not require adhesive, only tape and a cutter

They are loose laid and easy to remove

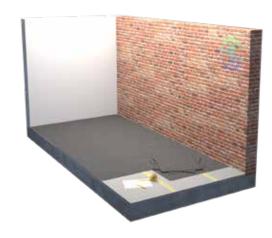
*The installation of our floating flooring solution may require more time, since it provides extra insulation. Each layer is installed independently. You may need some extra tools. Keep it quiet, keep it simple.



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 insulated.

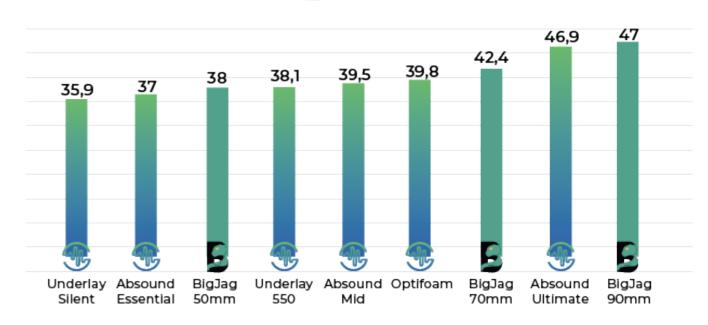


How to choose your Pavigym acoustic solution?

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

Reduction of maximum sound pressure level based on EN ISO 10140-3 $\Delta L_{\text{A,F,max}}$

\triangle LAFmax



Why BigJag?

- Just one acoustic solution with the best integrated Pavigym flooring layer.
- 3 different textures to choose from: Endurance, Extreme or CT.
- Available in 6 colours.
- Very easy and cost-effective installation.

Why Insulation layers?

- Maximum customisation to suit your specific acoustic requirements. Add as many layers as you need.
- Possibility to choose any flooring solution on top.
- Cost-effective acoustic solutions.

Sustainability and 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

Ourfloors 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





The first ALL-IN-ONE acoustic solution.





Aesthetics, durability and stability combined with the highest acoustic insulation in this ALL-IN-ONE solution.

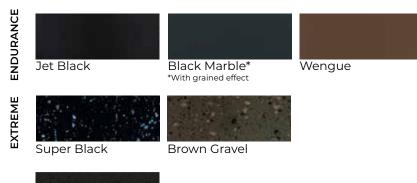
Technical Information

	BIG JAG 50	BIG JAG 70	BIG JAG 90
Dimensions	100 x 100 cm	100 x 100 cm	100 x 100 cm
Thickness	50 mm	70 mm	90 mm
Weight	35 kg	38 kg	41 kg
Top layer density	1200* kg/m ³	1200* kg/m ³	1200* kg/m ³
Impact Absorption EN 14808:2006	61%	61%	61%
Fire reaction EN 13501-1	Cfl s-2	Cfl s-2	Cfl s-2
Slip resistance EN 13036-4: 2012	95	95	95
Area weight	300 kg	300 kg	300 kg

^{*} Value for CT; 900 kg / m³

Colours and textures





Black

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*The appearance and color of these pictures may differ slightly from the final product.



Acoustic Tests

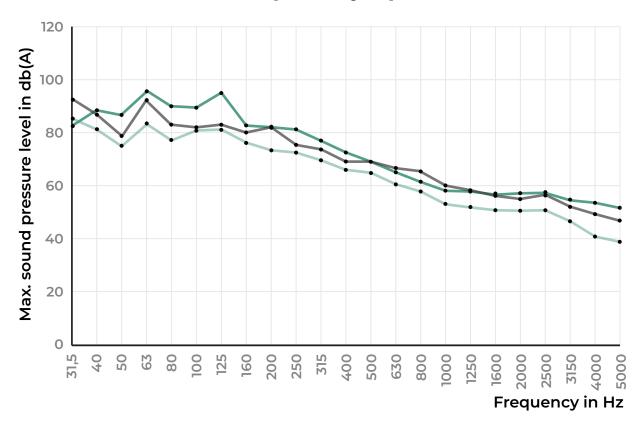
Sound pressure level based on EN ISO 10140-3
50 Kg dropped from 50 cm.

Reduction of maximum sound pressure

 $\Delta L_{A,F,max}$

BigJag 50mm = 38,0 dBA BigJag 70mm = 42,4 dBA BigJag 90mm = 47,0 dBA

Frequency spectrum



BigJag 50
BigJag 70
BigJag 90



Installation



Easy installation, no adhesive or added layers of insulation required. BigJag is designed for any type of fitness facility.

Forget about complex installations with multiple layers!

Advantages



Highest acoustic performance on the market.



Top layer made with Virgin rubber, elegant finish and easy to maintain.



Hygienic, waterproof and easy to clean.



Optimum subfloor protection.



High resistance and durability, not damaged by weather and/or impact.



Stable solution. No sagging.



Applications

Free Weight areas



Insulation / Durability:



Insulation:

BigJag 50: 3

BigJag 70: 4

BigJag 90: 5



Durability:

BigJag 50: 5

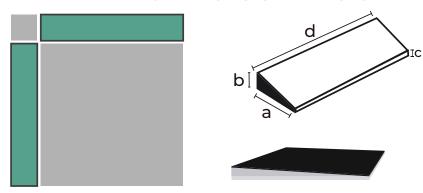
BigJag 70:5

BigJag 90:5



Accessories

BEVELED EDGE TO SUBFLOOR



		BIG JAG 50	BIG JAG 70	BIG JAG 90
	Weight (kg)	2,17	2,67	3,17
Ë	A (cm)	24	24	24
a=24 cm	B (cm)	47	67	87
a=,	C (cm)	10	10	10
	D (cm)	100	100	100
a=50 cm	Weight (kg)	4,5	5,51	6,52
	A (cm)	50	50	50
	B (cm)	47	67	87
	C (cm)	10	10	10
	D (cm)	100	100	100

0,70 Weight (kg) 0,47 0,59 24 24 24 A (cm) B (cm) 47 67 87 10 10 10 C (cm) D (cm) 24 24 24 2,05 2,55 3,05 Weight (kg) 50 50 50 A (cm) a=50 cm B (cm) 47 67 87 C (cm) 10 10 10 50 50 50

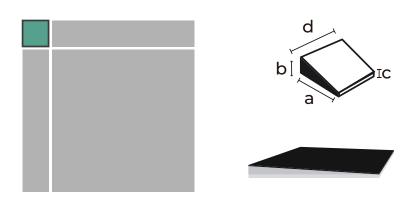
BIG JAG 70

BIG JAG 90

BIG JAG 50

D (cm)

BEVELED CORNER





Let them enjoy the moment... While others enjoy the silence

ACOUSTIC RANGES FOR FITNESS FACILITIES

MAXIMAL ACOUSTIC INSULATION SOLUTIONS





Two full ranges of acoustic solutions designed to fulfill all the needs of fitness facilities, regardless of the type of activity or building.



Neutralize the impact noise and



Protect the subfloor.



Tested and certified. Fulfil insulation regulations in each country.



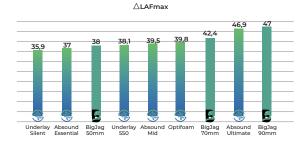
Provide a solution to the impact noise problems for each situation.



Solve a big problem with a simple solution.



Long-lasting and maintenance-free.



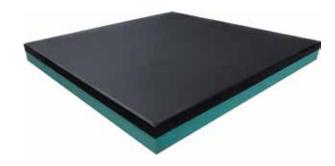
The best acoustical performance. Get rid of noise complaints!





Gym flooring with the highest acoustic properties.

The first all-in-one acoustic solution.



3 thicknesses 3 different insulation values



Microcellular Polyurethane + PAVIGYM final layer 100x100cm, 50mm

	L _{A, F, max}	50	KG,	0,51
	(BASED OF			

38 dB (A)



BigJag 70

Microcellular Polyurethane + PAVIGYM final layer 100x100cm, 70mm

	L _{A, F, max}	50	KG,	0,5M
50	(BASED OF	N UNE	EN IS	O 10140

42,4 dB (A)



BigJag 90

Microcellular Polyurethane + PAVIGYM final layer 100x100cm, 90mm



.... 50 KG, 0.5M

47 dB (A)

WHY BIGJAG?

- Just one acoustic solution with the best integrated Pavigym flooring layer.
- 3 different textures to choose from: Endurance. Extreme or CT.
- Available in 6 colours.
- Very easy and cost-effective installation.



A full range of insulation layers to choose from and overlay.

*These values have been tested with a Pavigym S&S flooring top layer.



Underlay + Silent

Recycled rubber + Latex

100x100cm, 20mm + 600x100cm, 5mm 50 KG, 0,5M 35,9 dB (A)



Absound Essential

Microcellular Polyurethane 150x75cm, 12,5mm

..... 50 KG, 0,5M

37 dB (A)



Underlay 550

Recycled rubber 100x100cm, 30mm

..... 50 KG, 0,5M

38,1 dB (A)



Absound Mid + CT15

50 KG, 0,5M

Microcellular Polyurethane + Recycled rubber 150x75cm, 25mm + 100x100cm, 15mm



39.5 dB (A)



Optifoam

Recycled PU Foam



100x100cm, 30mm



39.8 dB (A)



Absound Ultimate + CT25

Microcellular Polyurethane + Recycled rubber 150x75cm, 50mm + 100x100cm, 25mm



46.9 dB (A)

WHY INSULATION LAYERS?

- Maximum customisation to suit your specific acoustic requirements. Add as many layers as you need.
- O Possibility to choose any flooring solution on top.
- Cost-effective acoustic solutions.