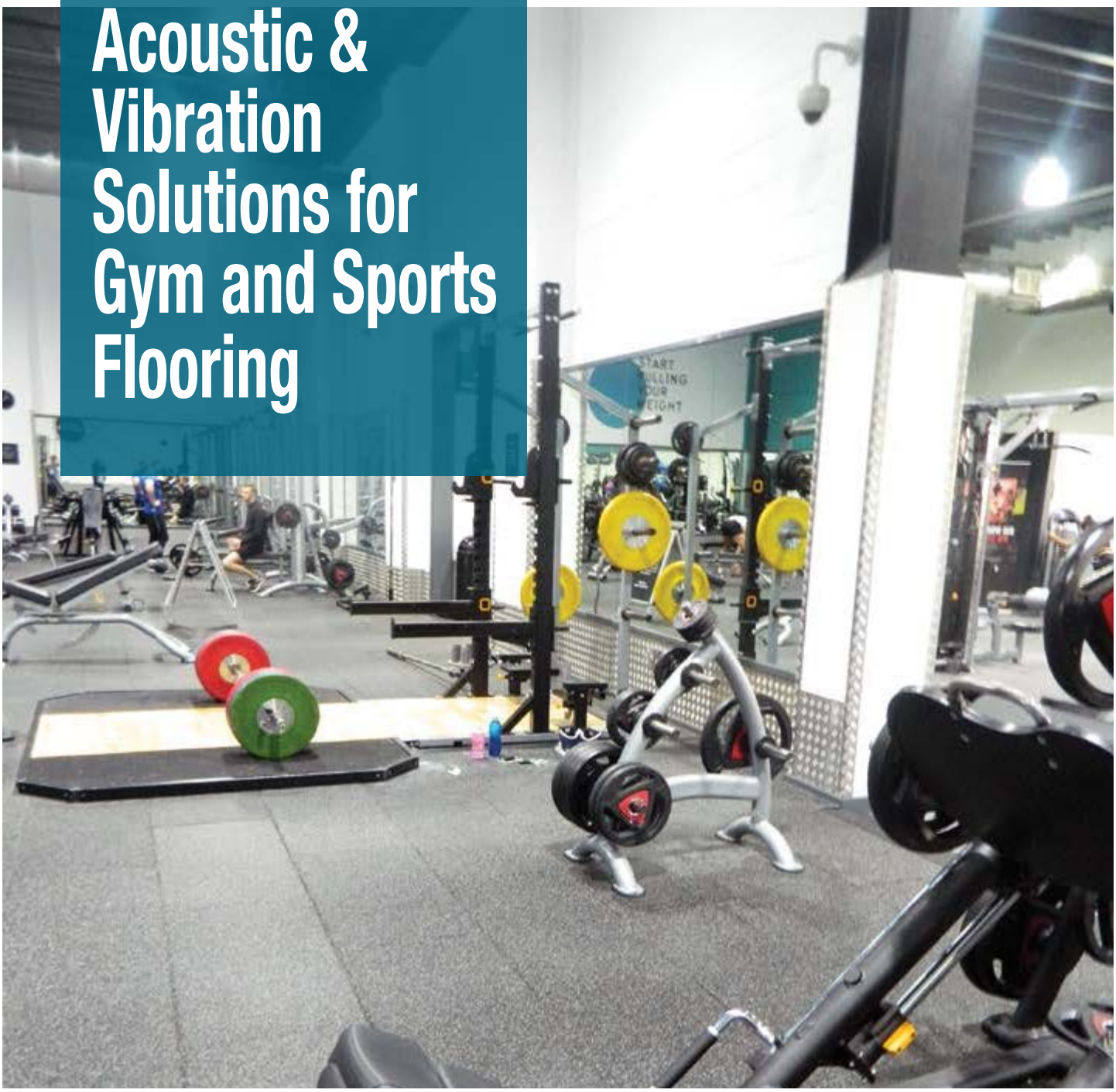
Acoustic & Vibration Solutions for Gym and Sports Flooring



Regupol®

CMSDANSKIN ACOUSTICS

The Importance of Sound Control in Gymnasiums

Nobody goes to a gym to sit still. It's an environment designed to encourage high levels of activity, all very energetic ... but far from quiet.

And because the floor takes the brunt of the impact, this should always be the main design focus. While sports flooring can often deliver the required rebound, acoustic and resilient performance and at the same time meet aesthetic requirements, this is not always the case. Especially when a gym is situated in a mixed-use development adjacent to residential dwellings or delicate businesses, or where sensitive fitness equipment is at risk of damage.

This is where CMS Danskin Acoustics comes in. If our standard sports flooring can't achieve the necessary sound reduction, our expert technical team can advise on the specification of a wide range of specialist acoustic and vibration control systems – balancing performance, aesthetics and budget.

Plus, as we also provide solutions to treat walls and ceilings, we can deliver a holistic design approach to sound control for the complete gym environment - reducing reverberation times and absorbing noise generated from members' exercise activity.

Why work with us?

Getting the specification right

There's no testing standard or building regulation which specifically governs sound control in gym environments. By using our subjective testing service, you can strike the right balance between acoustic performance and budget. No over engineering, simply solutions which are fit for purpose.

Proven products for gym environments

We have one of the most extensive product ranges for sound control in gym including:

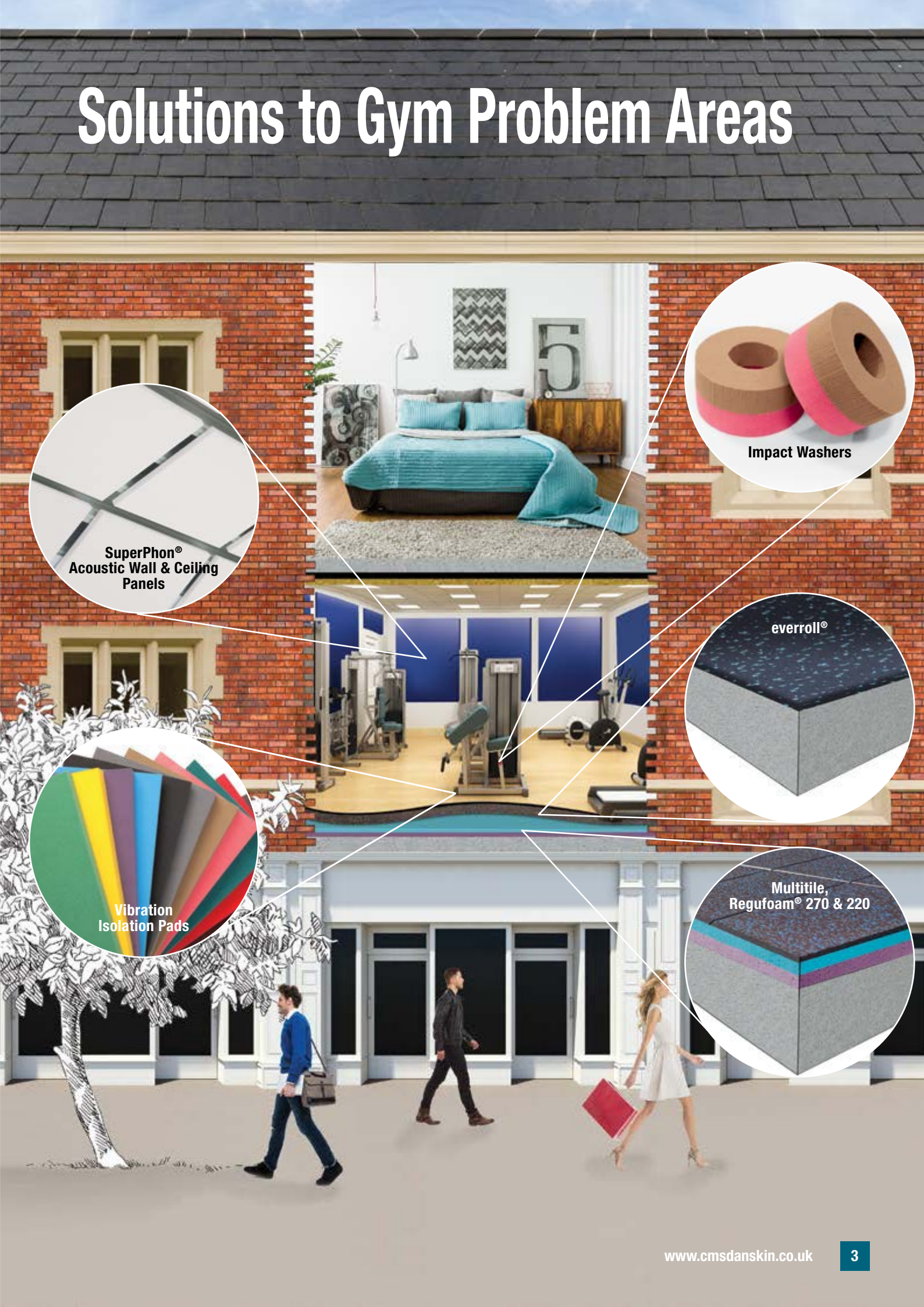
- free weights areas
- functional areas
- sports flooring
- accessories
- reverberation treatments

From everroll® sports flooring and Regupol® impact sound systems, through to high performance building isolation with floating floors - **we've got it covered**.

More than a supplier

We don't just design, manufacture and deliver market leading products. Instead, we work with the entire supply chain and project teams to ensure a smooth path from conception to completion. This includes attendance at project meetings and site supervision, where required.

Solutions to Gym Problem Areas



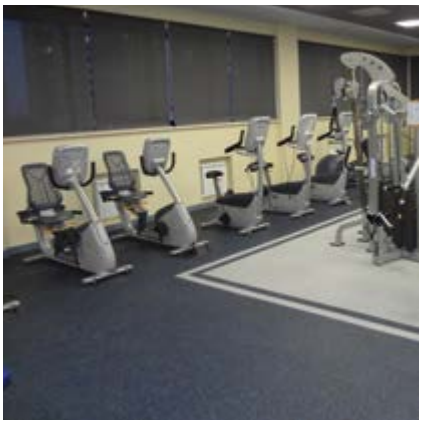
everroll®
performs as good as it looks

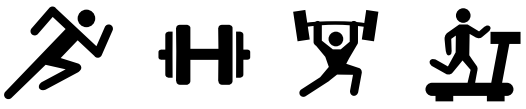
The specialist resilient flooring for fitness environments, **everroll**® not only helps to minimise impact sound - its shock absorbing and anti-slip properties are also designed to protect gym members during workouts.

A wide range of colours makes **everroll**® the sports flooring of choice for projects where aesthetics and corporate brand are as important as performance.

Available in standard rolls.
Thickness: 4, 6, 8, 10 and 12mm

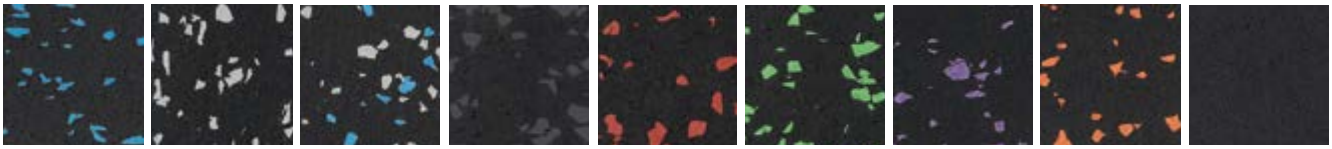
Image shown is everroll®





Colourways

More colours available on request



Black/Blue | Black/Grey | Black/Blue/Grey | Black/Black | Black/Red | Black/Green | Black/Purple | Black/Orange | Plain Black

Please note that due to printing variations the colours indicated on this colour chart are offered as guidance only and should not be relied upon as a true representation of the actual colour of the finish.

edition 4.0 High Definition Surface Finish

New surface finish:
no light reflections, brilliant colours

- Clean, uninterrupted floor colours
- Superior appearance: the colours are retained in all lighting conditions
- No light reflections
- Aids its use in sports facilities through excellent visibility of floor markings

Gloss Level

everroll® surfaces with the new edition 4.0 finish achieve values between 0.0 - 0.3 on a scale of 1 to 100 GU (gloss units).

everroll® Multitile and Weightlayer
taking the strain

Designed specifically for use in free-weight and lifting areas, **everroll® Multitile** and **everroll® Weightlayer** offer high levels of shock absorption - protecting the subfloor from damage while providing gym members with a cushioning and comfortable training area.

everroll® Multitile

As a multi-purpose tile, **everroll® Multitile** is easy to install and is laid with a V-grove joint finish. Aesthetically, **everroll® Multitile** offers a superior appearance as the surface finish is non-reflective - maintaining consistency of colour in all lighting conditions.

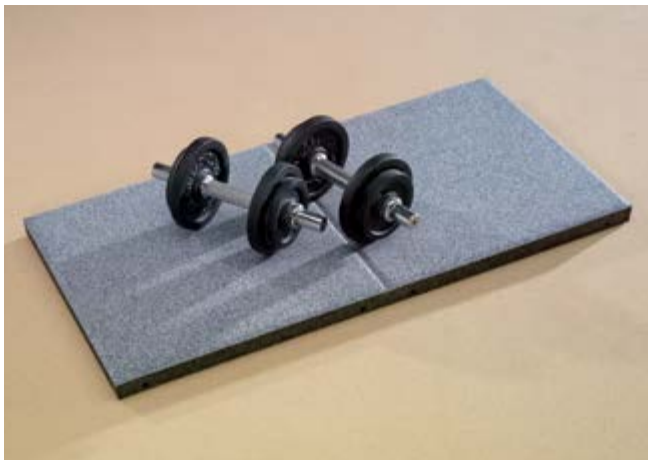
Material Composition
PUR bonded and moulded rubber tile with a 4mm everroll® compact top layer.

Thickness 27mm
(23mm black base layer + 4mm everroll® compact top layer).

Dimensions of Tile
1,000 x 500mm, including "appearance joint" for square design. **everroll® Multitile** (27mm) - the multipurpose tile product, easy to install and perfectly suitable for weight rooms and similar areas where impact sound absorption is critical.

Force Reduction Approximately 38.5%
NB: The Force Reduction rating is expressed as a relative percentage (bare concrete slab = 0% reduction) of the force that is not reflected when applied to a resilient surface. The higher the reduction rating, the more "forgiving" the surface.

everroll® Weightlayer



everroll® weightlayer is an extra robust tile for heavy-duty weight-training and weight-lifting and CrossFit training.

Material Composition
PUR bonded granulate made from SBR rubber with an SBR and EPDM rubber wear layer.

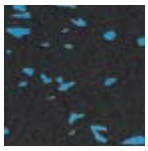
Thickness 43mm

Dimensions of Tile
1000mm x 500mm dummy joint at 500mm

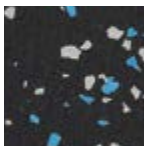
Force Reduction Approximately 44.2%
NB: The Force Reduction rating is expressed as a relative percentage (bare concrete slab = 0% reduction) of the force that is not reflected when applied to a resilient surface. The higher the reduction rating, the more "forgiving" the surface.

Colourways

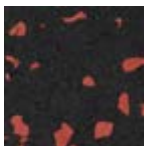
More colours available on request.

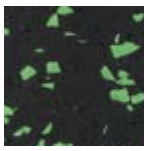

Black/Blue


Black/Grey


Black/Blue/Grey


Black/Black


Black/Red


Black/Green


Black/Purple


Black/Orange


Plain Black

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FX-G & FX-G Weightlayer
a strong solution

The Regupol® FX-G range is designed primarily for the fitness flooring market with its intended use being for free-weight areas where a high performance floor finish is required to provide reduction in impact and structure borne sound.

Regupol® FX-G and FX-G Weightlayer tiles are supplied with dowel fixings to enable a simple and effective method of installation and can be installed as a single item or as part of a bespoke floor build-up.*

FX-G Weightlayer

Finished with a 4mm everroll® top layer to give aesthetic appeal whilst providing durability in service, FX-G Weightlayer is available in a variety of colour finishes.

APPLICATIONS

- Gym Flooring
- Functional Training Areas
- Fitness Studios
- Specialist floors where impact and structure borne sound is prevalent

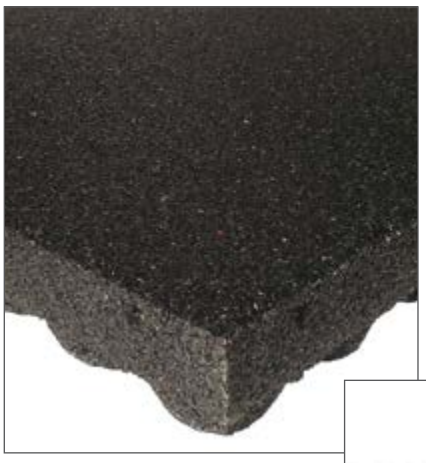
MATERIAL COMPOSITION

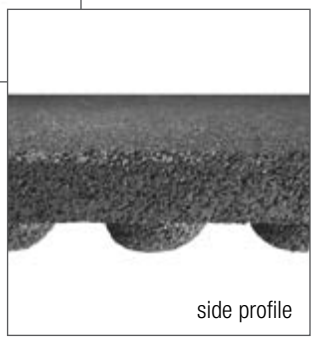
Manufactured from PUR bonded rubber. The underside of the Regupol® FX-G tiles have a dimpled structure to enhance the elasticity and acoustic performance of the floor and provide a comfortable surface on which to train.*

PHYSICAL INFORMATION

Product	Dimensions (L x W x H)	Tolerance		Weight per Tile (Kg)
		L / W	H	
FX-G	1m x 0.5m x 50mm	+/- 1%	+/- 2mm	17
	1m x 0.5m x 70mm			23
FX-G Weightlayer	1m x 0.5m x 45mm			15
	1m x 0.5m x 70mm			23.5

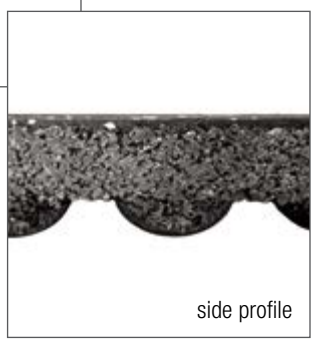
*Subjective on-site testing may be required to determine the performance of Regupol® FX-G & FX-G Weightlayer when used as a part of a laminated structure.





side profile

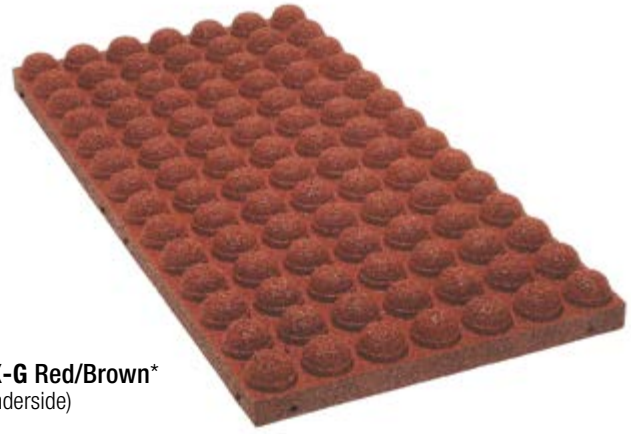
FX-G Black*



side profile

FX-G Weightlayer Black*

FX-G Red/Brown*
(topside)

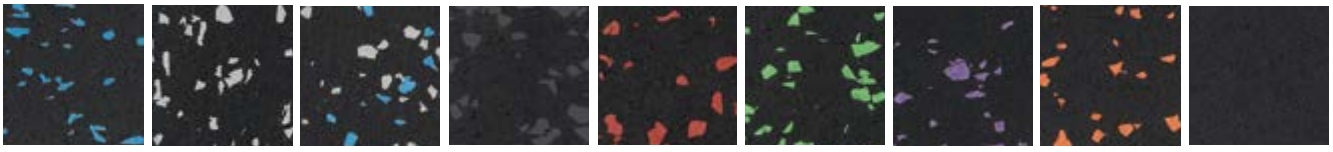


FX-G Red/Brown*
(underside)

* **FX-G Green** is also available but not shown

everroll® colourways (for FX-G Weightlayer as the top 'wear' layer ONLY)

More colours available on request.



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everroll® Uni I & II
vibrant colour options

The **everroll® Uni** range is a densely compacted resilient EPDM rubber flooring product, with small pores to provide an exciting surface structure. Designed predominantly for cardio, strength and functional training areas the vibrant colour options allow for clear demarcation of the various gym areas.

Material Composition
PUR bonded EPDM granulate

Thickness
4, 6, 8 or 10mm

Dimensions of Rolls
Width: 1.25m
Length: 10m

Force Reduction
4mm 7.3%
6mm 10.0%
8mm 12.9%
10mm 13.7%

Impact resistance
4 mm: 14 Nm
6 mm: 15 Nm
8 mm: 15 Nm
10 mm: 15 Nm

Colourways

More colours available on request.

Uni I Grey | Uni I Mid Grey | Uni I Dark Grey | Uni I Pale Blue | Uni I Blue | Uni I Green | Uni I Red | Uni I Biege

Please note that due to printing variations the colours indicated on this colour chart are offered as guidance only and should not be relied upon as a true representation of the actual colour of the finish.

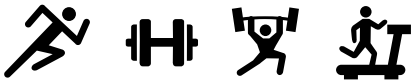
everroll® Impact Pad
don't feel the force

A premanufactured rubber bound mat designed primarily as a shock pad for use beneath a variety of everroll® floor finishes. It is also used as a protection layer for gym and sports flooring subfloor surfaces prior to the installation of everroll® floor finishes. **everroll® Impact Pad** is available in a variety of thicknesses from 4mm to 20mm inclusive, giving many options for the end user and can either be lose laid or bonded.

Material Composition
Elastic premanufactured mat made from selected rubber bound with polyurethane.

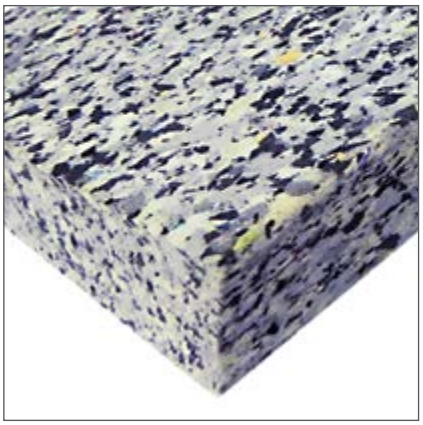
Thickness
10mm

Colours
Black



Regupol® 40/80
quiet by design

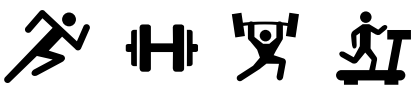
A PUR foam specifically designed as an intermediary layer for laminated structures for the isolation of noise and vibration in free-weight areas. Commonly used as part of a dual-laminate system with everroll®.



Material Composition
PUR foam bound with polyurethane.

Thickness
40mm

Colours
Multi-coloured



everroll® kombi
fast track sports flooring

Designed for sprint and speed training applications, **everroll® kombi** is a double layer, point-elastic sports flooring solution which protects athletes' joints by absorbing energy.

Impact and slip resistant, **everroll® kombi** is suitable for use with underfloor heating. Offering ease of installation, the material can also be 'lined' with polyurethane on-site to achieve a professional track finish.

Material Composition

Point-elastic, double-layer sports flooring made from PUR bonded rubber crumb and EPDM granulate.

Standard Thickness

8mm

Dimensions of Rolls

Width: 1,250mm
Lengths: 10m / 15m / 20m

everroll® kombi typically consists of a 4mm thick elastic layer and a 4mm thick EPDM top layer.

Force Reduction Approximately 18.9%

NB: The force reduction rating is expressed as a relative percentage (bare concrete slab = 0 % force reduction) of the force that is not reflected when applied to a resilient surface. The higher the force reduction rating, the more "forgiving" the surface.

Impact resistance 8Nm

This impact resistance rating meets the universally applicable minimum requirement for sports floorings of 8Nm.

Benefits

- Adequate force reduction rating for sprint and speed training
- Protects subfloors
- Impact sound and shock absorbent
- Impact resistance meets industry standard
- Slip resistant
- Suitable for underfloor heating
- Easy installation
- Can be "lined" with polyurethane line paint on site

Sports Carpet
versatility in action

A versatile sports surface, the **Sports Carpet** is primarily designed to meet the safety and performance demands of speed, agility and quickness (SAQ) activities - but is also commonly used for tennis, hockey, football and multi-use games areas.

The material construction means a prowler/sled can be used for pushing and pulling drills without damaging the surface.

When combined with elastic underlay it is also suitable for high intensity plyometric activity.

Standard Thickness

10mm (6mm pile height)

Dimensions of Rolls

Width: 2000 or 4100mm
Lengths: To order

Benefits

- Versatile multi-sport product
- Needlepunch
- Sand dressed
- UV stable
- Medium ITF pace rating

Colourways


Terracotta


Yellow


Summer Green


Autumn Green


Blue


Navy


Black

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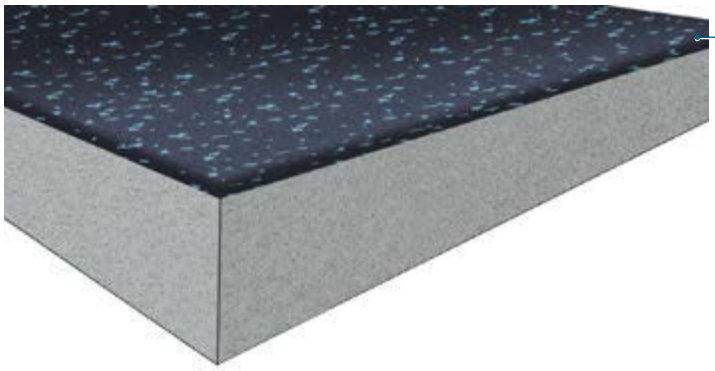
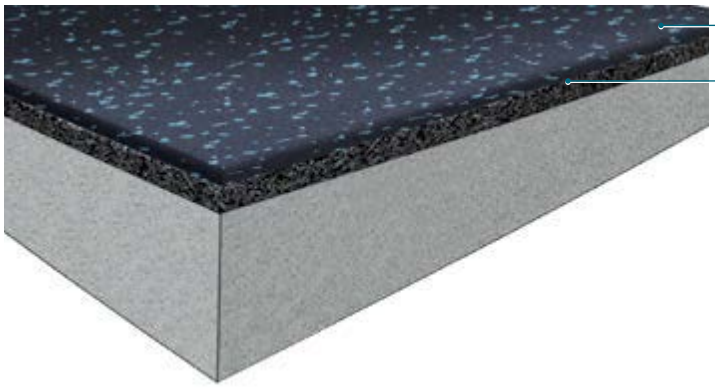
Standard GYM floor details

General Gym Flooring Multi Purpose Use



10mm **everroll®**

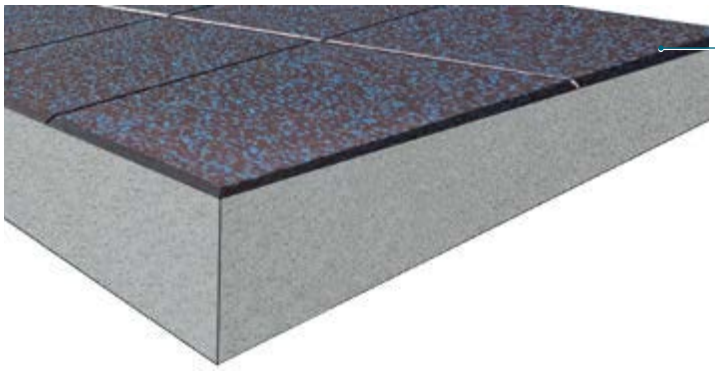
Free Weights Areas (sub floor protection required)



10mm **everroll®**

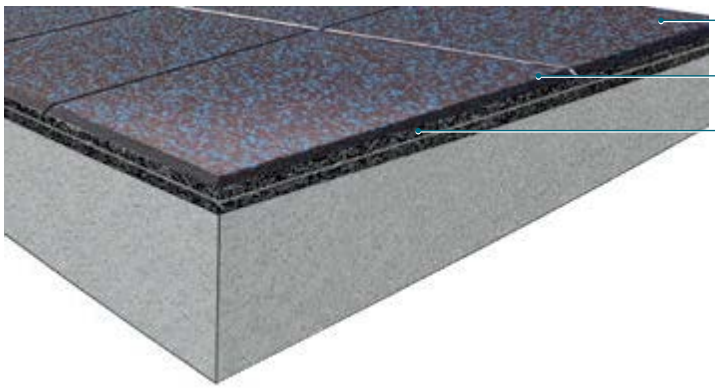
10mm or 15mm **Impact Pad**

Free Weights Areas (sub floor protection removable/moveable)



27mm **everroll® Multitile**

Free Weights Areas (Acoustic Issues)

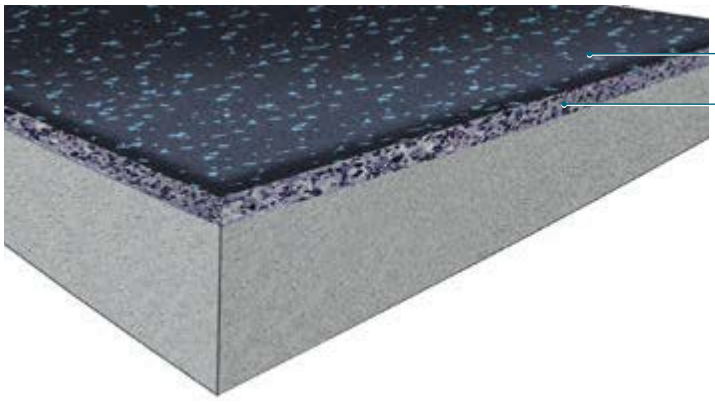


45mm **Regupol® FX-G Weightlayer**

17mm **Vibration 300 (dimpled)**

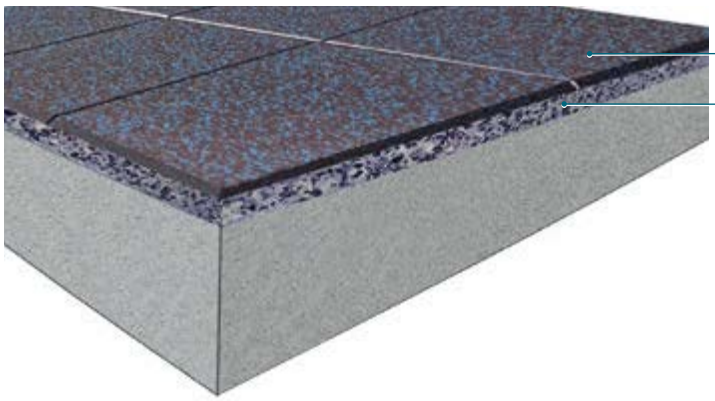
17mm **Vibration 300 (dimpled)**

Free Weights Areas (Acoustic Issues) High Performance



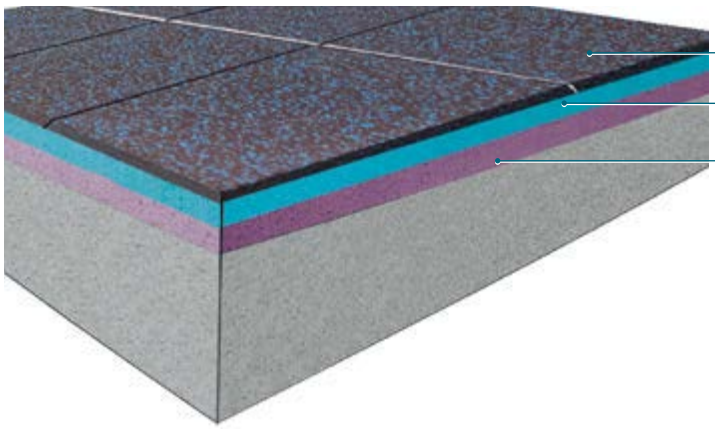
10mm **everroll®**

40mm **Regupol® 40/80**



45mm **Regupol® FX-G Weightlayer**

40mm **Regupol® 40/80**

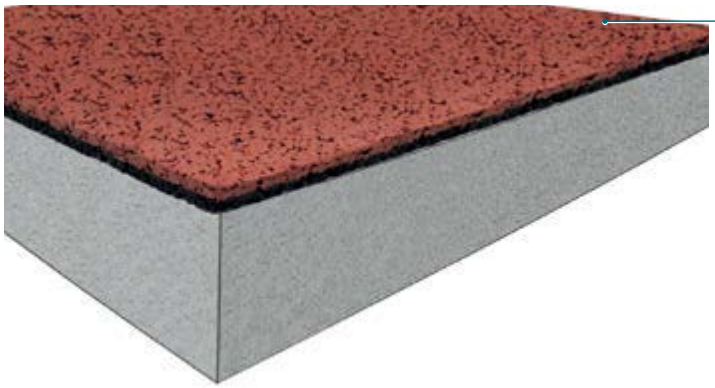


45mm **Regupol® FX-G Weightlayer**

25mm **Regufoam® 270**

25mm **Regufoam® 220**

Sprint Track



Regupol® Kombi 4+4

Gym Flooring Accessories

To assist with the creation of a high quality gym environment which will perform and be protected over time, CMS Danskin Acoustics offers a range of accessories which complement the standard sports flooring range. These include:

Ramp Edges

Facilitate wheelchair access, negates the need for a step and reduces the danger of stumbling at the edge of the floor.

- Quick easy to install
- Hard wearing
- Negates the need for a step

Regupol® Regubond 100 Flooring Adhesive

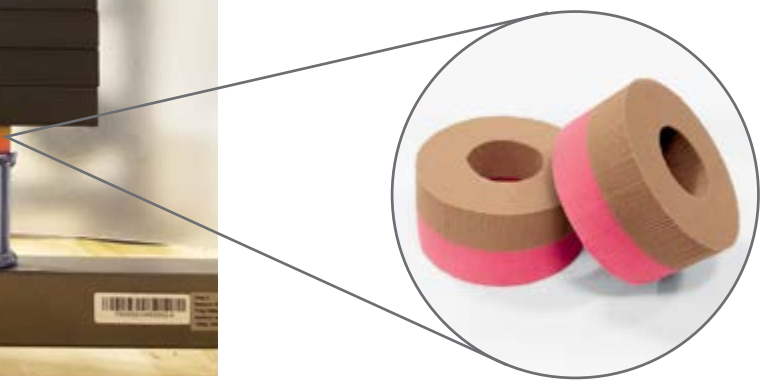
Can accept heavy traffic after 24 hours which means fitness equipment can be installed promptly after the sports flooring is laid.

Packaged in a 15 kg plastic bucket.

Resistance Machine Impact Washers

Reduce the impact and structural noise caused by resistance machines at source making for a better training environment and reducing the risk of noise complaints from neighbours. Can be retrofitted or installed during the machine assembly.

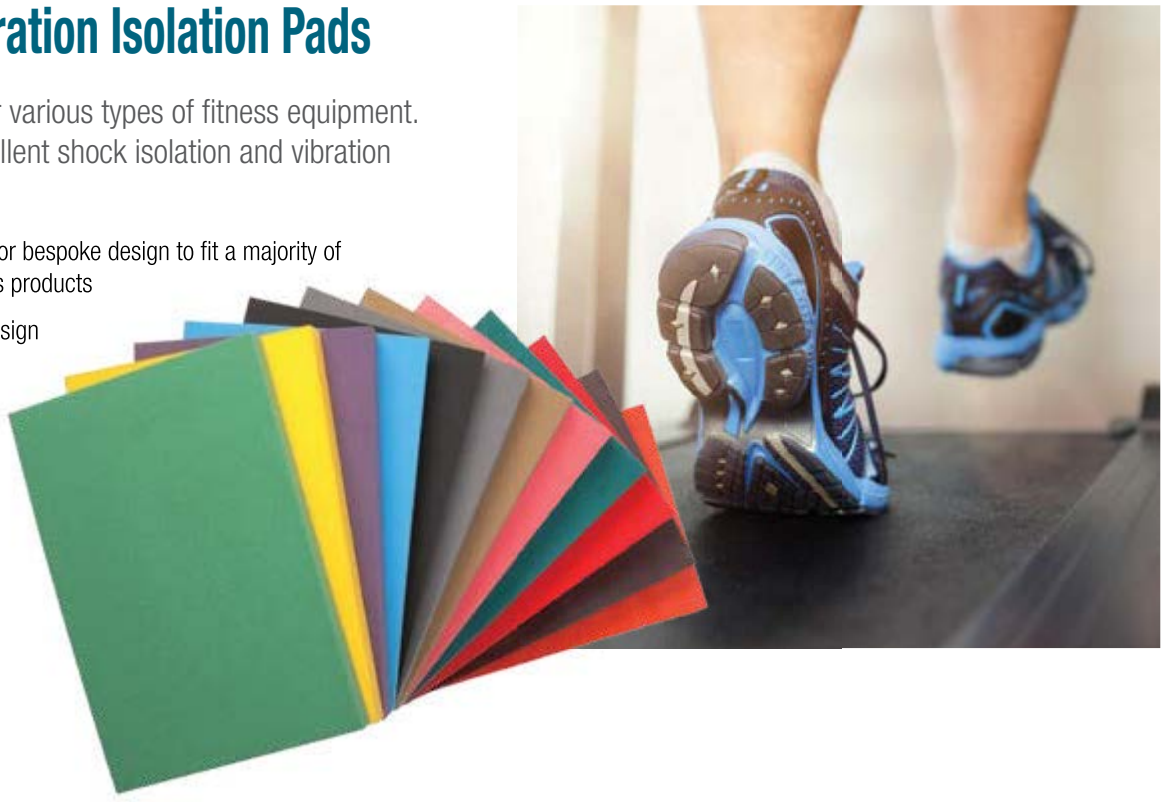
- Easy to install
- Reduces impact noise at source



Gym Vibration Isolation Pads

For use under various types of fitness equipment. Provides excellent shock isolation and vibration properties.

- Standardised or bespoke design to fit a majority of manufacturers products
- Low profile design
- Easy to install

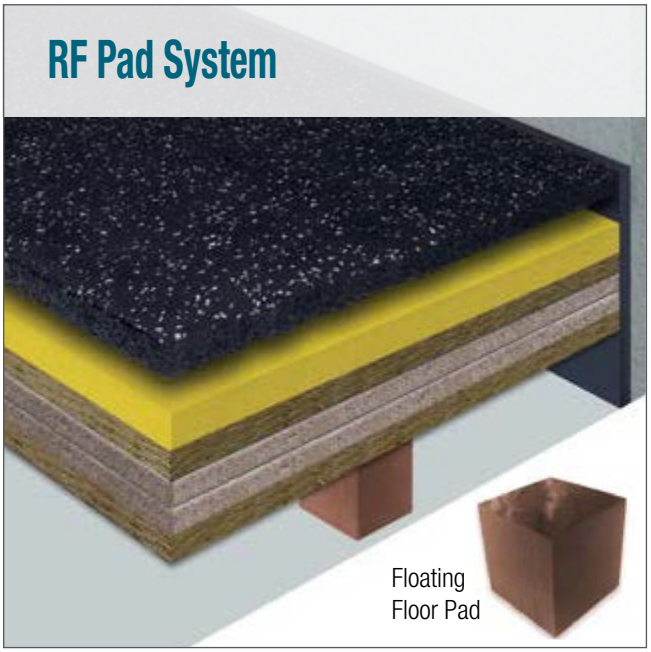


High Performance Systems

Where standard sports flooring cannot achieve the required level of impact sound control to protect sensitive fitness equipment, or there is a risk of noise and vibration transfer into adjacent retail units or residential dwellings - CMS Danskin Acoustics can provide guidance on the specification of high performance isolation systems.

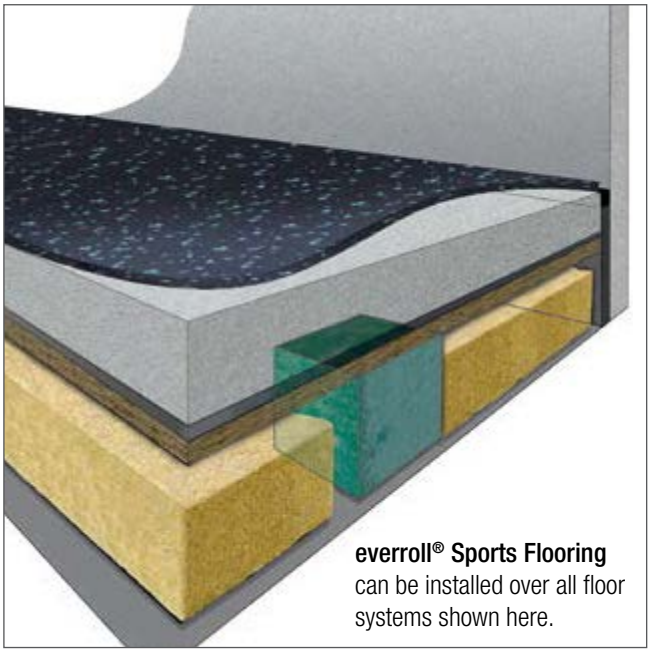
RF Pad System and Kinetics® LSM Mount

Typically used where free weight areas are situated over a retail or residential space, CMS Danskin Acoustics provides a full design service and on-site support.



Kinetics® RIM System

The **Kinetics® RIM System** is widely used for mixed-use developments where gyms are located on the first floor or above. When used in conjunction with ceiling and wall separation products, **Kinetics® RIM System** is an essential component of 'room within a room' isolation approach.



Reverberation Treatments

Problem reverberation in gym environments is most prevalent in areas where there are high levels of airborne sound and hard reflective surfaces, such as sports halls, dance studios and spin spaces. These reverberation times can be effectively reduced using absorptive solutions.

SuperPhon® Wall and Ceiling Acoustic Panels

Offering up to Class A absorption, this range of wall and ceiling acoustic panels provides a highly aesthetic solution for reducing reverberation times and can be retrospectively installed where remediation may be required.

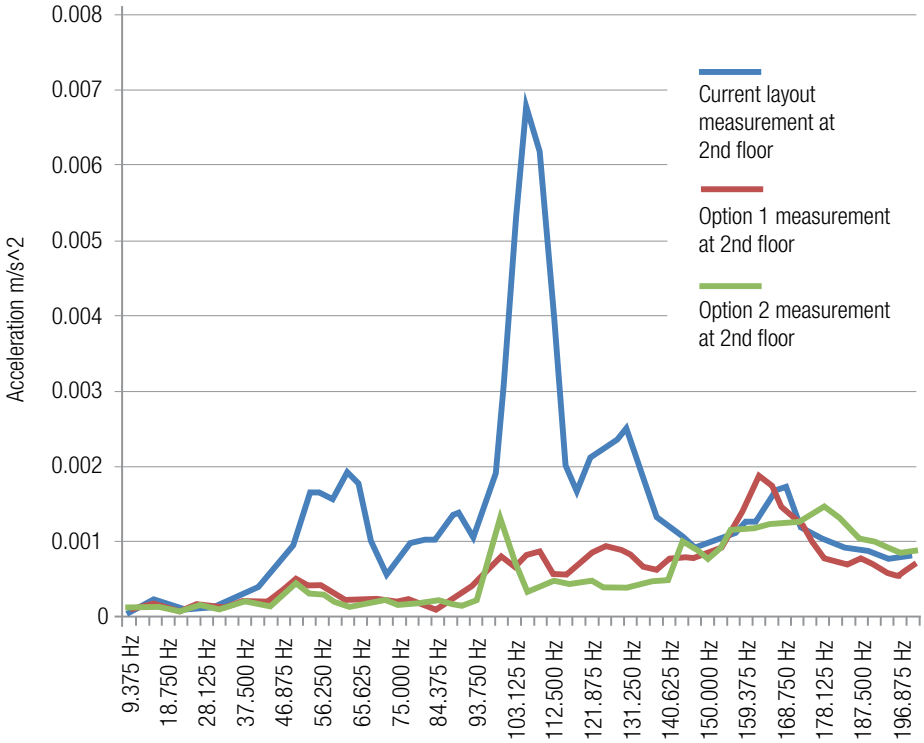
With 75 standard fabric colours available across two ranges, **SuperPhon**® can be manufactured to a bespoke specification with impact resistant and hygienic solutions also offered.

Fade® Acoustical Plaster

Where the objective is to achieve seamless sound absorption without the use of visible panels, the **Fade® Acoustical Plaster** system provides an excellent solution.

As a spray applied plaster system, **Fade® Acoustical Plaster** can reduce reverberation times in spaces even where there are curved angles or arching domes.

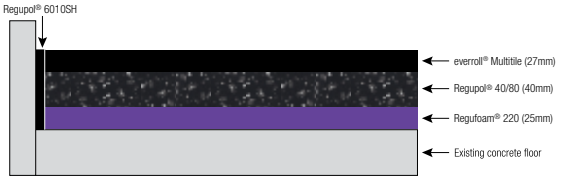
Acoustic Performance & Testing



Vibration measurements of 3 different layouts undertaken in second floor flat*

For illustration purposes only.

Option 1



Option 2

Subjective Testing

Subjective testing is a key ingredient to ensure that facilities, wherever located, do not cause a nuisance and/or disturbance to the surrounding occupants. More and more gymnasiums are being designed and built, many of which are located in already occupied buildings whether that be residential or commercial and this can itself be problematic due to the activities that take place, particularly so in the 'free weights' area. The noise and vibration generated from the dropping of weights, etc. can be very problematic and can often result in noise abatement orders and costly remedial works.

To avoid such problems 'subjective testing' should be carried out by independent acoustic consultants to ensure the noise and structural vibrations generated are assessed and adequately treated to avoid any potential complaints. This is a process whereby several samples of acoustic and vibration materials are built up off the floor with weights then dropped from a specific height, generally waist height to determine the forces applied. From this the resultant values can be assessed to determine the most effective build-up to achieve the desired natural frequency or ambient noise levels.

The aim of the subjective tests are:

- To identify the noise levels in surrounding areas due to typical worst case impacts on the floor slab, without any acoustic/vibration treatment.
- To measure the improvement in noise control when a simplified floor treatment is applied.
- To review the suitability of a simplified isolation floor build-up to comment its suitability in place.

* Independent test report available on request.

Pure Gym, Canterbury

CASE STUDY

The Challenge

Situated on the first floor of a mixed-use development, a jack-up floor was specified to prevent vibrations from transferring into the building structure. However, to ensure the development was fit for purpose, Pure Gym believed additional treatment was needed to further enhance the performance of the floor and reduce unwanted noise.

An acoustic consultants report recommended individual performance standards for the free weights zone and the rest of the studio.

The Solution

- For the free weights area, a build-up of two layers of Regufoam® in 270mm and 220mm, and 43mm everroll® was supplied.
- For the remainder of the studio, two layers of 15mm Regupol® Vibration 480 topped with 10mm everroll® was provided.
- The specified finish of black and grey EPDM was also matched by CMS Danskin Acoustics and all materials were produced for installation within the strict two-week time frame.

The Results

CMS Danskin Acoustics is now one of Pure Gym's preferred suppliers and has since worked on projects such as the new build of a two-storey facility in Croydon and the refurbishment of Warrington Central.

"The service CMS Danskin Acoustics provides is of an extremely high standard. Their expert advice, quality of the product and efficiency in getting the materials to site, were instrumental in allowing us to complete the project on time. The superb service has instilled a confidence in us to develop our relationship with CMS Danskin Acoustics as a trusted supplier," commented John Graham, Pure Gym Property Development Director.

Find out more at www.cmsdanskin.co.uk

Injured Jockey Fund Gym, Berkshire

CASE STUDY

The Challenge

Relocating the gym to the first floor, primarily because the building structure was composed of a steel tray and concrete base. To accommodate gym activity, the floor build-up would need to be enhanced to prevent noise and vibrations travelling through the building.

The project was unique because various performance requirements had to be met across the four areas but the floor level needed to be consistent throughout to make it accessible for wheelchair users.

The Solution

- A combination of everroll® Multitile was bonded to Regupol® 40/80 Acoustic Foam and fitted to Regupol® Vibration 300.
- Multitile was bonded to Regufoam® 270 acoustic PU foam and fitted to ply which was adhered to Regupol® Vibration 300.
- BOK Sprint track bonded to a everroll® Impact Pad elastic layer, ply build up and Regupol® Vibration 300.
- Concrete effect Luxury Vinyl Tiles (LVT) were used to create a purpose-built ramp up to the 84mm floor level from the entrance lobby

Image provided by horseracingphoto.co.uk

Find out more at www.cmsdanskin.co.uk

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CMS Danskin Acoustics products are part of the SIG PERFORMANCE TECHNOLOGY range

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Issue 3 - 06/2018 JW