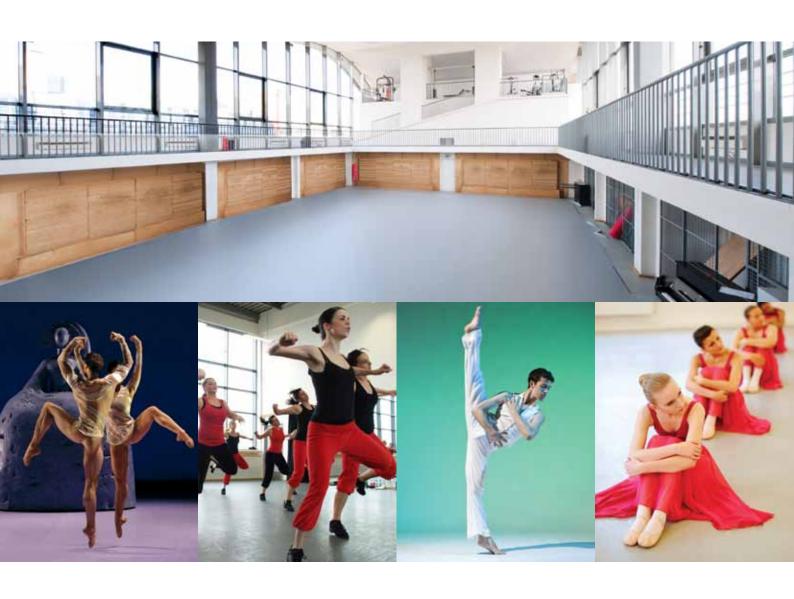


# Harlequin's Guide to **Dance Floors**



Harlequin Floors is the world leader in advanced technology flooring for dance, the performing arts, entertainment and display. Firmly established worldwide, the Harlequin Group has branches in the UK, Europe, the USA, Asia and Australia.

Established in England in 1979, Harlequin's experience and reputation are founded on the manufacture and supply of a range of long-lasting portable and permanent sprung and vinyl floors, which are preferred by dancers and performers at the world's leading venues.

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## 30 YEARS OF DEDICATION

Over 30 years after its creation, Bob Dagger, founder and CEO of the Harlequin Group says, "When I launched my company, I aimed at designing floors for theatre and dance using new. advanced materials. I am pleased to note that today, nearly all of the world's most prestigious dance companies. along with many of the world's largest venues, recognise the advantages of Harlequin floors; fewer injury risks and improvement of artists' trust in the floor."

Over the years, Harlequin has been involved with extensive research into reducing dancer injury whilst placing trust and innovation at the heart of everything it does to become a brand that dancers and performers depend on.

## Overview

This guide has been divided into helpful sections: planning and preparation, product information, installation and further advice.

A dance studio is essentially a dancer's 'work' environment, the floor being the tool that is a fundamental part of their work. The purpose of this Guide to Dance Floors is to help you decide what type of floor is suitable for your needs and why making the correct choice is critical for minimising injury risk to dancers.

## Dance Floors have unique benefits

Floors developed for general industrial, commercial or even sports applications do not offer the benefits that dancers appreciate when they talk about the 'feel' of the floor. Only floors developed for dance do that.

This 'Guide to Dance Floors' is therefore concerned with floors developed specifically for dance and because there are many different styles of dance, different dance floors have been developed. As you continue to read the guide these benefits will be explained in more detail.

## DO YOU HAVE A SMARTPHONE?

Visit the Harlequin YouTube Channel for customer testimonials, instructional videos, cleaning and maintenance advice and much more. Alternatively, go to www.youtube.com/user/harlequinfloors





## A common misconception...

It is a common assumption that a well-designed sports floor will suit the needs of dancers, but there are two intrinsic differences: the construction of the sprung sub-floor and the performance surface. Many think that dancers have the same requirements as athletes when it comes to floor criteria. Sprung floors for sport are tested for adequate ball bounce and athletes require a high degree of energy return i.e. spring. Evidently, dancers have little interest in ball bounce and are focussed on a combination of shock absorption and energy return.

An ideal dance floor needs to be not too hard with just the right amount of give to avoid repetitive strain injuries, and not too soft which can be tiring and cause muscle fatigue. There should be an appropriate level of traction or slip-resistance. Too much can block movement and cause the foot to twist. Too little and it can be dangerously slippery, although certain dance styles such as ballroom require a degree of slipperiness. It should also absorb the energy of falls to protect against serious injury.

A dancer's interest in the quality and consistency of both the sprung floor and dance surface is for artistic performance as well as health reasons. Every step and jump is responded to by the quality of the floor underfoot. Every dance step or jump on an unyielding surface wears down the resilience of the body and brings about the risk of injury and the prospect of long-term damage.

## Section one

## **Planning and Preparation**

When it comes to specifying a floor for a studio or stage, there is increasing focus towards choosing dance floors that meet both performance aspirations as well as conforming to health and safety requirements to minimise the risk of falling or incurring injury.



## Find out more...

You can find out more about portable and permanent sprung floors and performance surfaces in the Product Information section of this guide.

to provide primary school children with 3m<sup>2</sup> per participant and for secondary schools and adults, 5m<sup>2</sup> per participant.

Physically it is important to have headroom so that the dancer never feels inhibited in achieving height, especially when jumping. The opportunity for one dancer to stand on the shoulders of another and raise her or his arms in the air makes a height of at least 3.5m ideal.

## **Ballet barres**

Wall-mounted barres or freestanding ones? Dance barres are a prerequisite for the dancer. Without a comfortable and sturdy barre it is hard to do the essential warmup and stretching exercises. Both amateurs and professionals can minimise the risk of injury by stretching properly to increase blood-flow to the muscles and improve flexibility whilst achieving good posture.

## Investing in a new dance floor

A new dance floor will last a long time and is an investment that dancers will appreciate in the confidence it gives to perform without holding back and the protection it affords against falls and impact injuries. But budget realities may also play a part in the final decision so making an informed decision is a choice you will ultimately live with for a long time, so please ask for advice - there's no charge.



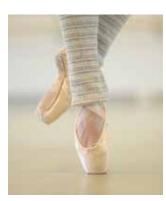


### Portable or permanent dance floors

Where the space is not dedicated to dance, or the floor will be transported to and used in other venues then a roll out, loose lay floor is a practical solution. A portable floor may also be called for if you do not own the venue or are otherwise prevented from a permanent installation. Portable vinyl floors are supplied in rolls and this is how they are stored and transported. Portable sprung floors are supplied as panels that can be linked together and vinyl flooring rolled out and taped in place.

## What is a sprung and semi-sprung floor?

A sprung floor is a floor that provides some degree of bounce and flexes under impact. Performers need a floor to absorb the shock of repeated impact to their joints and reduce injury from falls. Modern sprung floors are supported by foam backing or rubber pads while traditional floors provide their spring through bending woven wooden battens. Semi-sprung floors are designed to dampen bounce. Very thick vinyl flooring is often referred to as semi-sprung.



## Area and point elastic

An area-elastic floor flexes over a wider area to avoid the 'trampoline effect' whereas a point-elastic floor shows deflection or 'give' only at the point of contact.

A cushioned vinyl performance surface is point elastic whereas area elasticity as provided by a sprung floor is mainly preferred. No roll-out dance floor, no matter how thick or heavily cushioned can fully fit the description of a 'sprung floor'.

#### Benefits of a professional dance floor

As well as reducing the risk of getting injured through impact, slipping or falling, a professional dance floor gives dancers more confidence when performing.

The longevity of Harlequin products make it a good long-term investment and whether you dance in a village hall or a professional dance studio, a high quality, industry standard Harlequin dance floor is accessible to all.

## **Section two**

# **Dance floor product information**

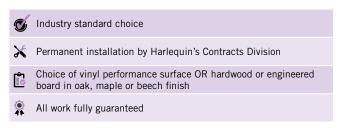
Sprung sub-floors are most commonly used in permanent installations, although Harlequin has also developed a portable panel system that is suited for touring companies or as a temporary sprung floor solution. The Harlequin range of sprung floors has been developed for use in combination with a vinyl or wood performance surface.

## Harlequin **Activity**™

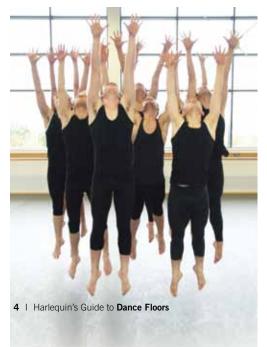
permanent sprung floor

Harlequin Activity is a permanently installed sprung floor system, based on the well-established 'triple sandwich' construction originated by Harlequin over 30 years ago. It is a fully-floating system with no fixings to the sub-floor and can be laid on any reasonably smooth and flat surface without prior preparation.

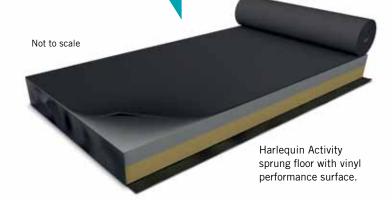
Harlequin Activity is shock-damped to avoid a 'trampoline' effect and provides area elasticity to offer identical characteristics across the whole floor. It is an 'industry standard' choice with many hundreds of installations worldwide, effectively reducing injuries to both teachers and performers.



Harlequin Activity with Harlequin Standdfast. Photo courtesy of Edinburgh's Telford College



When planning for a sprung dance floor to be installed, you will also need to allow budget for a performance surface.





### Different surface options include:

- A Harlequin vinyl performance floor, selected from our range
- Solid hardwood in beech, oak or maple
- Engineered board with a hardwood wear layer in beech, oak or maple.

If a Harlequin vinyl performance floor is chosen, a colour matched composite edging profile will be installed around the finished edges. If solid hardwood or engineered board is chosen, the skirting will be 'optional'.





Harlequin Liberty™

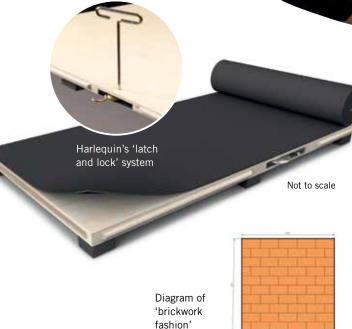
portable or permanent sprung floor

Harlequin Liberty is a modular sprung floor panel system, designed for permanent or portable installation. Panels are laid in a brickwork fashion onto the sub-floor, so that cross-joins do not coincide. The panels join together by a rounded tongue and groove, which is secured in place using our 'one turn of the key' latch and lock mechanism.

Harlequin Liberty is a relatively "springy" floor, with good area elasticity. The corners and sides of each large panel are fully supported by foam pads spaced at regular intervals, giving uniform and consistent shock damping and providing the same "feel" and energy return to one or several dancers on the same panel, and with no hard spots at the joints.

It is finished by choosing an appropriate Harlequin vinyl performance floor from our range. For permanent and semi-permanent use, installation can be carried out either by the customer themselves or by our technical team.

Harlequin Liberty sprung floor panels and the accompanying portable Harlequin vinyl performance floor can also be stored in carts, providing an easy and safe way for stage crew to move them on tour or around a venue.



- Industry standard choice
- Permanent installation by Harlequin's Contracts Division
- Available as a portable floor, ideal for touring
- Choice of vinyl performance surface
- All work fully guaranteed



## Harlequin WoodSpring™

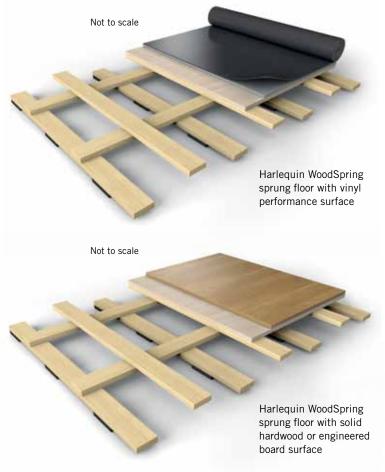
## basket weave sprung floor

Harlequin WoodSpring is a permanently installed sprung floor system. It is a modern update of the traditional 'basket weave' construction. Harlequin WoodSpring comprises a layer of select WBP (weather and boil proof) plywood, a triple-layer of custom machined southern yellow pine laid at right angles, with shock absorption and energy return enhanced by dual density elastomer blocks attached at pre-determined intervals to the underside.

### Different surface options include:

- A Harlequin vinyl performance floor
- Solid hardwood in beech, oak or maple
- Engineered board with a hardwood wear layer in beech, oak or maple.

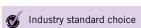
If a Harlequin vinyl performance floor is chosen, a moisture resistant suspension board will be included underneath, along with a colour matched composite edging profile, which will be installed around the finished edges. If solid hardwood or engineered board is chosen, the skirting will be 'optional'.

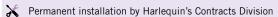


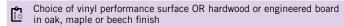


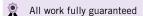


WoodSpring build up











Claire Robertson Adam Blyde and The Company - Scottish Ballet - Peter Darrell Studio - Photo Andrew Ross



## Harlequin Vitality™

## the self-install sprung floor

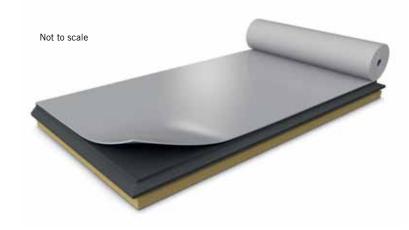
Harlequin Vitality is a self-install floor, designed to be installed by anyone with basic DIY skills. Full instructions are provided and an online instructional video is available on the Harlequin You Tube channel.

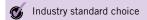
Harlequin Vitality is a cost-effective, sprung floor panel system, designed for permanent installation, which still meets the high standards of other Harlequin products.

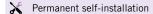
The panels are laid in a brickwork fashion onto the sub-floor, so that cross joins do not coincide. Panels join together by a special tongue and groove, which are glued during installation.

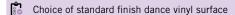
Tests have been carried out to ensure the floor meets the required safety standards, thus helping to reduce the injury risks associated with dancing or performing on a hard, unsprung floor.

Harlequin Vitality is finished by choosing an appropriate Harlequin vinyl performance floor from our range.











Harlequin's range of permanent and portable vinyl floors

Harlequin's range of vinyl floors can be used alone or as a dance surface on a sprung sub-floor. They offer added assurance for better protection from injuries for dancers, providing them with a feeling of optimum safety.

### Vinyl flooring

Vinyl floors are supplied on rolls. Some can be rolled up and stored after use, others can be permanently installed. When laid down, adjoining areas of vinyl can be taped together for temporary use or welded for permanent installation.

#### What is right for you?

Harlequin's range of surfaces have been developed to meet the needs of the dance community. The range includes vinyls with varying degrees of cushioning, durability and grip or 'traction'.

- Classical ballet for example requires a soft surface with some degree of traction.
- Street and hip-hop dancers usually wear trainers so require less traction. Too much can block movement and cause injury.
- Contemporary dance includes a lot of barefoot work and other parts of the body are in contact with the floor so a slightly cushioned surface may be preferable.

#### Loose-laid, semi-permanent or permanent?

- A loose-laid vinyl floor is rolled out and the seams are either covered with tape or temporarily secured to the sub-floor on the underside with double-sided tape.
- A semi-permanent vinyl floor is loose-laid using double-sided tape and then welded at the seams. The seams can later be cut and the floor taken up.
- A permanent vinyl floor is stuck down with adhesive and the seams sealed by hot or cold welding. These welds are unobtrusive and waterproof but can't be removed without risking damage to the floor.
- Percussive dancers usually favour hardwood because they use their shoes together with the floor to make certain sounds for the rhythm of their dance. A hardwearing vinyl or hardwood surface will withstand the rigours of percussive dance.
- A wooden surface is often specified for ballroom dance, multi-purpose use, or for designers obliged to match existing décor. Traditional wooden floors are expensive, need to be maintained properly and are more likely to warp, shrink or gouge. A hardwood surface or engineered wood is more resilient and more economical.

### Harlequin's vinyl floor application guide

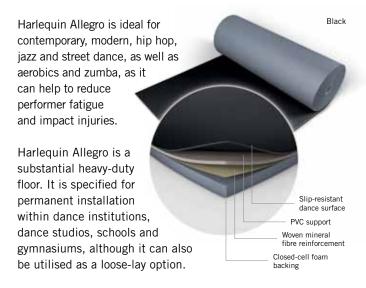
Our vinyl floor application guide provides recommendations for use, which are indicative only and are based on our extensive experience and client preferences. There are exceptions to almost every suggestion, so we strongly advise that you request samples and contact us if you have any questions.

Application	le								Specification Guide							
	Aerobics/Zumba	Ballet	Ballroom/Salsa	Contemporary	Hip-Hop/Jazz/Street	Modern	Multi-purpose	Percussive* (Flamenco, Irish, Tap)	Theatre/Opera	Permanent or Portable	Roll width (m)	Roll length (m)	Thickness (mm)	Weight (kg/m²)	Standard colours	Fire rating
Allegro	1			1	1	1				Both	1.5	10, 15, 18, 20, 25	8.5	6	Black, Grey	Cfl-s1 (EN 13501-1)
Cascade	1	1		1	1	1	1	/	1	Both	2	10, 15, 18, 20, 25	2	2.6	Black, Light grey, Dark grey, Hazelnut, White	Bfl-s1 (EN 13501-1)
Fiesta	1		1		1		1	1	1	Permanent	2	10, 15, 20, 25	2	3	Oak strip effect	Bfl-s1 (EN 13501-1)
Reversible	1	1		1	1		1	1	1	Portable	2	10, 15, 18, 20, 25	1.3	1.6	Dark grey/Light grey, Black/White, Black/Grey, Chroma key green/Yellow, Chroma key blue/Red, Fog/Tan, Hazelnut/Beige	Bfl-s1 (EN 13501-1)
Standfast	1	1		1	1	1	1	1	1	Permanent	1.5	10, 15, 20	2.6	3.4	Black, Light Grey, Grey, Dark grey	Cfl-s1 (EN 13501-1)
Studio	1	1		1	1	1				Both	1.5	10, 15, 18, 20, 25	3	2.3	Black, Grey, Dark grey, White	Bfl-s1 (EN 13501-1)

<sup>\* =</sup> Please ensure tap screws are fully tightened before use.

## Harlequin **Allegro**™

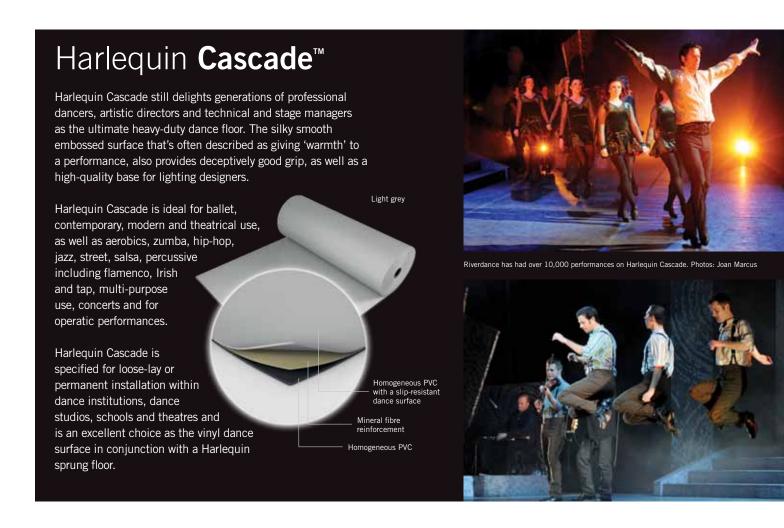
Harlequin Allegro was developed to protect against hard subfloors and is a popular choice as a semi-sprung flooring option. It's the thickest roll-out dance floor available worldwide and provides great protection for dancers due to its point-elasticity and slip-resistant dance surface.



## Harlequin **Fiesta**™

Harlequin Fiesta was developed because of the need for a floor which looked exactly like wood, but without all the associated problems of cleaning and maintenance. The floor's oak-strip performance surface provides the ideal solution.

Harlequin Fiesta is suitable for ballroom, salsa, Oak strip effect percussive including flamenco, Irish and tap, multi-purpose use, hip-hop, jazz, street, aerobics, zumba and for use in theatres and for operatic performances. Harlequin Fiesta is specified for permanent installation, when the joins are welded to provide a continuous surface. It can be laid on any hard, smooth Clear PVC sub-floor and is an excellent surface choice as the vinyl performance surface in conjunction with a Oak strip effect Harlequin sprung floor. Stable impregnated



polyester backing

## Harlequin **Reversible**™

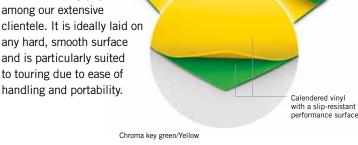
Harlequin Reversible is the original double-sided dance and stage floor. It is a lightweight calendered vinyl that rolls out quickly, lays flat and stays flat. It is hard-wearing and slip-resistant on both sides, thus providing two floors in one!

Harlequin Reversible is suitable for ballet, contemporary, percussive dance including flamenco, Irish and tap, multipurpose use, hip-hop, jazz, street, aerobics, zumba, concerts,

Harlequin Reversible is our most versatile loose-lay floor and is extremely popular among our extensive clientele. It is ideally laid on any hard, smooth surface and is particularly suited to touring due to ease of

and for operatic performances.

display, exhibitions, television, theatres

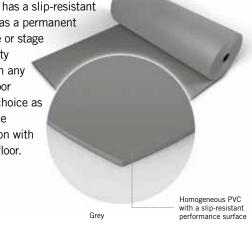


## Harlequin **Standfast**™

Harlequin Standfast is a hard-wearing, durable performance floor that is intended for permanent installation into adhesive, when the joins are heat welded to form a continuous performance surface.

Harlequin Standfast is suitable for ballet, contemporary, modern, percussive dance including flamenco, Irish and tap, multi-purpose use, hip-hop, jazz, street, aerobics, zumba, television, theatre and for operatic performances.

Harlequin Standfast has a slip-resistant surface and is ideal as a permanent multi-purpose dance or stage flooring for heavy-duty use. It can be laid on any hard, smooth sub-floor and is an excellent choice as the vinyl performance surface in conjunction with a Harlequin sprung floor.







#### **Ballet barres**

Whether you choose portable freestanding or permanent wall-mounted ballet barres, you will realise they are almost a prerequisite for the dancer. Barre exercises focus on flexibility, strength, balance, and precision. They also add a finishing touch to a dance studio or rehearsal space.

According to the National Dance Teachers Association (NDTA), the top of a barre should range between 900mm and 1200mm from the floor, allowing the hand to rest at arm's length without raising the shoulder.

### Single and double wall-mounted ballet barres

Harlequin's wall-mounted barres feature a choice of several shaped mounting plates and brackets to suit the design of your studio.

### **Professional freestanding barres**

Our professional studio quality barres are lightweight yet very stable. Constructed from anodised aluminium with a smooth silver finish, they are available with your choice of aluminium or beech barre.



#### **Tapes**

We offer a comprehensive range of single and double sided tapes for use with Harlequin floors in all portable and semipermanent situations.



Roll straps are recommended to ensure Harlequin floors stay tightly wound on their cardboard cores when stacked away or in transit. They come in a range of sizes to suit our range of dance surfaces.



Roll storage bags are recommended for protection of vinyl floors during transit and for ease of handling in touring situations. Made in durable polyester vinyl fabric with waterproof backing, they come complete with heavy-duty nylon webbing cradle straps for portability.





## **Section three**

## Installation and further advice

Harlequin Activity, Harlequin Liberty and Harlequin WoodSpring permanent sprung floors are fitted by our own Contracts Division as part of our total package to ensure your new floor is correctly installed and is fully compliant with current regulations and standards. Our Contracts Division is also expert in the installation of other permanent vinyls, conventional wooden sprung floors and basket weave or even floors to custom design.

## Our installation service includes:

- Initial guidance in selecting the most appropriate floor for your requirements.
- Design of floors to suit existing spaces and conversions.
- Design of floors for new build to architect's plans.
- Supply and installation of floors and accessories.
- Harlequin on-site installation team to meet your building programme timescales.
- Project Management for duration of the project.
- Unconditionally guaranteed against defects in workmanship.

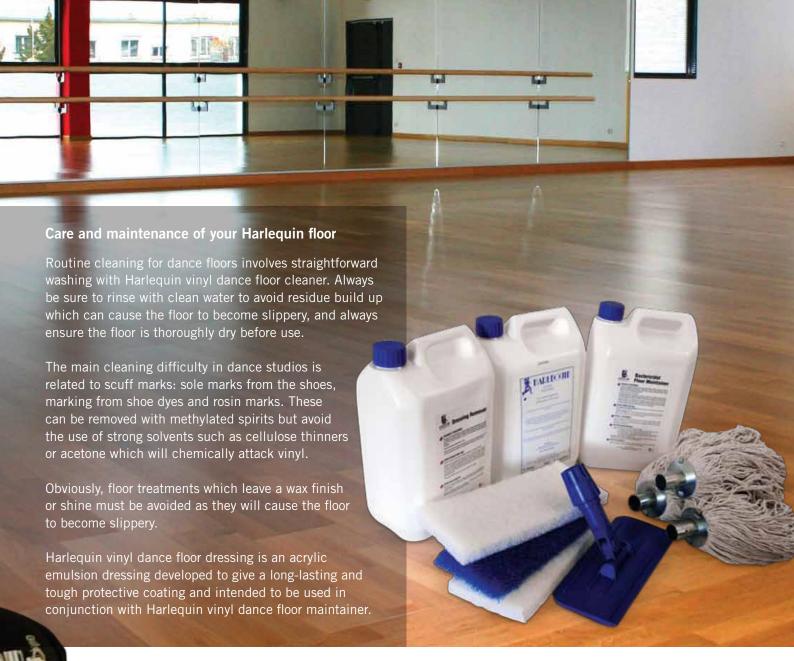
### Hiring a Harlequin Liberty sprung floor

If you need to hire a Harlequin sprung floor for a special event, for touring purposes, for a television show or even for an actor to rehearse on, then contact us to discuss your requirements. Please be aware, a Harlequin Liberty sprung floor is always used in conjunction with an appropriate Harlequin vinyl floor, which is not available to hire and will need to be purchased.

#### Hire options include:

- Delivery, installation, removal and collection everything is carried out by our highly-skilled technical team.
- Supply, delivery and collection only client to install and remove the floor themselves.
- Supply and delivery only client to install, remove and return the floor to Harlequin themselves.





In addition to vinyl dance floors and sprung sub-floors, when planning a dance studio it is worth considering additional products.

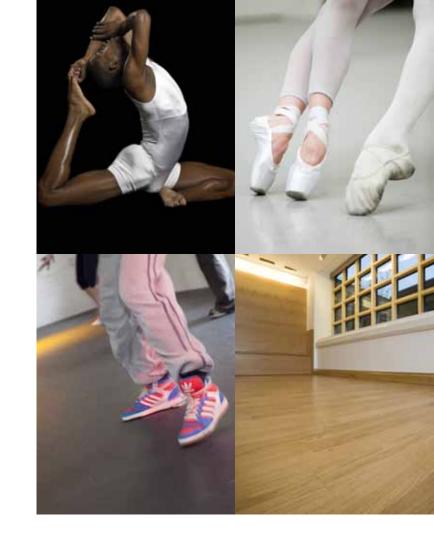
## The Harlequin Shop offers a range of products online:-

- Care and maintenance products to keep dance floors clean and hygienic.
- Move and store products for storage and transport of vinyl rolls and sprung floor panels.
- A range of tapes, single or double-sided in a choice of colours or just clear.
- Wall-mounted, floor-mounted or freestanding ballet barres.

## Green issues 🐴

Social and environmental responsibility is a core value within the Harlequin Group. We only use FSC certified sources and documentation is available regarding provenance on request.

PVC floorcoverings can be fully recycled and the Harlequin Group recycles nearly 100% of its post manufacturing waste. We also buy in further recycled PVC material, thereby actively reducing the amount of used PVC sent to landfill. As part of our commitment to Product Stewardship, we will also recycle any Harlequin product returned to our factories in Europe for recycling at the end of its life, thus minimising our and our customers' footprints.





## Harlequin Asia Limited

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