



SPORT PARQUET



Grabosport Parquet | **The simplest professional solution**



Grabo Sport Parquet | **The simplest professional solution**

Grabo sport parquet systems

Our sport parquet products are designed for both professional and amateur indoor sports activities.

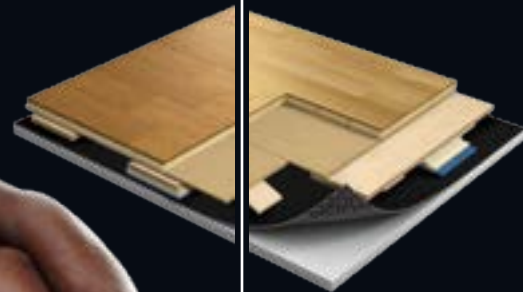
They are applicable for gym halls used for trainings and competitions in team sports (primarily ball games), gymnastics, dancing and fitness. Functionality, safety, easy installation and durability were the key aspects during the engineering of these products.

	StrongAir Elite+	StrongAir Elite	SpringAir Elite+	SpringAir Elite	JumpAir Elite	JumpAir Basic	
<ul style="list-style-type: none"> • Basketball • Futsal • Handball • Squash • Volleyball 							Competition
<ul style="list-style-type: none"> • Kindergarten • Middle School • High School • Elementary School • University 							Education
<ul style="list-style-type: none"> • Multisport gym • Fitness: Aerobic • Fitness: Cardio • Dance • Squash 							Leisure activities

Best solution



Sports flooring system specially developed for professional competition. For all kind of sport activities, particularly for indoor team ball games.



Timber sports system for use in multi-sports arenas, mainly for competition but also for leisure sport activities and wheel-chair sports.



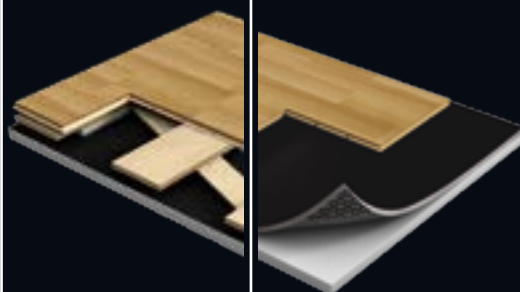
Sports flooring system engineered for amateur indoor sports. Recommended for trainings, competitions as well as leisure sports.



We developed this system for school gyms where the most important requirement is the safety of the athlete.



Flooring system for elementary schools and kindergartens. Suitable for physical education, games and training.



Ideal solution for fitness centers, dance halls and wheel-chair sports gyms.





Basic criteria for choosing a sport parquet product

Uniform properties

A good sports flooring provides equal conditions for athletes in every point of the sports ground.

Gloss/brightness

It is important that the glossy of the flooring should not be interfering for the athletes and/or for the TV broadcasting of the sporting event.

Dimensional stability

A significant criterion of the wooden sports floors is their reduced sensitivity to varying moisture content.

Vertical deformation

This is actually the braking distance the body travels after touching the ground. When too small, the ground contact goes with an impact on the body. When too large, the sporting activity causes unnecessary muscle strain.

Force reduction

Shows (in percent) how much of the energy imparted to the surface by the athlete at the time of ground contact is absorbed by the flooring system. Along with the level of force reduction, the speed of the shock absorption is equally important, as the protecting mechanisms of the human body cannot be activated till after 0.03 sec upon ground contact.

Ball bounce

One of major functions of the sports flooring is to facilitate higher sports performance. The ball bounce describes behavior of the examined flooring, in percent, as compared to the concrete surface.

Friction factor

An excessively high or a too low flooring friction is potentially dangerous for athlete's health and can affect the sports performance in an adverse way. Therefore the friction factor must be kept within the optimal limits defined by the related standard.

Wear resistance

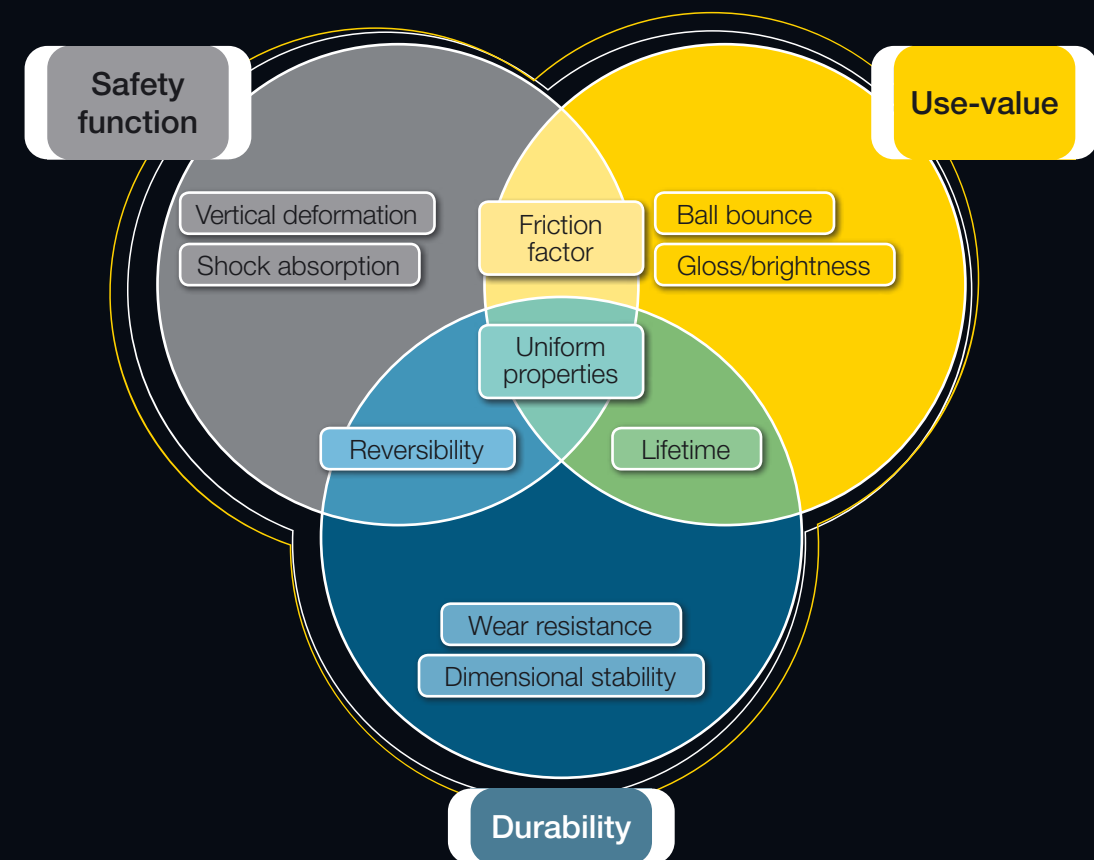
A good sports floor retains its surface properties for a long time.

Lifetime

Throughout their life the sports flooring systems are subject to the so-called fatigue loading. Resistance to fatigue stress is an indication of the product's expected lifetime.

Reversibility

The sports flooring should retain its initial resilience throughout its lifetime.





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Advantages of Grabo sport parquet systems



Uniform profile properties

The construction of the Grabo sport parquet systems ensures equal conditions for high sports performance to all athletes in every point of the sports ground.



Optimal grip

Due to the special sport varnish and surface texture, the friction coefficient meets the requirements stipulated by EN 13036-4. This helps to reduce „slip and trip” and adhesion-caused accidents and facilitate quick direction change.

< 0,03 sec

Genuine joint and muscle protection

The ShockPad Elite shock-absorbing underlay significantly reduces the load on the athlete's joints and cartilages. The system reaches the maximum of its shock absorption capacity within less than 0.03 seconds, which means that it performs its protective function when the athlete's body really needs it.



Safe ground contact

The combination of flexible and resilient elements within the balanced flooring system ensures an optimal braking distance, without excessive vertical deformation causing unnecessary muscular strain.

Competitive appearance

Careful selection of the parquet board and finishing gloss contributes to the attractive appearance of the sporting facility and a positive overall atmosphere of the sporting event.



Long lifetime

High-cycle (1 mln cycles) life testing of the system has proved its exceptional durability.

Long-term flexibility

Due to the unique 3 layer shock-absorbing foam and special flexible adhesive, these flooring systems retain their functional quality and protective capacity for a long period of time.



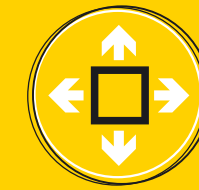
Wear resistance

The 9 layer special sport varnish is extremely wear resistant and retains its surface properties for a long time.



Good dimensional stability

Basic materials used in these systems and their specific design account for improved dimensional stability as compared to the solid wood sports parquets.



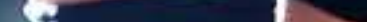
Easy installation

Due to the shock-absorbing underlay supplied as prefabricated boards, these highly functional flooring systems can be installed easily.



Excellent sport properties

The Grabo sport flooring systems resume their original shape immediately after the loading has ceased, thus contributing to higher sports performance.





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STRONGAIR⁺ Elite

StrongAir Elite+

Ideal wood floor system for high level competitions. Outstanding durable, recommended for places where mainly professionals do sporting activities.

StrongAir+ sport parquet

- Excellent dimensional stability due to specifically designed profile.
- 5,2 mm hardwood top layer: a long-term solution.
- 9 layer wear resistant sport varnish ensuring optimal grip.



ShockPad Elite

boarded shock-absorbing underlay

- **Easy and fast installation** with simple tools.
- Uniform performance in every point of the sports ground.
- Optimal strength and resilience in spite of small weight.
- Exceptionally durable, three-layer foam that works well for both small and large impacts.



Consists of three parts:

- **22 mm thick StrongAir+: sports parquet**

The nine layers wear-resistant sport lacquer provides optimum sliding friction. Durable 5,2 mm top layer. It has excellent mechanical properties due to bottom plywood layer.

Thanks to the construction the product has better dimensional stability than solid wood parquets

- **ShockPad Elite: boarded shock absorbing sub floor**

Provides consistent sports performance at all points of the sports court. This sub floor can be easily, quickly and cost-effectively installed.

- **Vaporex: damp proof membrane**

protects the system from the effects of moisture

Vaporex damp proof membrane

- Protects the sport parquet from sub-floor moisture.
- The use of damp proof membrane can reduce the overall turnover time of the installation project, as the customer does not need to wait till the concrete base dries up completely.
- Rolled form of supply facilitates the application of the product.

StrongAir Elite+

Property	Standard	Result
Description		
Thickness	EN 429	47 mm
Weight	-	16 kg/m ²
Classification area elastic A3		
Reaction to fire	EN 13501	Cfl-s1
Sport properties		
Friction	EN 13036-4	80-110
Shock absorption	EN 14808	51 %
Vertical deformation	EN 14809	2,5 mm
Ball rebound	EN 12235	99 %
Specular gloss	EN 2813	< 30 %
Technical characteristics		
Resistance to rolling load	EN 1569	≥ 1500 N
Abrasion resistance (CS10 wheel)	EN ISO 5470-1	< 80 mg/1000 cycles
Formaldehyd emission	EN 717-1,717-2	E1
Pentachlorophenol	EN 12673	no

Appearance

Oak
unique

Ash
natur



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STRONGAIR Elite

StrongAir Elite

The StrongAir Elite sport parquet system has been engineered for multisport purposes. It is especially suitable for workouts and competitions in team ball games (such as basketball, handball, volleyball, futsal etc.) as well as for gymnastics, combat sports, dancing, fitness and wheel-chair sports.



StrongAir sport parquet

ShockPad Elite boarded shockabsorbing underlay

Vaporex damp proof membrane

Components of the StrongAir Elite module are damp proof membrane (Vaporex), boarded shock-absorbing underlay (ShockPad Elite) and sports parquet (StrongAir).

Engineered for long-term use

The profile of our flooring systems contains no weak spots over the entire floor surface, which ensures equal conditions for high performance to all athletes in every point of the sports ground.

Durability through 22 mm thick StrongAir sports parquet with plywood bottom layer.

Improved dimensional stability and resilience

Basic materials used in these systems and their specific design account for improved dimensional stability as compared to the solid wood sports parquets.

UV cross-linked sport varnish

The wear resistant varnish designed specifically for this purpose is applied to the surface in 9 layers under perfectly dust-free conditions. The result is a durable, easily cleaned surface that enables rapid direction changes and protects the athlete from uncontrollable slipping.

StrongAir Elite

Property	Standard	Result
Description		
Thickness	EN 429	47 mm
Weight	-	16 kg/m ²
Classification area elastic A4		
Reaction to fire	EN 13501	Dfl-s1
Sport properties		
Friction	EN 13036-4	80-110
Shock absorption	EN 14808	55 %
Vertical deformation	EN 14809	2,4 mm
Ball rebound	EN 12235	98 %
Specular gloss	EN 2813	< 30 %
Technical characteristics		
Resistance to rolling load	EN 1569	≥ 1500 N
Abrasion resistance (CS10 wheel)	EN ISO 5470-1	< 80 mg/1000 cycles
Formaldehyd emission	EN 717-1,-717-2	E1
Pentachlorphenol	EN 12673	no

Appearance

Oak
unique

Ash
natur





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SPRINGAIR Elite+

SpringAir Elite+

We developed this sport parquet system for elementary and middle school gyms as well as for fitness halls where it is exposed to intensive use through most of the day. Recommended for team ball sports, squash, aerobic and cardio fitness. Suitable for competitions, training and free time sports.



SpringAir+ sport parquet

ShockPad Elite boarded shockabsorbing underlay

Vaporex damp proof membrane

Components of the SpringAir Elite+ module are damp proof membrane (Vaporex), boarded shock-absorbing underlay (ShockPad Elite) and sports parquet (SpringAir+).

5.2 mm hardwood top layer

The top layer of our parquet products is made of hardwood that is optimal for sporting purposes and offers long-term, durable solutions due to its robustness and excellent constructional stability. The 5.2 mm thickness allows multiple renovation of such flooring.

Improved dimensional stability and resilience

Basic materials used in these systems and their specific design account for improved dimensional stability as compared to the solid wood sports parquets.

UV cross-linked sport varnish

The wear resistant varnish designed specifically for this purpose is applied to the surface in 9 layers under perfectly dust-free conditions. The result is a durable, easily cleaned surface that enables rapid direction changes and protects the athlete from uncontrollable slipping.

Easy-to-install professional shock-absorbing underlay

Due to its boarded design, installation of the underlay is as simple as the ABC. Basic materials used in the manufacturing process ensure exceptional durability and efficiency of the product. Structure of the product allows to drastically reduce the loss of material during installation.

SpringAir Elite+

Property	Standard	Result
Description		
Thickness	EN 429	43 mm
Weight	-	15 kg/m ²
Classification area elastic A3		
Reaction to fire	EN 13501	Cfl-s1
Sport properties		
Friction	EN 13036-4	80-110
Shock absorption	EN 14808	53 %
Vertical deformation	EN 14809	3,0 mm
Ball rebound	EN 12235	98 %
Specular gloss	EN 2813	< 30 %
Technical characteristics		
Resistance to rolling load	EN 1569	≥ 1500 N
Abrasion resistance (CS10 wheel)	EN ISO 5470-1	< 80 mg/1000 cycles
Formaldehyd emission	EN 717-1,717-2	E1
Pentachlorophenol	EN 12673	no

Appearance	Oak	Ash
	unique	natur
	rustic	rustic



Grabo Sport Parquet | **The simplest professional solution**

SPRINGAIR Elite

SpringAir Elite

Indoor sport system with optimal shock absorption and vertical deformation. Recommended for schools and dance halls, where the protective functions (such as optimal slip resistance, efficient joint protection) of the flooring system are the most important properties. Components of the SpringAir Elite module are damp proof membrane (Vaporex), boarded shock-absorbing underlay (ShockPad Elite) and sports parquet (SpringAir).



SpringAir sport parquet

ShockPad Elite boarded shock-absorbing underlay

Vaporex damp proof membrane

Genuine joint and muscle protection

The low specific weight combined with normal area deformation enables the system to reach maximum shock absorption within 30 milliseconds upon ground contact, which means genuine protection of athlete's joints and cartilages, as it is triggered before the human body can activate its own protective mechanisms.

5.2 mm hardwood top layer

The top layer of our parquet products is made of hardwood that is optimal for sporting purposes and offers long-term, durable solutions due to its robustness and excellent dimensional stability. The 5.2 mm thickness allows multiple renovation of such flooring.

UV cross-linked sport varnish

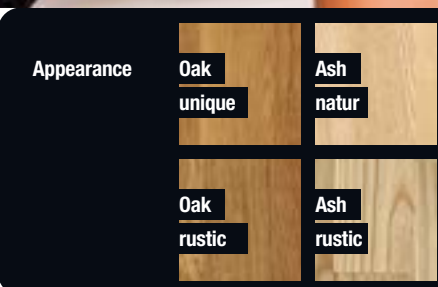
The wear resistant varnish designed specifically for this purpose is applied to the surface in 9 layers under perfectly dust-free conditions. The result is a durable, easily cleaned surface that enables rapid direction changes and protects the athlete from uncontrollable slipping.

Easy-to-install professional shock-absorbing underlay

Due to its boarded design, installation of the underlay is as simple as the ABC. Basic materials used in the manufacturing process ensure exceptional durability and efficiency of the product. Structure of the product allows to drastically reduce the loss of material during installation.

SpringAir Elite

Property	Standard	Result
Description		
Thickness	EN 429	41 mm
Weight	-	13 kg/m ²
Classification area elastic A4		
Reaction to fire	EN 13501	Cfl-s1
Sport properties		
Friction	EN 13036-4	80-110
Shock absorption	EN 14808	56 %
Vertical deformation	EN 14809	3,2 mm
Ball rebound	EN 12235	100 %
Specular gloss	EN 2813	< 30 %
Technical characteristics		
Resistance to rolling load	EN 1569	≥ 1500 N
Abrasion resistance (CS10 wheel)	EN ISO 5470-1	< 80 ^{mg/1000 cycles}
Formaldehyd emission	EN 717-1, 717-2	E1
Pentachlorphenol	EN 12673	no





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JUMP AIR Elite

JumpAir Elite

The JumpAir Elite sport parquet system has been engineered for kindergartens and elementary schools. It is equally suitable for holding PE classes, games and trainings.



Components of the JumpAir Elite module are damp proof membrane (Vaporex), boarded shock-absorbing underlay (ShockPad Elite) and sports parquet (JumpAir).

Properties:

- Area elastic sports flooring (Category A4 as per EN 14904).
- Efficient joint and cartilage protection.
- Wear resistant surface with optimal grip.
- Uniform performance in every point of the sports ground.
- Excellent dimensional stability.
- Easy installation.

JumpAir Elite

Property	Standard	Result
Description		
Thickness	EN 429	39 mm
Weight	-	12 kg/m ²
Classification area elastic A4		
Reaction to fire	EN 13501	Dfl-s1
Sport properties		
Friction	EN 13036-4	80-110
Shock absorption	EN 14808	59 %
Vertical deformation	EN 14809	3,2 mm
Ball rebound	EN 12235	95 %
Specular gloss	EN 2813	< 30 %
Technical characteristics		
Resistance to rolling load	EN 1569	≥ 1500 N
Abrasion resistance (CS10 wheel)	EN ISO 5470-1	< 80 mg/1000 cycles
Formaldehyd emission	EN 717-1, 717-2	E1
Pentachlorophenol	EN 12673	no

Appearance

Oak
unique

Ash
natur





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JUMP AIR Basic

JumpAir Basic

JumpAir Basic is applicable primarily in, cardio training centers fitness and dancing halls.

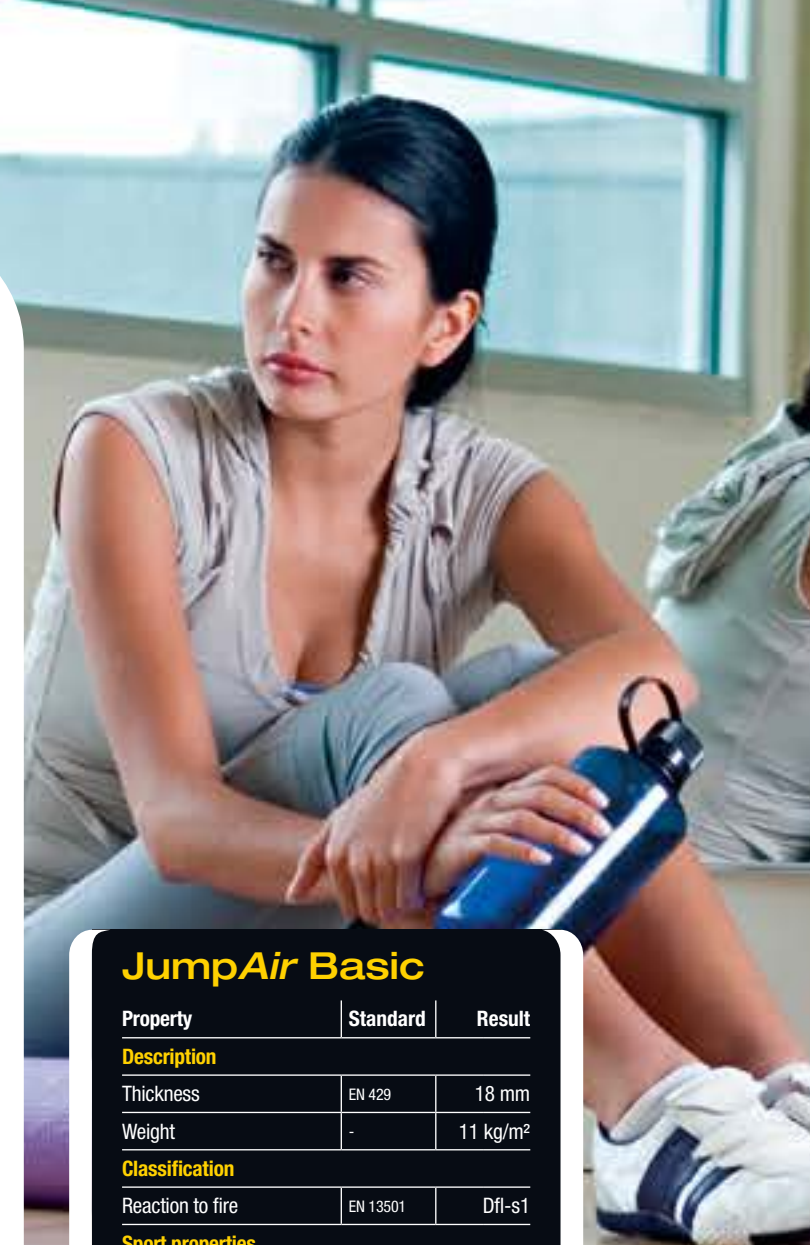
It can also be installed in gyms, studios, or in sports rooms of homes, childcare and educational institutions.



Components of the JumpAir Basic module are damp proof membrane with an integrated foam layer (Vaporex40) and the sports parquet (JumpAir).

Properties:

- Simple construction.
- Special sport varnish ensuring excellent wear resistance and optimal grip.
- Uniform performance in every point of the sports ground.
- Fast installation.



JumpAir Basic

Property	Standard	Result
Description		
Thickness	EN 429	18 mm
Weight	-	11 kg/m ²
Classification		
Reaction to fire	EN 13501	Dfl-s1
Sport properties		
Friction	EN 13036-4	80-110
Shock absorption	EN 14808	17 %
Vertical deformation	EN 14809	0,4 mm
Ball rebound	EN 12235	99 %
Specular gloss	EN 2813	< 30 %
Technical characteristics		
Resistance to rolling load	EN 1569	≥ 1500 N
Abrasion resistance (CS10 wheel)	EN ISO 5470-1	< 80 mg/1000 cycles
Formaldehyd emission	EN 717-1, 717-2	E1
Pentachlorophenol	EN 12673	no

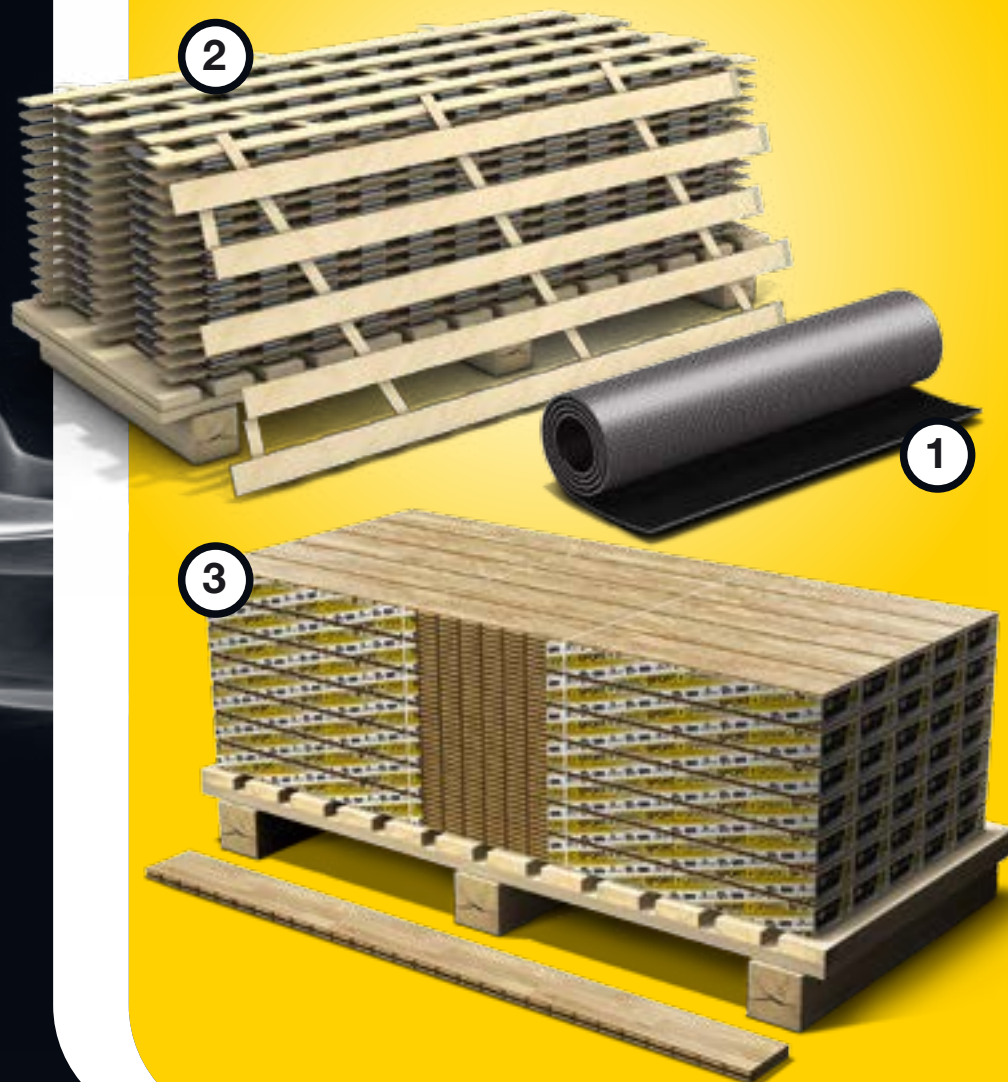




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Delivery, storage and installation

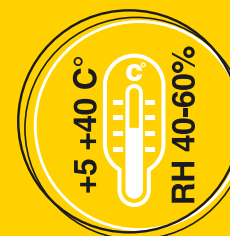
The three major elements of the Grabosport parquet system, the parquet (3) and the boarded shock-absorbing underlay (2) are supplied separately stacked on pallets, while the damp proof membrane (1) in rolls.



Do not pile more than two bundles of parquet boards on top of one another. Batches of underlay components should not be piled for transportation. After the product has arrived at the place of installation, cut off the straps holding the batches together. Components of the flooring module should be stored indoors at a constant temperature between +5 and +40 °C and at 40–60 % relative humidity. Store the boards at the intended place of their installation for approximately one week before application.

The sport parquet components should be protected from the sub-floor moisture. We recommend the use of Grabo Vaporex damp proof membrane as moisture barrier instead of traditional polyethylene film. Due to its specially engineered surface Grabo Vaporex provides appropriate ventilation. By the walls the edges of the membrane should be folded up for 10 cm in order to facilitate escape of the moisture from the sub-floor. Prior to any installation the moisture content of the sub-floor should be measured. While the measured moisture content stays within 1,8–5,0 CM%, or else in the case the surface area intended for parquet floor installation exceeds 800 m², the use of Grabo Vaporex damp proof membrane is recommended. Flooring installation cannot commence at moisture content above 5 CM%.

Detailed installation guide is included in the product description which is inserted in the packaging of the sport parquet.





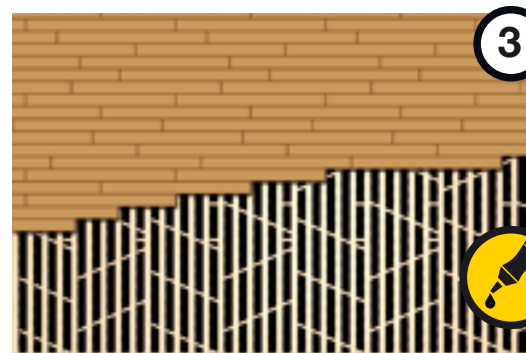
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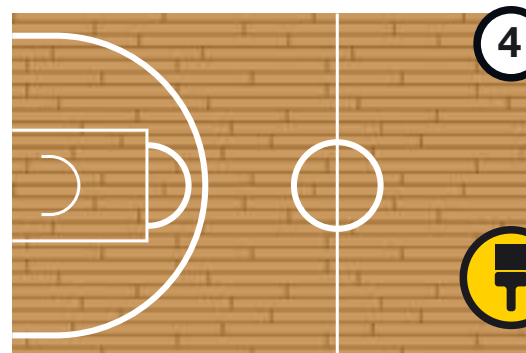
1 Vaporex
Grabo Vaporex should be laid with the pattern side facing down and adjusted edge-to-edge; the edges then should be closed with an at least 5 cm wide vapor-tight tape.



2 ShockPad
The shock-absorbing underlay should be laid across the hall (along its shorter side). The boards should be stitched together.



3 Parquet
The parquet boards should be laid down the longer axis of the hall and glued to the underlay with a flexible adhesive. The boards should be interlocked by applying a waterproof tongue and groove glue.

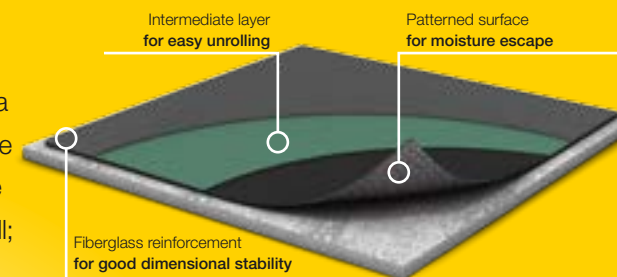


4 Game line painting
Use Grabo Color two-component type paint to draw the game lines in order to mark different parts of the hall and make it playable.

Accessories

Grabo Vaporex

Vaporex is a fiberglass reinforced waterproofing underlayment that creates a vapor barrier between the subfloor and the flooring materials, assuring good moisture control. Supplied in rolls, it is easy to install; the fiberglass reinforcement ensures its excellent dimensional stability. The use of Vaporex helps to increase the durability of the flooring and reduce the installation time.



Property	Standard	Vaporex	Vaporex40	Vaporex T
Width	EN 426	145 cm	145 cm	200 cm
Standard Length	EN 426	25 45 m ±10%	25 m ±10%	35 m ±10%
Thickness	EN 428	1,4 mm	4,0 mm	1,0 mm



Grabo Color

This is a two-component polyurethane paint for drawing the game lines to mark and distinguish between various parts of the sports ground. Available in yellow, blue, red, white and black colors. Application rate for game lining: 1 liter paint is enough to draw a 5 cm wide, 100 m long line in two coats.

Grabo ProtectSport

This is a temporary shielding to apply for non-sporting events. It helps to protect the valuable sports flooring from accidental damage or contamination. Easy to roll and unroll. Colored and transparent options are available.



Property	Standard	Protect Sport	Protect Sport T
Width	EN 426	140 cm	200 cm
Standard Length	EN 426	25 m ±10%	35 m ±10%
Thickness	EN 428	1,5 mm	1,0 mm
Available colors		gray, green	transparent



SPORT
PARQUET



Graboplast
Floor Covering Manufacturers Ltd.
H-9023 Győr, Fehérvári út. 16/b. Telefon: (+36) 96 506-132
www.graboplast.com