



marmoleum[®] sport

creating better environments

forbo

FLOORING SYSTEMS



THE INNOVATIVE SPORTS FLOORING

The name Forbo Flooring links industry professionals to linoleum - an obvious connection, since Forbo is the world market leader with a market share of over 60% in linoleum flooring products. More than 100 years of experience and modern technology guarantee the highest quality of the best environmental performing flooring product today.

For the sports and leisure sector Forbo is setting a new standard introducing the **Marmoleum Sport Move** range. Connected to themes like 'streetwise' and 'modern toughness' these new colours provide inspiring sports flooring design possibilities. Future-oriented, the collec-

tion continues consistently the chosen path and offers the normative required material thickness of **3.2 mm** for all colours offered, next to an extensive range of **4.0 mm** items. Marmoleum Sport meets the requirements of modern sports and multipurpose facilities.



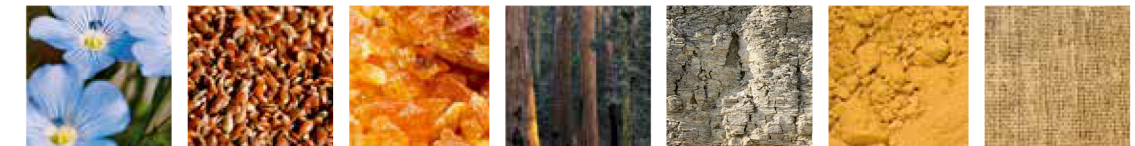
THE NATURAL WINNER

It is the composition of ingredients that makes Marmoleum Sport so unique. It meets all the requirements of an ecologically superior product construction and combines a wealth of positive performance characteristics, the end result of the material composition as such.

Linseed oil obtained from the seeds of the flax plant is the main component of Marmoleum Sport. Together with natural rosin, limestone and woodflour the linoleum substrate is created, which is coloured by adding natural or nature-based colour pigments.

This still flexible substrate is pressed onto a jute woven fabric and then, in large drying chambers, transforms into a tough, durable sports flooring. Using green energy, the production process of Marmoleum Sport is a very environmentally friendly process.

89% NATURAL RAW MATERIALS - 76% RAPIDLY RENEWABLE - 50% RECYCLED CONTENT



High level sports flooring performance

- Flexible and elastic
- Multi-purpose (in combination with the appropriate subfloor system)
- Slip resistant
- Durable
- Insensitive to friction heat
- Warm to touch
- Flame retardant
- Suitable for underfloor heating
- Cigarette burn resistant

Unique sports floor offer

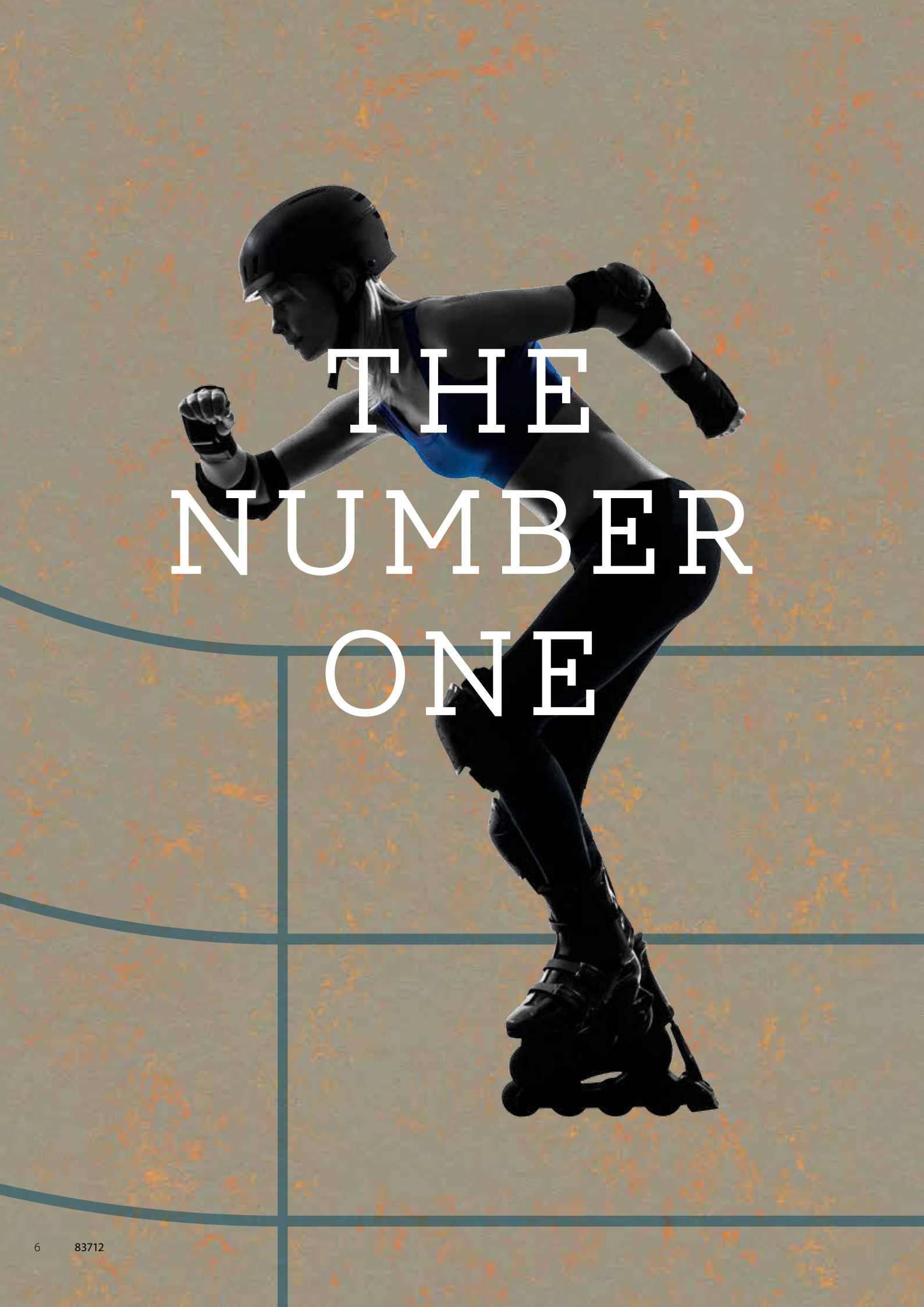
- Available in both 3.2 and 4.0 mm thickness
- Marmoleum Sport Move design
- Wide range of colours that can be combined

Natural and hygienic

- Made from natural raw materials
- Hygienic
- Bacteriostatic
- Sustainable

THE NATURAL WINNER

83210



THE NUMBER ONE

marmoleum® sport

THE NUMBER ONE CHOICE FOR SPORTS AND MULTIPURPOSE HALLS

Floor coverings in sports and multipurpose halls have extensive requirements to meet, ranging from professional and semiprofessional sports to jamborees, festivities and school exams. Depending on the usage profile, different floor systems are used.

A sports floor construction needs to fulfill safety and sport functional features: a sports floor with Marmoleum Sport as a top coating diminishes the risk of injuries, reduces the risk on muscle fatigue and overstraining. The top layer guarantees optimal performance in terms of anti-slip and glide.

Whether it's handball, indoor hockey, basketball, volleyball, indoor soccer, roller sports, dancing, athletics or gymnastics Marmoleum Sport does it all. Also driving with heavy loads or transporting weighty exercise equipment cannot harm the linoleum, in combination with the appropriate subfloor. Even festivities like partying and dancing will leave this floor unimpressed,

street shoes, cigarettes, drinks, Marmoleum Sport can deal with it.

The extreme durability of linoleum guarantees even after years of intensive use the ability to deliver a top performance. Best cleaning and maintenance properties ensure that the floor looks good over many years.



THE ALL-ROUND TALENT WITH PERSEVERANCE

According to the German standard **DIN V 18032-2** and European **EN 14904** all sport functional and technical characteristics are covered. Taking into account the range of requirements in sports halls in these standards for linoleum sport floor coverings a material thickness of 3.2 mm is recommended.

3.2 mm corresponds to the latest state of the art performance requirements and is



in accordance with applicable national and European Standards.

3.2 mm poses significant technical, economic and design advantages:

- Easy application through lower weight
- Cost savings through lower material price
- Most environmental sustainable solution
- All colours available in 3.2 mm



A VISUAL CHAMPION

Modern toughness and Streetwise

The exciting Marmoleum Sport Move collection exists of four elegant neutral colours that can be used as a solid base for multiple floors in sports areas. The modern subtle marbling of 83707 and 83711 and the matt surface create a solid and elegant base for any activity. In other words: modern toughness. The colours 83712 and 83715 are pleasantly surprising with their orange and yellow veins. It resembles with playing your favorite sport where it started: on the street.

The Marmoleum Sport collection exists of nine expressive but friendly marbled colours which cover the complete spec-

trum. Ranging from yellow, orange, red, greens and blues, to two complementary neutrals. The chosen colours can easily be combined on the playground, to ensure an attractive and inspiring floor is created. In the end the most dominating area in your sports hall.

Invisible welds

For Marmoleum Sport and Marmoleum Sport Move matching coloured welding rods are available for all colours. Practical and decorative, this colourful welding rod harmonises perfectly with the Marmoleum Sport colours. Marmoweld is used to create an invisibly sealed hygienic floor.



Marmoleum Sport Move

The exciting Marmoleum Sport Move collection exists of four elegant neutral colours that can be used as a solid base for multiple floors in sports areas.



83715
3,2 mm LRV 34 %
NCS S 4010 - Y10R - NCS S 3050 - G90Y



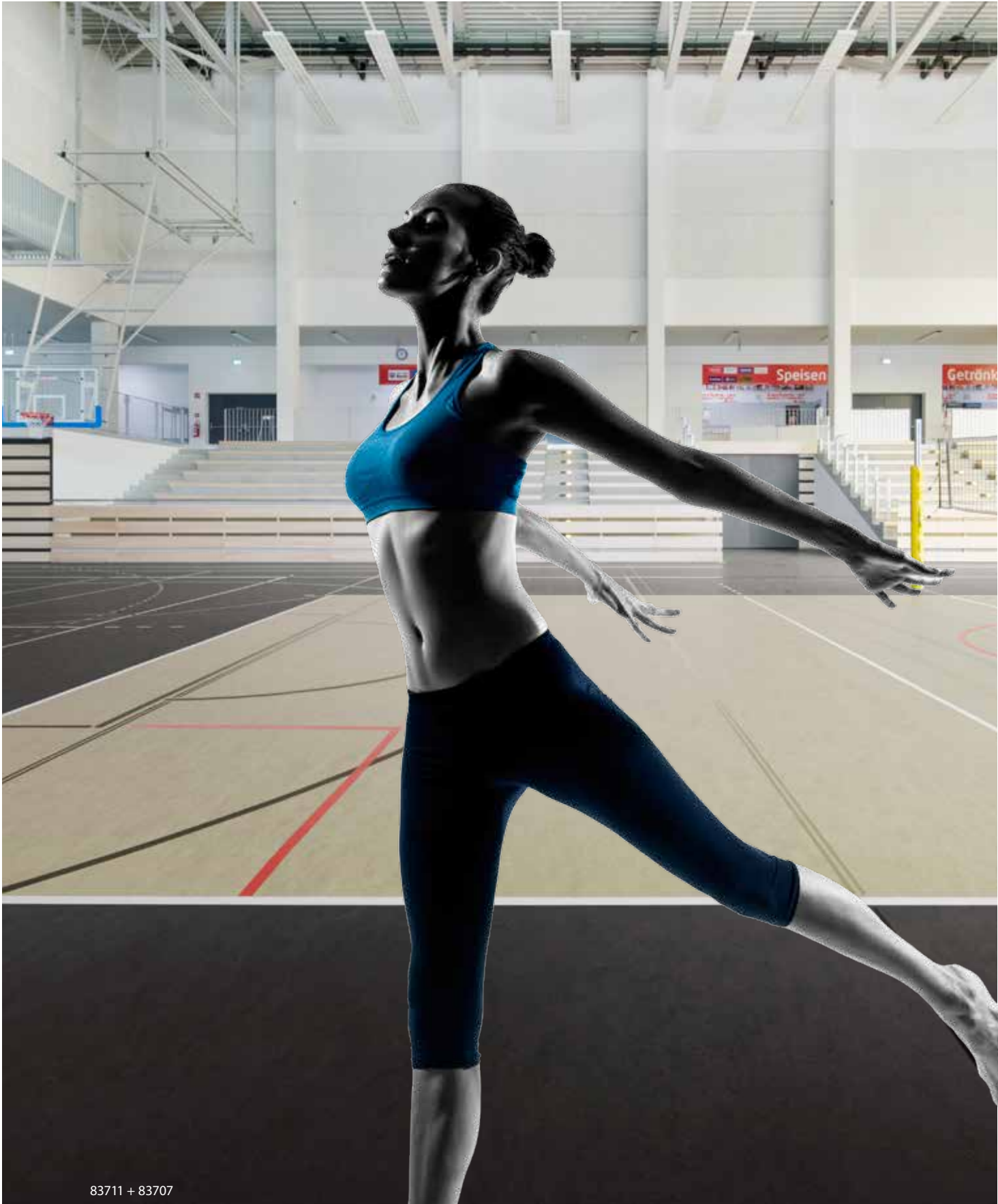
83711
3,2 mm LRV 49 %
NCS S 2010 - Y



83712
3,2 mm LRV 31 %
NCS S 4502 - Y - NCS S 1050 - Y50R



83707
3,2 mm LRV 7 %
NCS S 8500 - N



Marmoleum Sport

The 9 vivid colours have been designed based on colour patterns commonly applied in sports halls. The colours can be combined to add accented shapes in the floor for certain sports applications and are dirt concealing.



83208
3,2 / 4,0 mm

LRV 39 %
NCS S 2050 - Y20R



83878
3,2 / 4,0 mm

LRV 29 %
NCS S 3050 - G80Y



83120
3,2 / 4,0 mm

LRV 51 %
NCS S 2010 - Y20R



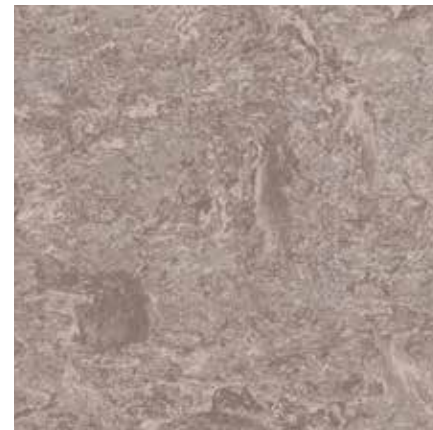
83176
3,2 / 4,0 mm

LRV 33 %
NCS S 2050 - Y30R



83212
3,2 / 4,0 mm

LRV 23 %
NCS S 4040 - G40Y



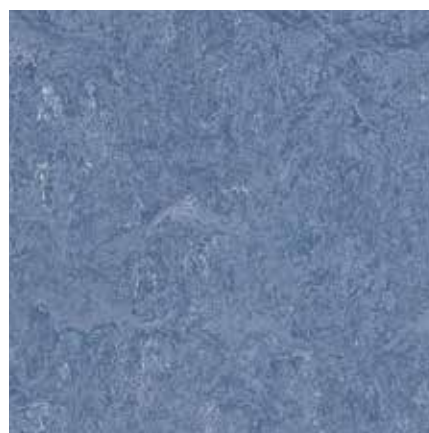
83146
3,2 / 4,0 mm

LRV 27 %
NCS S 4502 - Y



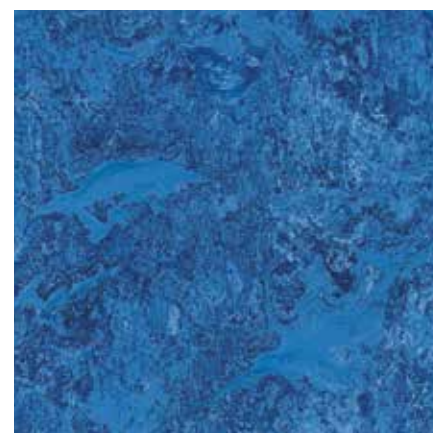
83215
3,2 mm

LRV 13 %
NCS S 2070 - Y90R



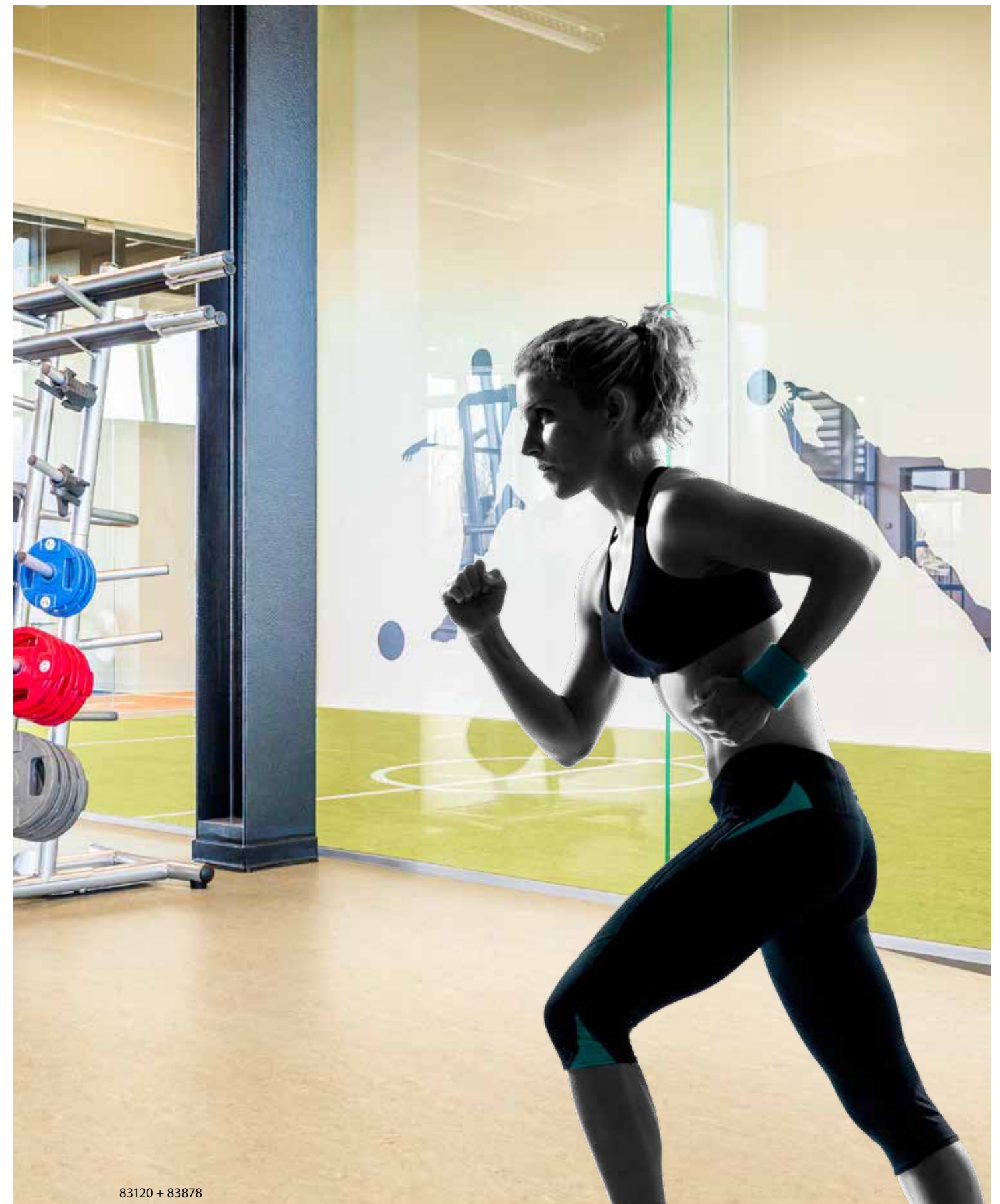
83055
3,2 / 4,0 mm

LRV 23 %
NCS S 4020 - B



83210
3,2 / 4,0 mm

LRV 14 %
NCS S 4040 - B



83120 + 83878

DESIGN POSSIBILITIES



APPLICATIONS

Marmoleum Sport can be used as floor covering for several types of sports flooring systems according to EN 14904. The two most commonly used are area elastic and point deformation.

Area elastic (type A) sports flooring system

Marmoleum Sport is perfect for use in area elastic (sprung) sports floor constructions. Area-elastic floors minimise the risk of injury by spreading the force of an impact over a larger area. The combination of a sprung system with a Marmoleum Sport floor covering provides increased force reduction and vertical deformation. This makes **it suitable for more demanding sports**. The construction of the sprung undercarriage determines the exact performance values.

Point elastic (type P) sports flooring system

Marmoleum Sport can also be used to

create point elastic flooring systems. Marmoleum Sport Elastic is a combination of Marmoleum Sport and a high-tech rubber underlay to cushion shocks directly at the point of impact. This helps to reduce the risk of repetitive stress problems associated with hard surfaces. Nor does the weight of the user determine the effectiveness of the cushioning effect, as with area elastic systems. Point elastic systems are therefore **ideal for children's play areas and lower impact sports**. Important to note is that point elastic sports floors are more vulnerable for indentation issues than area elastic floors, therefore too heavy point loads should be avoided in order to ensure the longest possible lifetime of the floor.

MARMOLEUM SPORT ELASTIC

Marmoleum Sport + an advanced rubber underlay = Marmoleum Sport Elastic

Marmoleum Sport Elastic is a point elastic (type P) floor covering that consists of two layers that work together to provide a perfect base for low-impact sports. The shock pad underfloor is made of recycled rubber and foam particles, bound with

polyurethane. The top surface is Marmoleum Sport. The rubber underlay and Marmoleum Sport are installed separately. The underlay can be affixed directly to the subfloor, which makes it a simple and cost effective sports floor system.

FORBO FLOORING, THE MULTI-TALENT COMPANY

Forbo Flooring Systems can enhance any interior environment by offering innovative and beautifully designed flooring products delivering long life and consistent high quality. At the same time we help to take care of the natural environment through our commitment to sustainable development and responsible raw material procurement and manufacturing processes.

We have a comprehensive product offer including linoleum, project vinyl, carpet tiles, flocked flooring and fully integrated entrance systems.

ENTRANCE: A well designed entrance flooring system will prevent dirt and moisture from being tracked in and thereby prolong the life of interior flooring and reduce cleaning, repair and overall maintenance costs. Our high performance Nuway and Coral entrance systems have been helping to provide clean and safe environments in every type of building for decades.



CANTEEN: Marmoleum is practical, hard wearing as well as colourful and fun. The Topshield2, water based finish, prevents dirt and dust from penetrating Marmoleum, making it reassuringly easy to keep clean. Other flooring solutions for this area: LVT Allura and Eternal.



TOILETS AND DRESSING ROOM: The safety vinyl flooring from Forbo flooring is tough, long lasting and extremely wear resistant. All particles are so hard that they cannot wear, providing slip resistance that lasts throughout the life of the floor.

BOARD ROOM: Today's modern office environments with open office systems are designed for and associated with flexibility, to accommodate frequent layout changes. Choose from our broad collection textile flooring whether it is Flotex, Tessera or Westbond carpet tiles or our needlefelt collection.

















TREATMENT ROOM: For this room we can offer you different flooring solutions: Our hard wearing Marmoleum ranges offer constant protection in infection control for all areas. Our Project Vinyl ranges offer an easily maintained flooring solution for all general circulation areas.



83208 + 83215

TECHNICAL SPECIFICATIONS


Marmoleum Sport meets the requirements of EN-ISO 24011, EN 14904 and DIN V 18032-2

	Total Thickness	EN-ISO 24346	3.2 mm	4.0 mm
	Roll Width	EN-ISO 24341	2.00 m	2.00 m
	Roll Length	EN-ISO 24341	≤ 28m	≤ 28m
	Total Weight	EN-ISO 23997	3.7 kg/m²	4.6 kg/m²
	Flexibility	EN-ISO 24344	50 mm	60 mm
	Light reflection	DIN 5036-3	≥ 0.20 (except colour 83210, 83215, 83707)	≥ 0.20 (except colour 83210, 83215, 83707)
	Light Fastness	EN-ISO 105-B02	Method 3: blue scale minimum 6.	
	Acoustical impact noise reduction	EN-ISO 717-2	6dB	7dB
	Castor Chair continous use	EN 425	No effect	No effect
	Residual Indentation	EN-ISO 24343-1	≤ 0,15 mm	≤ 0,20 mm
	Bacteriostatic properties		yes	yes
	Cigarette resistance	EN 1399	There is no melting of the surface by cigarettes, which is resistant to cigarette burns. Marks left on linoleum as a result of stubbed-out cigarettes can be removed.	
	Slip Resistance	EN 13893	DS ≥ 0.30	DS ≥ 0.30
	Body voltage	EN 1815	< 2 kV	< 2 kV
	Thermal conductivity	EN 12524	0.17 W/m-K	0.17 W/m-K
	Life Cycle Assesment		yes	yes

Marmoleum Sport meets the requirements of EN 14904

EN 14904
CE

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	Reaction to fire	EN 13501-1	C _{fl} S1	C _{fl} S1
	Friction	EN 13036-4	80-110	80-110
	Resistance to rolling load	EN 1569	Pass	Pass
	Resistance to wear	EN-ISO 5470-1	≤ 1000mg	≤ 1000mg

Marmoleum Sport meets the emission requirements and is AgBB by DIBt building approval: approval no. Z-156604-627]

Certification from sports associations, e.g. Fiba or IHF, is only provided on the surface layer in combination with the subfloor. There are examples in the market available of complete floor systems which use Marmoleum Sport that received certificates from either Fiba, IHF or other sport associations.

Forbo Flooring Systems is part of the Forbo Group, a global leader in flooring, bonding and movement systems, and offers a full range of flooring products for both commercial and residential markets. High quality linoleum, vinyl, textile, flocked and entrance flooring products combine functionality, colour and design, offering you total flooring solutions for any environment.



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