



Subflex

Sports wood subconstruction

Gerflor[®]



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Gerflor, where champions play™



Indoor synthetic floors:

The best performing products on the market

Taraflex® has been one of the pioneer in 1947 when developing synthetic floors and is today the world leading brand for indoor sports floor.

With a complete range of products, Gerflor offers the perfect solution adapted to all users and usages, from low impact activities through to elite and performance sports.

Gerflor sets itself the highest standards when it comes to the environmental quality of its products.

Made in France 

Taraflex® sport floors are recognised all over the world

Every day more than

6 millions children

play on a Taraflex® sports floor.

3500

high level competitions

per year are played on a Taraflex® sports floor.



Hardwood flooring systems:

More than 100 years
Of experience



Founded in 1872, Connor Sports® is the market leader in portable and permanent hardwood sports flooring systems. Connor Sports® professional engineers lead the industry in new product design and development, setting the standard for innovative solutions in sports surfacing.

In 1914, Connor Sports® installed the first basketball court in the USA.

In the late 90's, Boston Celtics selected Connor Sports® to repurpose their famed parquet into a portable flooring system.

Please check availability in your zone with your local representative



Outdoor play areas:

World's leading outdoor
Sport surface

Made in France 



In 1974, Sport Court® created the outdoor game court. Since then, over 150,000 courts have been installed worldwide.

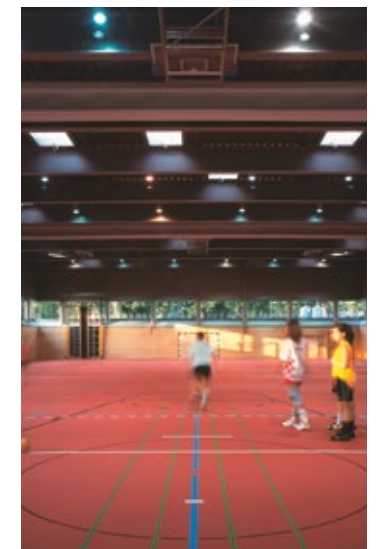
Sport Court®'s superior outdoor play surface is designed to:

- keep athletes safe
- allow for year-round sports activity
- eliminate costly annual maintenance



Indoor sport areas:

Historic leader
in linoleum sport flooring



DLW Linoleum has been manufacturing high class sport linoleum for over 30 years and is proud to deliver uncompromising product quality. Adapted to both specific and multi-function use, linoleum high performance floors are a great option to address various applications, from kindergartens to multipurpose halls and fitness centres. Thanks to its acknowledged sustainable features, millions of square metres of sport linoleum have been installed over the years and still convince new generations of users.

Partner of major international events



Players health above all



Play in a healthy environment

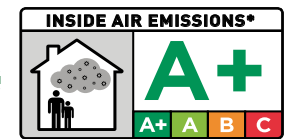
Improve indoor air quality

We are spending 90% of our time indoor: fitness centre, public building, office, home... Knowing that most of building materials emit Volatile Organic Compounds (VOC), indoor air quality is a major challenge for the health. That is why we have reduced VOC emissions of our products at a level 10 times below norms standards, almost at zero. Moreover, our products do not emit formaldehydes.



Certifications

All Gerflor products are certified A+, it is the best level of emissions for building products. Also, Gerflor products are certified by Floorscore. Most of our sports products emit less than 100µg/m³ after 28 days.



Hygiene also goes through floors

Antibacterial activity

All our heterogeneous PVC floorings notably with ProtecSol® treatment offer a 99% antibacterial performance according to ISO 22196 norm.

All our Linoleum flooring have natural antibacterial properties, thanks to linseed oil and pine resin used for their manufacturing process. The respect of maintenance protocol permits to maintain this antibacterial activity over time.

COVID-19

ISO 21702 norm permits to test antiviral activity on plastic and other non porous surfaces. Tests are driven by an independant laboratory (Virhealth) according to ISO 21702 norm. It shows that Gerflor floors with ProtecSol® or Neocare surface treatments have an antiviral activity against coronaviruses : it reduces virus quantity by 99.7% after 2 hours.



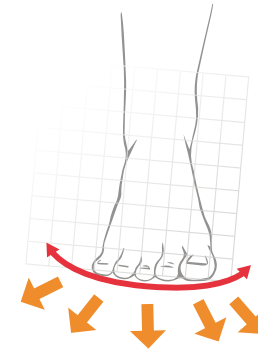


Safety & performance

are the most important characteristics of a sports floor and are evaluated according to shock absorption, friction coefficient, vertical deformation and ball bounce.

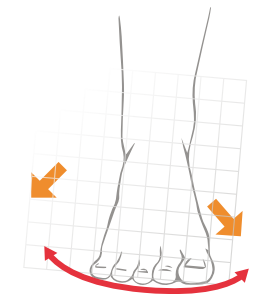
Shock absorption (force reduction)

It's about floor capacity to cushion impacts of any type of activity (running, jumping, falling and diving on floor). A point-elastic floor will deform only around the impact point and will disperse energy in the material to insure safety and comfort for the player.



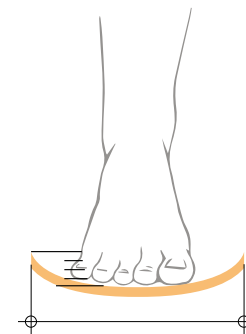
Friction

It is necessary for a sports floor to have a uniform friction coefficient in all directions. This characteristic aims to optimize safety of player footholds and to reduce injury risk due to a movement blocking. This property is linked to the friction risk which provokes burns while diving on the floor.



Vertical deformation

Floor vertical deformation traduces the combination of comfort (maximum flexibility of the material) and foot stability (minimum flexibility of the material). Surface deformation of point-elastic and combined materials usually insure a greater comfort than harder area-elastic materials.



Ball bounce

For the good practice of ball sports, it is necessary to have a uniform ball bounce over the entire playing surface and the highest possible (more than 90% compared to concrete surfaces).



Choosing the right sports floor

Indoor sports floor characteristics

Taraflex® floors wide range

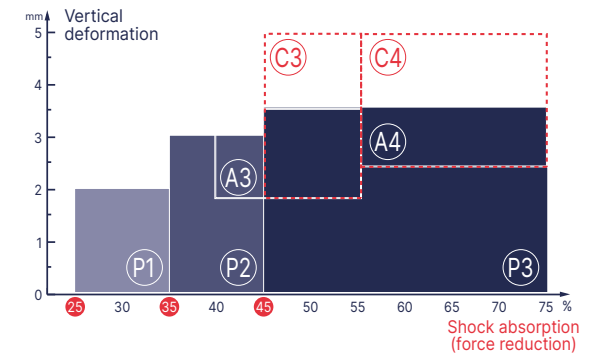
permits to define which product is the most adapted to the sport practice (game level, practice time, game intensity, multidisciplinary, exclusive practice, type of user...).

Norm values

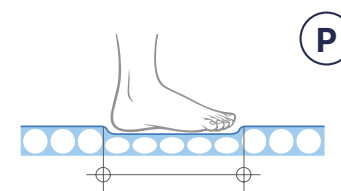
To ease this choice, sports floors are classified into 3 categories defined by EN 14904 standards:

- P Point-elastic floors
- A Area-elastic floors
- C Combined floors

The objective is to draw attention to the necessity of installing safe, comfortable floors, reducing the risk of injuries and traumas.



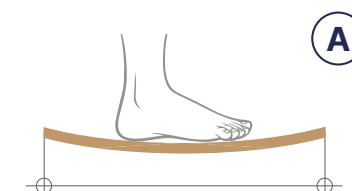
EN 14904	Description	Standard	Requirements	Units
Sport properties	Vertical deformation	EN 14809	≤ 3,5	mm
	Shock absorption (Force reduction)	EN 14808	≥ 25	%
	Friction coefficient	EN 13036-4	80 - 110	-
Technical characteristics	Ball bounce	EN 12 235	≥ 90	%
	Indentation resistance	EN 1516	≤ 0,5	mm
	Wheel resistance	EN 1569	≥ 1500	N
	Impact resistance	EN 1517	≥ 8	N/m
	Abrasion resistance	EN ISO 5470-1	≤ 1000	gram
	Gloss	EN ISO 2813	≤ 30	%
	Flatness	EN 13036-7	< 6mm/3m	-
Essential characteristics	Fire rating	EN 13501-1	Cfl-S1	-
	Formaldehyde emission	EN 717-1/2	≥ E1	-
	Pentachlorophenol emission	EN 12673	< 0,1	%



Adapted to the greatest number of players (children, teenagers, adults) and sports activities

Point-elastic floors

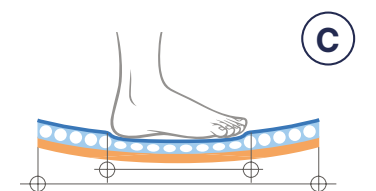
Point-elastic floors compress around the impact point to absorb the force of the impact. Point-elastic material deformation is a comfort indicator and makes this kind of floor particularly adapted to children. These properties make it more comfortable to walk and run, for every players.



Adapted to rolling sports and high-level basketball practice

Area-elastic floors

Area-elastic floors reduce the impact force by spreading the energy on a larger surface than the impact point.



Adapted to intense to high-level practice

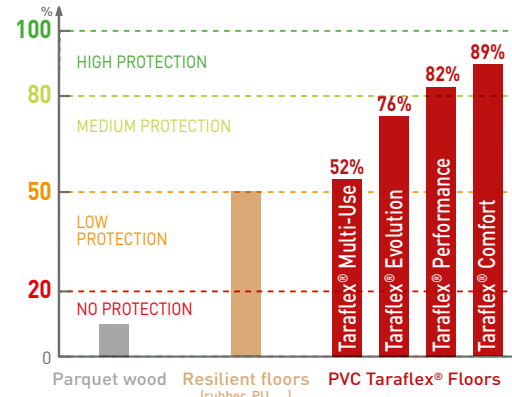
Combined floors

Combined floors are the association of a point-elastic floor and an area-elastic floor. They combine shock absorption and elasticity properties of these two categories. For example, Subflex Taraflex® Evolution is in this category, by association of Taraflex® Evolution, point elastic floor and Subflex cushioning wood subconstruction with foam.

Why should you choose Taraflex®?

1 For protection

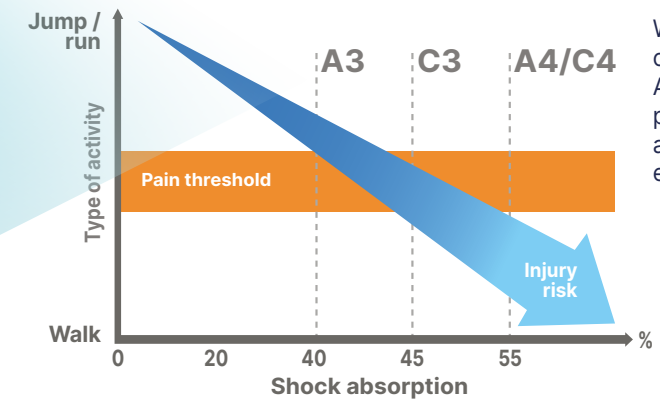
The floor that brings immediate protection on impact to all users when falling, diving or sliding on the floor.



Gerflor offers Taraflex® Comfort, a P3 floor with the highest level of comfort on the market.

2 For Safety

Shock absorption **minimises the force** of impact on the body and reduces long term injury risk.



With a complete range of shock absorption A3/A4 and C3/C4, Gerflor provides the right solution and the best safety for every user.

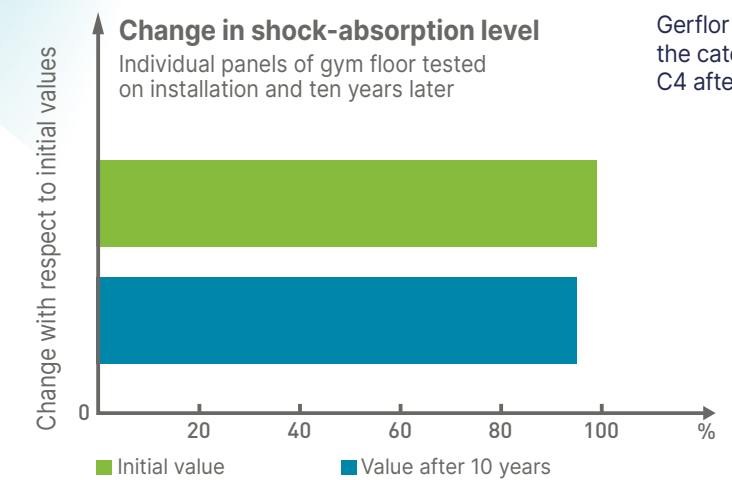
5 For its Sustainability commitment

 Indoor air quality TCOV <100ug/m³ after 28 days	 100% recyclable	Proactive post manufacturing waste management
 Energy saving up to 15%	 Second life	A second life programme for post installation waste
 LIFE CYCLE ANALYSIS Reduced maintenance costs Reach* compliant	 REACH	Selected and responsible raw materials

*REACH is the European regulation on registering, assessing and authorising chemical products within the European Union

3 For Durability

Taraflex® technologies ensure long-lasting **High Performance**



Gerflor guarantees the category A3/A4/C3/C4 after 10 years use*.

*Gerflor's internal ageing tests

TARAFLEX®
SINCE 1947



4 For its legitimacy

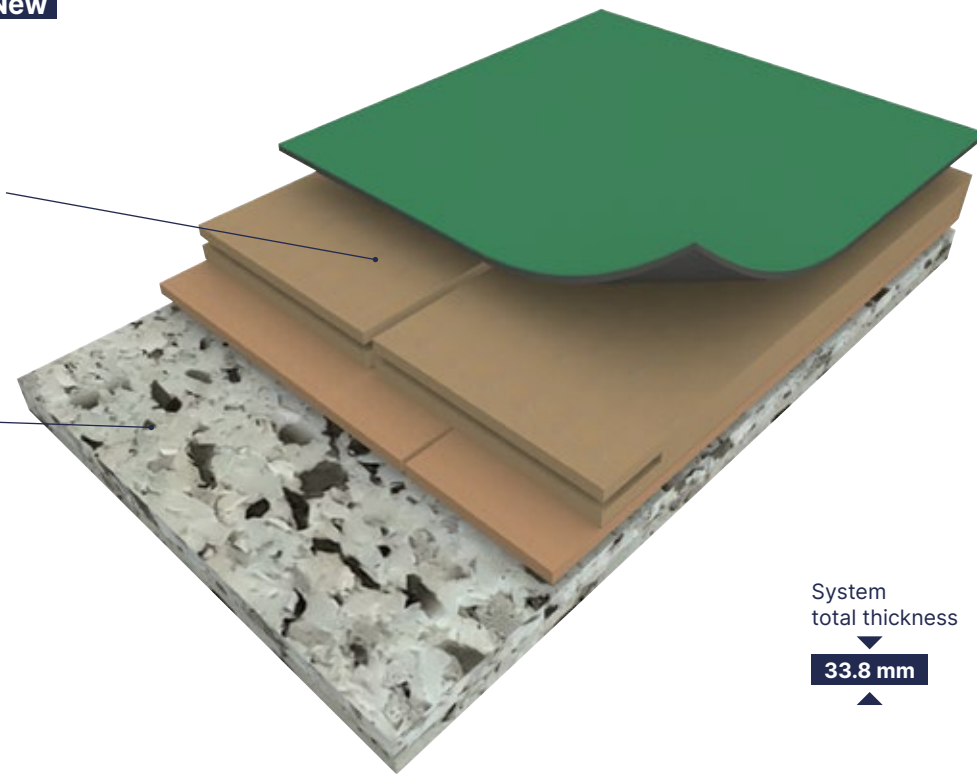
Partner of major sports events

A Subflex for each use

Subflex **New**

Double high-density HDF panel
Offset double structure
18.8 mm

Foam
15 mm



System total thickness
33.8 mm

Subflex benefits



Resistance against humidity rises, up to 7%



Wide ranges of designs for an **ultra-realistic wood aspect**



No need to sand or treat joints before surface flooring installation: **easy installation**

Modular installation: **Easy to fix**

GERFLOR SOLUTION



OTHER MARKET SOLUTIONS



High-density surface with 900 kg/m³ HDF: **resistance to impact, static and rolling loads**

Offset double-layer structure that enables a full assembly coverage: **solidity, stability and superior resistance to static and rolling loads**



Competition

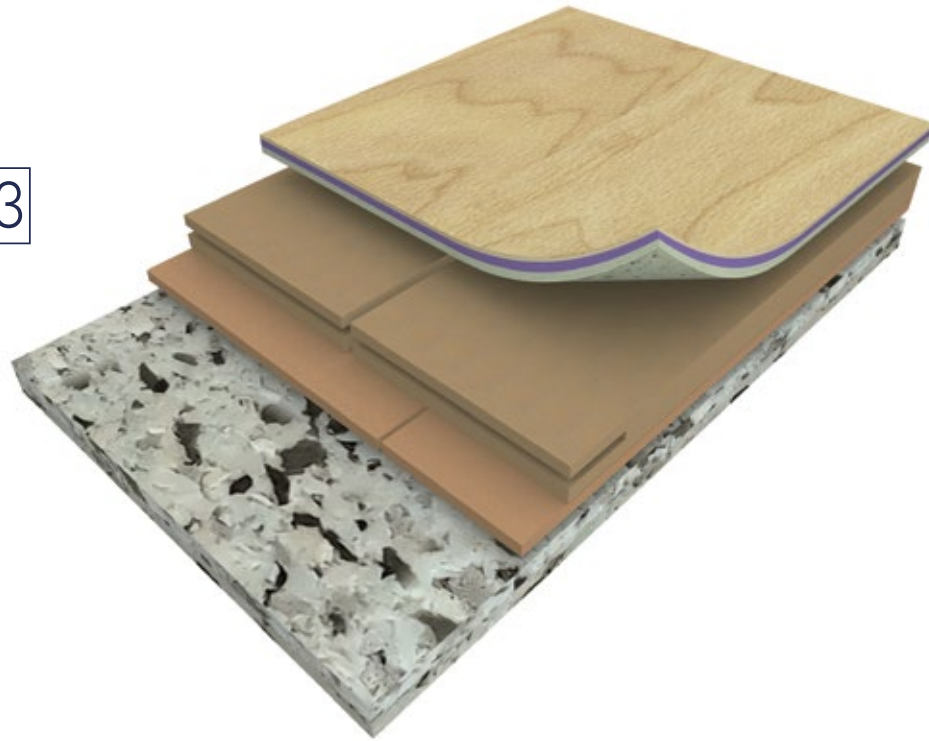
Subflex Taraflex® Evolution

System
total thickness

41 mm

C3

Shock
absorption
≥ 50%



A wide range of colours and designs



Multi-use definition

Heavy or light multi-use is defined by the sports or non-sports equipment weight and by the flooring exposure time to loads

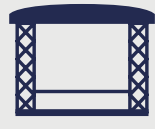


Light multi-use rule

- Weight: <math><10 \text{ kg/cm}^2</math>
- Time: 5h



Chair + man
2,5 kg to 102,5 kg



Concert stage
500 kg



Podium
29 kg to 380 kg/m²



Bleacher + man
250 kg to 1500 kg



Forklift
up to 2000 kg*



Heavy multi-use rule

- Weight: 10 to 50 kg/cm²
- Time: 12h to 24h

*with a manual forklift truck loaded with 2T over Subflex subconstruction

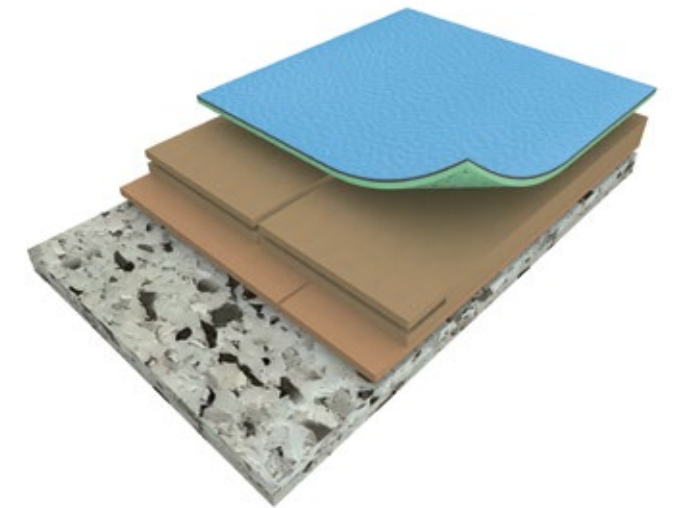
Competition and light multi-use

Subflex Recreation 60

39.8 mm
System total thickness

Shock absorption $\geq 50\%$

C3



A wide range of colours and designs



2402 - Azul / Y = 25.1



6062 - Canadian Maple / Y = 44.0



6058 - American Oak / Y = 29.8



6614 - Oceano / Y = 8.0



6556 - Verde / Y = 16.9



6563 - Menta / Y = 16.6



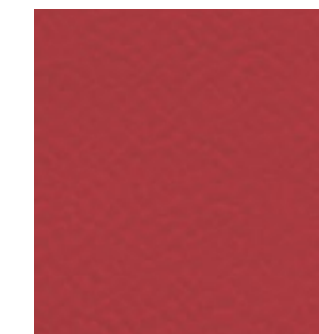
2711 - Gris / Y = 32.6



6160 - Naranja / Y = 36.5



6157 - Rosa / Y = 27.8



6154 - Roja / Y = 8.9

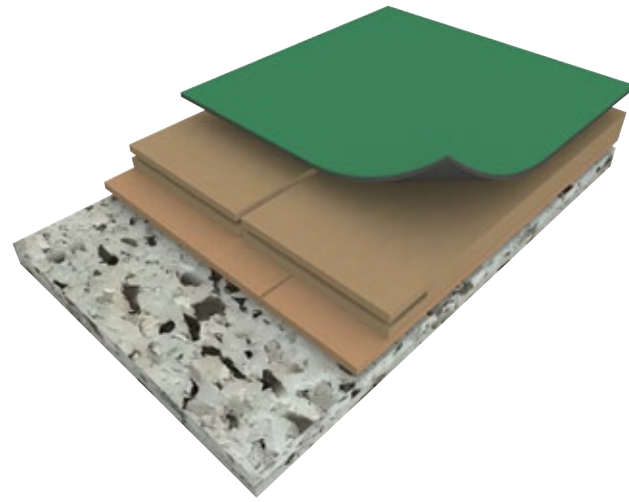
Competition & Heavy multi-use and rolling sports

Subflex Taraflex® Surface

35.8 mm
System total thickness

Shock absorption $\geq 45\%$

A3

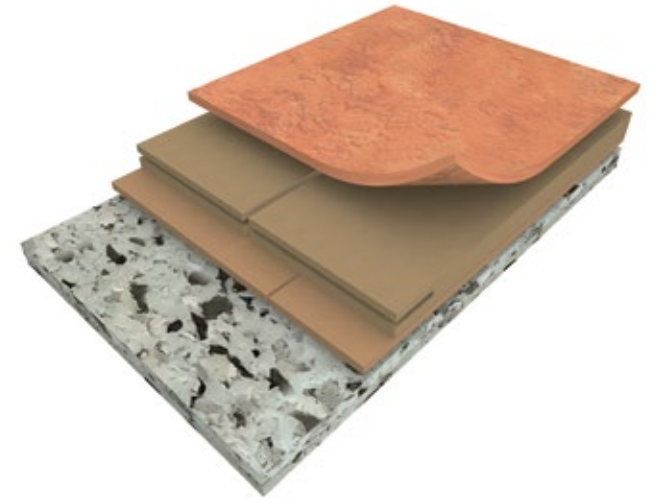


Subflex Linodur Sport

37.8 mm
System total thickness

Shock absorption $\geq 45\%$

A3



A wide range of colours and designs

Product guide

Education		Subflex Multisport	Subflex Evolution	Subflex Linodur Sport	Subflex Surface
Elementary school	Multisports	●	●	○	○
	Light multi-use	●	●	○	○
	Heavy multi-use			●	●
Middle school / High school	Multisports	●	●	○	○
	Moderate use	●	●	○	○
	Intensive use			●	●
University	Multisports	●	●	○	○
	Moderate use	●	●	○	○
	Intensive use			●	●
Competition	Handball	●	●		
	Volleyball	●	●		
	Badminton	●	●		
	Basket ball			○	○
Leisure	Roller			●	●
	Floorball			●	●
	Futsal			●	●
	Wheelchair sports			●	●

● Recommended ○ Possible

Complete range of accessories

Vapor barrier

Protective underlayer against rising damp

Finishing profiles and vented cove base

Peripheral finishes to ease court access and to mask peripheral expansion



Reservations

Finishes for play poles anchoring. Rubber plunger to remove reservation hats




Bateco

Ideal moveable solution to protect sports floor from non-sports use



Technical Data

Description	Standard	Requirement	Units	Subflex Taraflex® Evolution	Subflex Taraflex® Surface	Subflex DLW Linodur Sport	Subflex Taraflex® Recreation 60
Product Description							
Surface treatment	-	-	-	Triple-Action Protectsol®	Triple-Action Protectsol®	Neocare®	Triple-Action Protectsol®
Surface complex	-	-	-	D-Max™	D-Max™	Linoleum	D-Max™
Foam	-	-	-	Double-density foam CXP-HD™	-	-	CXP
Panel density	-	-	g./m³	900	900	900	900
Thickness	EN ISO 24346	-	mm	7.5	2	4	6.0
Weight	EN ISO 23997	-	kg/m²	4.6	2.9	4.7	3.7
Length	EN ISO 24341	-	lm	26.5 Max	26.5	28	20.5
Width	EN ISO 24341	-	lm	1.5	1.5	2	1.5
Dimensions panels	-	-	ml x ml	1.235 × 0.46 (thickness: 18.8 mm)	1.235 × 0.46 (thickness: 18.8 mm)	1.235 × 0.46 (thickness: 18.8 mm)	1.235 × 0.46 (thickness: 18.8 mm)
Dimensions absorbing foams	-	-	ml x ml	2.0 × 1.6 (thickness: 15 mm)	2.0 × 1.6 (thickness: 15 mm)	2.0 × 1.6 (thickness: 15 mm)	2.0 × 1.6 (thickness: 15 mm)
Total thickness of the system	EN ISO 24346	-	mm	41	36	38	40
Total weight of the system	EN ISO 23997	-	kg/m²	23	21	23	22
Sport Properties							
Shock absorption	EN 14808	≥ 25	%	C3	A3	A3	C3
Vertical deformation	EN 14809	≤ 3,5	mm	≥ 2.3 to < 5	≥ 1.8 to < 3.5	≥ 1.8 to < 3.5	≥ 2.3 to < 5
Sliding coefficient	EN 13036-4	80 to 110	-	80 to 110	80 to 110	80 to 110	80 to 110
Ball bounce	EN 12235	≥ 90	%	≥ 90	≥ 90	≥ 90	≥ 90
Technical Characteristics							
Abrasion resistance	EN ISO 5470-1	≤ 1000	mg	≤ 350	≤ 350	≤ 1000	≤ 350
Impact resistance	EN 1517	≥ 8	N/m	≥ 8	≥ 8	≥ 8	≥ 8
Rolling load Resistance	EN 1569	≤ 0,5	mm	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Indentation resistance	EN 1516	≤ 0,5	mm	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Classification							
Fire	EN 13501-1	-	-	Cfl-s1	Bfl-s1	Cfl-s1	Cfl-s1
Anti-bacterial activity (E. coli - S. aureus - MRSA) ⁽¹⁾	ISO 22196	-	-	> 99 % inhibits growth		> 99 % inhibits growth	
Anti-viral activity (human coronavirus) after 2h ⁽¹⁾	ISO 21702	-	-	> 99.3 % virucidal activity		> 99.3 % virucidal activity	
CE Marking							
	EN 14 904	-	-	Fire Shock Absorption Sliding Coefficient Abrasion Resistance Rolling load Resistance		Fire Shock Absorption Sliding Coefficient Abrasion Resistance Rolling load Resistance	
Installation method							
Glued installation of PVC on panels	Gerflor recommendation		Units	< 7% humidity	< 7% humidity	< 7% humidity	< 7% humidity

The proposed specifications fall within the tolerance limits usually accepted in this sector whilst still complying with standards.
 (1) The implementation of an effective cleaning method is the best defence against infection.

We care / We act Our Commitments for a Sustainable future



CARBON FOOTPRINT*
-20 % kg
CO₂ equivalent/m²
between 2020 and 2025



BIOSOURCED CONTENT**
10 % by 2025



RECYCLED CONTENT
30 % by 2025



ADHESIVE FREE***
35 % by 2025



ANNUAL VOLUME RECYCLED
60 000 t by 2025



* Scopes 1 and 2 defined in the GHG protocol ** % of activity with biosourced materials *** % of activity - adhesive free solution