

Indoor Sports Surfaces

Decking Material Comparison

Long Matrix

	Polyurethane (CONICA)	Linoleum	PVC	Wood
Material characteristics	Synthetically manufactured from petrochemicals. Contains natural alcohols and mineral fillers. Addition polymerization of polyols (large percentages of natural substances like castor oil) and isocyanates.	Synthetically manufactured by the vegetable oil industry. Contains natural oils and mineral fillers. A mixture of linseed oil, cork dust and saw dust filled with chalk and other mineral fillers is applied to a backing fabric made of jute.	Synthetically manufactured from petrochemicals. In the manufacturing process, already problematic production residues from chlorine chemistry accumulate. Large amount of softening agents are used to elasticize the hard and brittle PVC material. In addition to non-hazardous mineral fillers and pigments, softening agents (particularly phthalic acid esters) and chlorine from the vinyl chloride component are used as physiologically questionable raw materials.	Natural raw material, consisting partly of rare and protected types of hardwood (tropical wood). Mostly softwoods are used for the area-elastic substructure, while robust, less sensitive hardwoods are used for the surface layer.
System attributes	Due to the high-quality polyurethane, all desired system types can be manufactured. A spike-resistant covering is also possible.	Due to the lack of flexibility and the limited mechanical attributes, the coverings are only installed as a surface layer on rigid subsurfacing floors.	The product is preferably used for area-elastic systems, but can also serve other system types with an additional point-elastic laminate. The top layer is finished with a non-PVC plastic layer.	Wood is only integrated into the rigid substructure as surface-elastic systems.
Application/Laying	 The coating material is poured onto the desired structure in liquid form and geometrically leveled without joints or shrinking. Then a high-quality, pigmented and light-fast PUR sealant is applied.	 The covering is laid in rolls and glued down. The joint areas are fused . Because the top layer is soiled easily and has very bad cleaning properties, a top coat sealant or a temporary coating with care products or oils is applied to create a surface that is easier to clean.	 The covering is laid in rolls and glued down. The joint areas are fused .	 The wood is glued to the background and finished with PUR or acrylate sealants, usually without pigmentation.
Sports functionality	Area elastic, point elastic, combined elastic and mixed elastic. PUR systems can be used with nearly all desired substructures.	Area elastic and mixed elastic. Can only be used with hard lower surface floors.	Area elastic, combined elastic, mixed elastic and, conditionally, point elastic. Should preferably be used on a rigid substructure. Can conditionally be used with point-elastic systems.	Area elastic. Wood coverings are glued to wooden substructures with a distributor plate.
Play and ball characteristics	Optimal coverage is provided for all sports.	Good characteristics for ball sports.	All types of sports are covered.	Good characteristics for ball sports.
Protective function	Good protective function for athletes on point and combined elastic systems.	Poor protective function due to lack of point elasticity. The hard surface layer is associated with a high risk of injury for athletes.	Point elasticity provides good protective function for athletes.	Poor protective function due to lack of point elasticity. The hard surface layer is associated with a high risk of injury for athletes.
Appearance/Color variants	 All colors and color combinations are possible. Logos or writing can also be added individually.	 Very limited color palette , available either marbled or as a variant with added color chips.	 Limited color palette of standard colors .	 Only in brown shades of the desired wood type.
Environment and Safety	Emissions  All products do not contain any softening , and almost all products do not contain any solvents . Their entire system is in complete compliance with the EU directives regarding emissions (Consortium for Fire Prevention (AgBB)).	Emissions  Due to the porousness and nonintegrated to partial existence of softening agents , covering system can be used mostly only with coating. The well-known linoleum smell indicates that substances are being emitted.	Emissions  Due to softening agents that are not chemically integrated , free substances can migrate into the atmosphere and/or be emitted.	Emissions  The wood itself can also emit substances that can be problematic with regard to EU directives. However, the problem is that the natural raw material cannot be measured with regard to emissions (this will depend on the season, place and type of treatment).
Fire protection	 High flame protection: Special polyurethane systems achieve a flammability classification of at least Cfl - s1 (EN 13501-1).	 Low flame protection. There is no achievement of a high flame class for the entire sports surface system.	 No well-founded information about complete systems is known.	 No well-founded information about complete systems is known.
Durability	Chemical (liquids, sweat etc.) Very good resistance due to PUR sealant.	Poor resistance to chemicals in an unsealed state.	Good resistance due to a plastic sealant.	Good resistance in a sealed state. Nevertheless, joints remain problem areas (shrinkage, swelling behavior of wood).
Mechanical	Good mechanical durability for all coating types.	Adequate mechanical durability for area elastic coatings.	Adequate mechanical durability.	Light scratching is possible. Otherwise hard and stable surface layer.
Maintenance and Care	Very easy to clean due to jointless PUR sealant. Demonstrably low maintenance.	High maintenance in an unsealed state due to light soiling of the porous, open-pored coating type. Dirt accumulates easily.	Plastic finishing on the PVC makes it easy to clean.	Coating makes it easy to clean. High sensitivity of the natural raw material wood to moisture in general, particularly in the joint area.
Lifespan	Lasts approx. 20 years.	Lasts approx. 20 years.	Lasts approx. 20 years.	Lasts approx. 20 years.
Refurbishment / Retopping	Easy and cost-effective to reseal with retopping.	Requires costly full refurbishment.	Requires costly full refurbishment.	Can be sanded and sealed over.
TCO (Total Cost of Ownership)	 High cost-effectiveness during the period of use.	 Low cost-effectiveness during the period of use.	 Low cost-effectiveness during the period of use.	 Average cost-effectiveness during the period of use.



06/2013