

L'unicflex PU indoor Polyurethane indoor sport floor covering

L'unicflex PU indoor (Polyurethane indoor sport floor covering)

System Description

L'unicflex PU indoor entails the preparation of the concrete substrate with ready-made 8 mm rubber rolls to be adhered, followed by the application of a 2mm elastic polyurethane coating, ending with a matte topcoat and the marking of game lines. L'unicflex PU indoor is a system accredited for compliance with European sports flooring standards BS EN 14904:2006 in UK CST accredited laboratories.

Surface Preparation

- The concrete or asphalt surface designated as the foundation for the L'unicflex PU indoor system must have fully cured for at least 30 days, with moisture content not exceeding 3%.
- The concrete surface should be free of elevation differences.
- Concrete surfaces should be cleaned of dust, oil, and cement residues, avoiding the use of any surface hardening agents that may adversely affect adhesion.
- Any hairline cracks, joints, and damaged areas on the concrete surface should be repaired and leveled with UNEPOX COMPOUND ST.
- Another crucial point; the concrete surface should be poured taking precautions against any moisture from below, such as dampness or water, using effective barrier membranes, fibers, or chemical moisture barriers if necessary.
- This application must be carried out by an application firm approved by UNICA. Following the surface preparation procedures outlined above, the application should be conducted according to the application instructions specified below.

L'UNICFLEX PU indoor SYSTEM COMPONENTS

Products	Packaging
Unepox Primer 2K	15 kg A + 15 kg B
SBR Prefabricated Roll	0,8cmX120cmX150cm
UNIPU 030 2K	18,12 kg A + 1,88 kg B
PU SEALER 2K	17 kg A + 3 kg B
PU Elastic SL 2K	15,4 kg A + 4,6 kg B
PU Flex Mat Topcoat 2K	17 kg A + 3 kg B
PU Overline 2K	4,25 kg A + 0,75 kg B

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*Performance Tests BS EN 14904:2006

Test	Units	Results	Typical value for pointielastic sports floors		
			Type P1	Type P2	Type P3
Shock Absorbtion	%±1	31	≥25<35	≥35<45	≥45
Vertical Deformation	mm ±1	1,9	≥2.0	≥3.0	≥3.5
Vertical Ball Rebound	%±1	99	≥90		
Friction	-±3	104	80-110		
Rolling Load Test	No damage to the floor				

*Upon request test report can be shared.

L'UNICFLEX PU indoor System Application

1. UNEPOX PRIMER 2K Epoxy Concrete Primer Application

Prior to application, a moisture test should be conducted on the floor, with the relative humidity not exceeding 5%. Additionally, the surface pH should fall within the range of 6-8, and in cases of high pH levels, surface neutralization should be carried out with acidic etching. For this purpose, a 10% muriatic acid solution is recommended.

After mechanical removal of oil, dust, and dirt from the floor, the surface should be impregnated with UNEPOX PRIMER-Epoxy Concrete Primer using a roller. This two-component material, consisting of Part A and Part B, should be mixed in a 1:1 ratio and applied homogeneously to the surface using a short nap roller. Due to solvent content, all necessary fire safety and health precautions must be taken, and the area should be well-ventilated. The mixture has a pot life of 24 hours, and it must be utilized within this timeframe. The theoretical consumption varies between 0.150-0.250 kg/m² depending on the porosity of the floor.

After application, tools should be cleaned with a specific thinner, UP-002. Application should not be carried out at temperatures below +10 degrees Celsius.

2. UNEPOX COMPOUND ST-Epoxy Putty Application

After 24 hours of surface impregnation, cracked and damaged areas should be identified and repaired using UNEPOX COMPOUND-Epoxy Putty. Packaged in 5kg sets, the product should be mixed in a 3/1 (A/B) ratio by weight and applied to the floor with a spatula. Since the mixture has a pot life of 45 minutes, only the necessary amount of material should be mixed for use. Equipment used in the application should be cleaned with UP-002 Thinner at the end of the process.

3. UNIPU 030 2K-Polyurethane Adhesive Application

After 24 hours of repairing, the UNIPU 030 2K-Polyurethane Adhesive is applied to the floor using a notched trowel at an approximate consumption rate of 1kg/m² to adhere the rubber roll pads to the floor. The material is two-component, with a pot life of 30 minutes, necessitating application within this timeframe.

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4. RUBBER ROLL PAD Application

8 mm thickness of rubber roll pads is laid onto the adhesive applied to the floor. It is crucial to place the rubber roll pads with 1-2 mm joint gaps between them. As the pads expand slightly during the adhesive's drying period, these gaps will close. After laying the pads, sandbags or similar weights should be placed on them throughout the drying period to ensure full adhesion of the pads to the floor.

5. PU Sealer 2K Polyurethane Filler Application

After removing the weights from the pads and ensuring that they are fully adhered to the floor at every point, PU SEALER 2K, a Polyurethane Filler material (A+B), is mixed. Using a straight-edge steel trowel, the mixture is then pulled across the rubber pads in a scraping motion to fill pores and joints on the surface, with an approximate consumption rate of around 0,700 kg/m².

6. PU Elastic SL 2K Elastic Polyurethane Self-leveling Application

Following the Sealer application for 24 hours, the Elastic coating application is initiated. PU Elastic SL 2K, composed of A+B components, is mixed vigorously with a high-speed mixer. This mixture is transferred to another clean container and thoroughly mixed again to ensure complete homogenization of the A and B components. With a short pot life, the product is poured onto the floor at a rate of 1,2 kg/m², spread using a notched trowel, and any potential air bubbles are removed from the surface with a spiked roller. This process is repeated 24 hours later, applying the system in two layers to minimize the risk of air bubble formation, avoiding a single application in thick layers.

7. PU Flex Mat Topcoat 2K Polyurethane Elastic Matte Finish Application

24 hours after the application of PU Elastic SL 2K, the two-component PU FLEX MAT TOPCOAT 2K material is mixed and applied to the floor with a short-nap roller. It can be applied in 1 or 2 coats as needed, with a consumption rate ranging approximately between 0,200-0,250 kg/m².

8. PU Overline 2K Polyurethane Line Marking Paint

After 24 hours of the PU FLEX MAT TOPCOAT 2K application, field lines are marked with masking tape using PU OVERLINE 2K final paint in the chosen colors or color combinations. The interior areas are then painted using a short-nap roller. Remove the masking tape after 3-4 hours of application.

Sports activities can be carried out on the floor 48 hours after the completion of this application.

Cleaning and Maintenance

Floor cleaning should be done with neutral cleaning detergents using a soft mop. It is essential to wear appropriate sports shoes on the floor and avoid walking with high-heeled shoes, cleats, or suede shoes. The floor should not be soiled with substances like gum, coffee, or tea.

Cleaning

All tools should be cleaned with the specific thinner, UP-002 Thinner, and hands should only be washed with mild soap and plenty of water.

Maintenance

UNICA SFC Industrial surface cleaner is specially formulated to clean the applied system without damaging the floor. For detailed information about the product, contact the UNICA technical/sales department.

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Repair

In areas requiring repair, damaged sections should be removed, and repairs should be carried out following the steps outlined in the job description above.

Key Points

- The L'unicflex PU indoor floor covering system should be applied by experienced application teams.
- Application should be carried the temperature range of 15°C-35°C.
- Drying and curing times will be slower at lower temperatures and faster at higher temperatures.
- The maximum relative humidity during application is approximately 85%.
- Surface temperature should be above the dew point <3°C.
- Moisture content in concrete floors should be <5% by weight.
- Presence of moisture during application may lead to the formation of bubbles on the surface.
- Newly laid concrete or asphalt surfaces need to cure for at least 21-28 days.
- Before application, the surface must be cleaned of all dust, dirt, oil, and cement residues.
- If the surface has been affected by water, wait for it to dry completely before applying.
- Any depressions, cracks, indentations, or damaged areas on the surface should be repaired and restored before application. However, surface irregularities may still be more noticeable due to the inherent unevenness of the concrete surface. This is not considered a product or application flaw.
- If there is an existing coating on the surface to be treated, conduct an adhesion and compatibility test in a suitable area before the application begins.
- Products stored outdoors and exposed to sunlight can deteriorate inside their packaging. Therefore, they should be stored in their original sealed packaging in a closed and cool storage area.
- Always mix the products with low-speed electric mixers. To eliminate the risk of incomplete mixing, transfer the mixed product to another clean container and remix if necessary.
- Do not use any thinners other than those recommended by UNICA.
- The consumption rates stated in this application document are determined under ideal surface conditions. For applications of varying thicknesses, please consult the UNICA technical department.
- Prolonged contact with chemicals such as hydraulic oil, gasoline, diesel, antifreeze, can result in staining on the surface. In the event of contact with these chemicals, they should be cleaned from the surface promptly.

Health and Safety Information

Refer to the material safety data sheets of the relevant products for the safe use of products and disposal of waste.

NOTE

The explanations made on this technical page are based on test evaluations and results of the product according to relevant standards and are intended to provide guidance to applicators. Since labor, weather conditions, construction, equipment used, and other variables affecting the results are entirely beyond our control, UNICA does not provide any explicit or implied warranties regarding this material. UNICA only guarantees that the material complies with the product specifications, and its sole responsibility to the buyer or user of this product is limited to the replacement value of the product in case of manufacturing defects. In no event shall UNICA be liable for any direct or incidental, special, or consequential injury, loss, or damage arising directly or indirectly from the material or work performed. UNICA is not responsible for any defects, alterations, or changes in the substrate on which the products are applied.