

L'UNICFLEX SP PU Outdoor Spray Coating Athletic Track

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System Description

L'unicflex SP involves spreading a mixture of SBR and Prepolymer binder onto the surface at a specific thickness using a special application apparatus, followed by being coated with an Elastic Polyurethane-based spray coating and finishing the process by marking the lines. L'unicflex SP is a system certified for compliance with sports surface standards as documented in our laboratories according to DIN18045/6.

System Components&Consumptions

Product	Product Info	Consumption(kg/m ²)
UNIPU 045 1K	PU Concrete Primer	0,150 kg
UNIPU 060 1K	PU Asphalt Primer	0,150 kg
UNIPU 030 1K	PU Prepolymer Binder	1,400 kg
SBR	1-4 mm SBR	6,500 kg
UNIPU SPRAY COATING 2K	PU Elastic Spray Coating	1,200 kg
EPDM	0,5-2,5 cm Colored EPDM	0,600 kg
EPDM TOZ	Colored Fine EPDM	0,050 kg
UNIPU OVERLINE 2K	PU Line Marking Paint	

The total thickness is approximately 14 mm (10 mm SBR + 4 mm Spray coating + EPDM).

Technicals

Tests	WA standart	DIN18035/6	+5°C	+23°C	+35°C
Vertical deformation	6-2,5	1,2	1,1	1,3	1,4
Force Reduction	35-50 %	38	36	38	41
Tensile Strength	>0,5 N/mm ²	0,67			
Elongation at Break	>40 %	69 %			
Slip Resistance-wet	≥47 DIR A	78			
Ball Rebound	99 %				
Water Permeability	N/A	Impermeable			
Flammability		DIN51960 Class 1			

Surface Preparation

The concrete or asphalt surface designated as the foundation for the L'unicflex SP system must have completed its 30-day setting/curing period and should not exceed a moisture content of 3%. There should be no elevation differences on the concrete floor.

The concrete surface should be cleaned of dust, oil, and cement residues, and no surface hardening product that could adversely affect adhesion should be used.

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Any hairline cracks, joints, and damaged areas on the concrete surface should be repaired and smoothed with UNEPOX COMPOUND ST.

Another important aspect is that concrete surfaces must be poured taking precautions against any moisture or water seepage from below, potentially utilizing effective barrier membranes, fibers, or chemical moisture barriers.

Under these conditions, UNIPU SPRAY COAT 2K can be applied directly without a primer onto SBR INSITU or prefabricated SBR roll. Before the SBR application, a UNIPU 045 1K primer must be applied to the concrete surface (refer to the product information sheet). The bonding strength of the surface should be at least 1.0 N/mm². The surface moisture of concrete should not exceed 3%.

When coating an old surface, adhesion tests should be conducted first. Prior to the application of UNIPU SPRAY COAT 2K, the surface may need to be sanded to remove dust and an UNIPU 060 1K primer (Consumption 0.200 kg/m²) applied as a primer.

This application must be carried out by an application company approved by UNICA. Following the surface preparation procedures described above, the application should be conducted according to the application instructions provided below.

Application

Primer Application

A specially formulated single-component polyurethane, UNIPU 045 1K for concrete or UNIPU 060 1K for asphalt, is used to ensure compatibility with the subsequent coating component and the relevant substrate. The UNIPU 045/060 Primer can be applied at a rate of 0.150 kg/m²-0.200 kg/m² as per BOYTEM's instructions using an airless paint sprayer or paint roller.

SBR + Prepolymer Application

This coating layer (SBR granules + PU Binder) includes a mixture of SBR granules and UNIPU 030 1K PU Binder. Mix the SBR granules and UNIPU 030 1K with a low-speed specially designed mixer, and apply the mixed material to the primed surface with a paver. Wait for 16-24 hours for curing. The curing time may vary depending on environmental temperature and humidity conditions.

UNIPU Spray Coat 2K Application

The A component of UNIPU SPRAY COAT 2K should be mixed before application. Drum mixers with low-speed mixing devices can be used for this purpose.

The A and B components of UNIPU SPRAY COAT 2K are weighed in separate containers at a ratio of 80:20 by weight. Part A and part B are emptied into a mixed container, and using a slowly rotating mixer, mix at a speed of approximately 300 rpm to ensure the mixer reaches the sides and bottom of the mixing container thoroughly. The mixing process should last at least two minutes and continue until the mixture is homogenized. The mixed material is then emptied into a second container and mixed for another minute. Subsequently, 0.5-1.5 mm EPDM (Spray Coating: EPDM ratio 100:50) is added, followed by the addition of EPDM powder at a rate of 2%. To achieve better spraying conditions, you may need to add 5% Special Thinner UP-008. We recommend following the manufacturer's instructions for any mixer, but obtaining a homogeneous mixture is crucial. The average component temperature should be between 15-25 °C.

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PU WB TOPCOAT 1K Application(Optional)

The application of PU WB TOPCOAT 1K ensures better UV resistance and longevity of the EPDM layer and is ready for use, preferably applied in a single layer with an airless paint sprayer. While it is an optional product, Boytem strongly recommends its use based on the performance it adds to the application.

UNIPU OVERLINE 2K (Track Line Paint)

The application of track and field/athletic walkway lane markings is a critical step in the implementation. It should be applied by experienced applicators using suitable equipment according to appropriate standards. UNIPU OVERLINE 2K is an Aliphatic-based elastic line paint applied with road line painting equipment.

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.

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 SP 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.

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- 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 documents 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.