

L'unicflex PU PG Indoor Polyurethane school indoor floor covering

L'unicflex PU PG Indoor (Polyurethane school indoor floor covering)

System Description

L'unicflex PU PG indoor encompasses the application of a suitable 2 mm elastic polyurethane coating on concrete and concrete-derived indoor school, classroom, and corridor floors, finished with a matte topcoat application. L'unicflex PU PG indoor is a system that has been tested in our laboratories according to BS EN 14904:2006 standards, encompassing the requirements.

Surface Preparation

The concrete or asphalt surface designated as the foundation for the L'unicflex PU PG indoor system must have aged at least 30 days, with its internal moisture content not exceeding 3%. There should be no elevation differences in the concrete floor.

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

Hairline cracks, joints, and damaged areas on the concrete surface should be repaired and leveled with UNEPOX COMPUND ST.

Another crucial aspect is that the concrete surface should be poured with precautions against any moisture or water infiltration from below, utilizing effective barrier membranes, fibers, or chemical moisture barriers if necessary.

This application should be carried out by an application company 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 PG SYSTEM COMPONENTS

AQ Primer 2K	15 kg A + 15 kg B
PU Elastic SL 2K	15,4 kg A + 4,6 kg
PU Flex Mat Topcoat 2K	17 kg A + 3 kg

Application of L'unicflex PU PG indoor system

1. AQ Primer 2K Epoxy Concrete Primer/Moisture Barrier Application

First, a moisture test should be conducted on the floor, and the relative humidity of the floor should not exceed 5%. Additionally, the surface pH value should be in the range of 6-8, and in cases of high pH levels, surface neutralization should be achieved with acidic etching. In this regard, a 10% muriatic acid is recommended.

After mechanical removal of oil, dust, and dirt from the floor, AQ Primer 2K Epoxy Concrete Primer/Moisture Barrier is applied with a roller. This material consists of two components, A and B. Mixed in a ratio of 14 kg A + 6 kg B, this product should be thoroughly mixed to homogeneity and applied to the surface with a short-pile roller for impregnation. The product does not contain solvents, but all fire and health precautions should be taken, and the area should be well-ventilated. The mixture has a shelf life of 24 hours, and the mixed product should be used within this time frame. The theoretical consumption rate varies around 0.150-0.300 kg/m² depending on the porosity of the floor.

After the application, tools should be cleaned with a special thinner UP-002. Avoid applying below +10 degrees Celsius.

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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. 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.

4. 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.

5. 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.

6. 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.

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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 PU PG indoor floor covering system should be applied by experienced application teams.
- Application should be carried out in 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.

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- 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.