KDF
Sports Flooring Systems & Building Materials
50 YEARS OF EXPERIENCE

SYSTEM POLYFLEX PU - IN

Total thickness of 6mm – 16mm

CERTIFIED BY LABOSPORT

Indoor highly resilient sports flooring system ideal for multipurpose halls, gym floors, tennis, basketball, volleyball, handball, footsal courts, as well as any other indoor sports court. Combination of prefabricated shock-pad and polyurethane coatings in 6mm – 16mm average total thickness.

Certified by LABOSPORT according to EN 14904.

Steps :

1. **PU FLEX 140 - Special, polyurethane, two-component adhesive.** It is applied, with a V-notch trowel (3mm), on dry waterproof surfaces of concrete, without rising humidity issues or asphalt. Used for the application of **ISOPOL 854** shock-pad or other prefabricated shock-absorbent rolls made from recycled rubber or EPDM.
2. **ISOPOL 854 - Shock-pad in rolls.** Elastic, prefabricated shock-pad made of recycled rubber providing shock-absorbency, in thickness of 4mm up to12mm. Used as cushion substrate before the application of polyurethane or acrylic systems.
3. **POLYSPORT STUCCO 950 - Polyurethane, elastic, two-component pore filler.** Used for sealing porous prefabricated subfloor of sports flooring such as **ISOPOL 854** or wet-pour cushion shock-pad. Applied by flat trowel.
4. **POLYSPORT PU 951 - Polyurethane, self-leveling, two-component coating for indoor sports surfaces.** It is combined with **ISOPOL 854** as substrate to create multi-purpose shock-absorbent resilient sports flooring systems. Pore-filling with **POLYSPORT STUCCO 950** precedes its application. Applied by V-notch trowel (5-6mm) and the parallel use of spiked roller.

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5. **POLYSPORT 952 -Polyurethane, aliphatic, two-component top coating for indoor sports flooring.** Applied, in two crossing layers by airless sprayer or short haired mohair roller.

Preparation – Application

Applied only on dry waterproof concrete surfaces (over 40 days old from date of placement) without rising humidity issues and free of materials that might prevent bonding e.g. dust, loose particles, grease etc. The success in the application depends on the right preparation of the underlay and use of the material.

- **Good, dry** cleaning of the surface from dust and residues with vacuum cleaner and squeegees.
- Application of polyurethane glue, **PU FLEX 140**, with V-notch trowel with 3mm teeth. Consumption: 1kg/m2.
- Place the **ISOPOL 854** rolls on the floor in their final positions without gluing them. Lift each side of each roll and apply the PU glue by a V-notch trowel with 3mm teeth and then glue the rolls immediately without waiting. In case there are small bulges (humps, swollen parts) on the roll after its application, you'll have to tear it around the edge of the hump without removing it completely, raise that small part, put some PU glue underneath and glue the hump part again, making sure this time it's flat. Weights such as sand bags have to be used on the edges, corners and seams of the shock absorbent roll surface installation until the PU glue is cured. Then you let everything dry. Do not overlap the rolls but bring them as close together as possible to eliminate gaps. The usage of a light cylinder (10-15kg maximum) will help to compact the rolls on the floor. It is recommended that the joints (only) are covered flush with **ELASTOTURF 851** or **PU FLEX 140** with a flat trowel (or a brush) along their whole length, so that the surface is leveled out. Next day the joints are ground lightly with sandpaper or other grinding device to smooth out the joints with the rest of the surface and create the required roughness.
- Sealing of prefabricated surface porosity using elastic pore sealer **POLYSPORT STUCCO 950**. Care should be taken that the porosity of prefabricated subfloor should be totally covered using **POLYSPORT STUCCO 950** to avoid surface defects on the final surface of **POLYSPORT PU 951**. Consumption on prefabricated shock-pad: 0,8 kg per square meter in two layers.
- The next day, depending ambient temperature, follows application of **POLYSPORT PU 951**. Components A (resin) & B (hardener).The mixed material must be used within 20-30 minutes of mixing at 25ºC. The polyurethane mixture is poured on the floor and spread using a V-notch trowel with 5-6mm notches. Consumption:2,2 kg per square meter for 1 layer.
- Following the application of **POLYSPORT PU 951**, the self-leveling layer should be rolled using a special spiked roller in order to release any possibly entrapped air and avoid the formation of bubbles. Sanding of the surface should be done after drying.
- The next day, depending ambient temperature follows application of finishing paint **POLYSPORT 952 in 2 crossing layers by a short-haired mohair roller or even better by airless sprayer.** Consumption: 0,25 kg per square meter in 2 layers.

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Important Remarks

- In case our sport systems **POLYFLEX PU-IN & WET-POUR POLYFLEX PU-IN** are going to be used for events like school gatherings, speeches or any other event apart from sport events (games, sport contest etc) then the surface needs to be protected with special modular portable flooring above 20mm thickness.
  Same is valid in case of weight lifting areas in gyms.
- During temperatures over 40 degrees, ideal time for the application of **POLYFLEX PU - IN SYSTEM** is between 22:00 and 09:00 and the minimum bearing temperature during application and drying should be over 10ºC.
- In case the second layer of PU pore filler is applied after more than 24 hours of the application of the first one, then the whole surface must be sanded by a special sanding machine. After that the second layer can be applied.
- In case the layer of PU self-leveling is applied after more than 24 hours of the application of the last layer of PU pore filler, then the whole surface must be sanded by a special sanding machine. After that the PU self-leveling can be applied.
- In case the second layer of PU top coat is applied after more than 24 hours of the application of the first one, then the whole surface must be sanded by a special sanding machine. After that the second layer can be applied.
- The freshly coated surface should be protected from high temperatures, wind, rain and frost for at least the first 24 hours.
- In case it gets damaged, it is simply repaired and recoated on the spot.

Substrate

Asphalt is the safer subfloor for sport floorings for sure and must be always preferred than concrete surfaces.

A. Asphalt Substrate

The asphalt must have a slope of 0.7-1% and must dry for at least 30 days so that all solvents from the asphalt can evaporate.

The asphalt sub-floor should be applied on well compacted 150mm road base sub-floor and asphalt should be laid in one layer (and not 2) in 6 to 8cm with fine and coarse aggregates (up to 15mm granulometry) like the kind of asphalt used in road construction.

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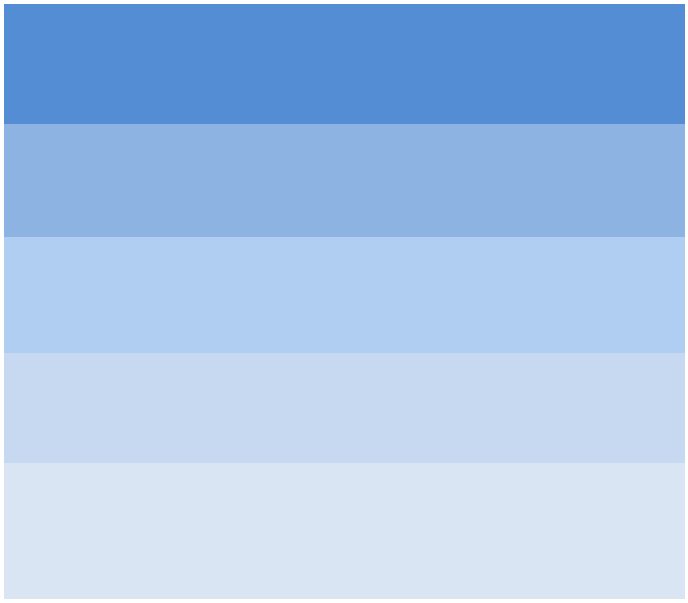
So, new road-grade asphalt will have to be laid (minimum 60mm) in one layer containing coarse aggregates and then mature for 30 days at least, before any application takes place on top of the asphalt to avoid bubbles on the final layer of the sport or rubber floorings.

Asphalt Infrastructure



Fine asphalt base in thickness of 6cm with very fine aggregates by finisher

Asphalt primer

Good compaction by vibration

Fine gravel 10cm

Gravel stone in thickness of 15cm

B. Concrete Surface

Concrete surface must be power-trowelled without cracks and must be smooth with a slope of 0.7-1% and humidity under 4% in 10cm depth of concrete.

Concrete must also be **dry at least for 40 days** and then the application takes place if there is no rising humidity for the sub-floor. Before the application takes place, there must be proper grinding of the surface by a grinding machine to open the pores accordingly and also a measurement by special instrument to measure humidity on the surface and in 10cm under the surface.

Generally concrete is a risky sub-floor and there may be problems with rising humidity, especially in areas where the sea level is really high and when the sea is close or in areas near greenery.

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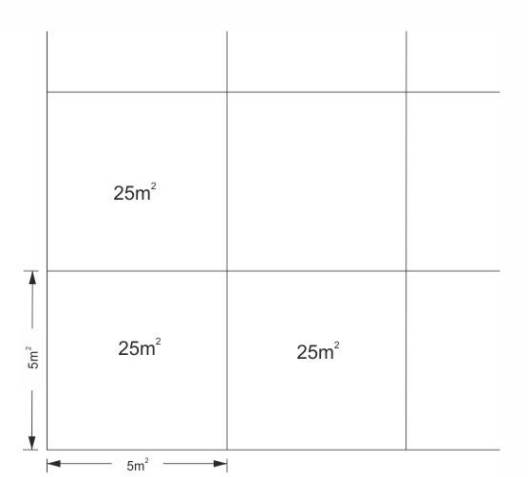
Always make expansion joints in large areas of concrete, in order to avoid uncontrollable cracks and failures.
Joints should be every 25 square meters creating a grid of 5x5 meters or close to that.



Substrate requirements

Concrete quality	at least C20/25
Age:	at least 40 days
Moisture content:	below 4%

Tools:


V-notch trowel


spiked roller


sandpaper machine


roller


airless sprayer

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