KDF
Sports Flooring Systems & Building Materials
50 YEARS OF EXPERIENCE

SAFEPOL SANDPROOF SYSTEM

Playground, safety flooring

Innovative, elastic, seamless, flexible colored flooring with sandproof properties, ideal for school courtyards and playground flooring.

It consists of a cushion base of 2 layers. First layer is a mixture of **PU BINDER 1178** and **RECYCLED RUBBER 858** (granulometry 2-4mm or 2-5mm), in thickness of 30-110mm Second layer is a mixture of PU BINDER 1178 and **RECYCLED RUBBER 858** (granulometry 0,5-2mm) in thickness of 10mm. Then follows the modified sealing, sandproof and waterproof **KDF-PU 1055** pore filler with high elasticity in 2 crossing layers followed by the polyurethane self-leveling **POLYSPORT PU 1051** and then the modified, **KDF-PU 1056**, sealing, UV-resistant, aliphatic, elastic, glossy top layer in 3 crossing layers.

Certified system by TUV and LABOSPORT Institute.

Steps

1. **PU PRIMER 870 - Special, polyurethane primer.** Applied by brush or airless sprayer on asphalt surfaces or on waterproof concrete surfaces without rising humidity issues.
2. **Mixture of PU BINDER 1178 and RECYCLED RUBBER 858 in granulometry of 2-4mm or 2-5mm.** Application with paving machine, in thickness of 30-110mm.
3. **Mixture of PU BINDER 1178 and RECYCLED RUBBER 858 in granulometry of 0.5-2mm.** Application with paving machine, in thickness of 10mm.
4. **KDF-PU 1055 - Polyurethane, modified, sandproof and waterproof, elastic pore filler.** Applied by metal trowel to create a completely non porous surface.
5. **POLYSPORT PU 1051 - Polyurethane, self-leveling, two-component coat for outdoor surfaces**. Applied by V-notch trowel and the parallel use of spiked roller.

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6. **KDF-PU 1056 - Polyurethane, modified, UV-resistant, aliphatic, elastic, glossy, two-component top coating.** Applied, in two crossing layers by airless sprayer or short haired mohair roller.

Preparation – Application

Applied only on dry asphalt and concrete surfaces (over 30 days old from date of placement for asphalt and 40 days for concrete) 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.
- Priming of the surface with special **POLYURETHANE PRIMER 870** in two layers. Consumption: 200-250 gr/m^2, depending on the absorption of the underlay. It is recommended that the second layer should be applied in sections each time, right before the application of the mixture of **PU BINDER 1118** and **RECYCLED RUBBER 858** (mixture **SAFEPOL)** in order to ensure proper adhesion, especially on the edges and endings of the playground flooring.
- After 5-12 hours and when the primer is almost dry but not completely, application of the **mixture of PU BINDER 1178 and SBR granules, in granulometry 2-4mm or 2-5mm** with paver machine to have the appropriate elasticity on the subfloor, in thickness of 30-110mm. Consumption 7kg/m^2/cm.
- Then when the first cushion surface is dry, application with paver machine of a mixture of **PU BINDER 1178 with SBR granules in granulometry 0,5-2mm** in thickness of 10mm. Consumption 7.2kg/m^2/cm.
- Afterwards when the surface of SBR is dry, application of **polyurethane, modified, sandproof and waterproof, elastic pore filler KDF-PU 1055 with metal trowels to create a completely non porous surface.** Consumption: 2 7kg/m^2 for 2 layers.
- The next day, depending ambient temperature, follows application of **POLYSPORT PU 1051**. 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 V-notch trowel, 5,5mm. Consumption: 2,0 - 2,2 kg/m^2 in one layer.
- Following the application of **POLYSPORT PU 1051**, the self-leveling layer should be rolled using a special spiky-roller in order to release any possibly entrapped air and avoid the formation of bubbles. Sanding of the surface should be done after drying.
- Before the last **UV-resistant top layers** are applied, the surface needs the use of sandpaper machine to make a completely even surface without any irregularities or loose crumbs.

- After the sandpaper of the whole surface is finished follows the application of 350 gr/square meter of our **polyurethane, modified, UV-resistant, aliphatic, elastic, glossy, two-component top coating KDF-PU 1056** in three cross layers by airless spray or by rollers.

Important Remarks

- ✓ During temperatures over 40 degrees, ideal time for the application of **SAFEPOL SANDPROOF** is between 22:00 and 09:00 and the minimum bearing temperature during application and drying should be over 10°C.
- ✓ In case the second layer of PU pore filler **KDF-PU 1055** 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 POLYSPORT PU 1051 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.

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.

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.

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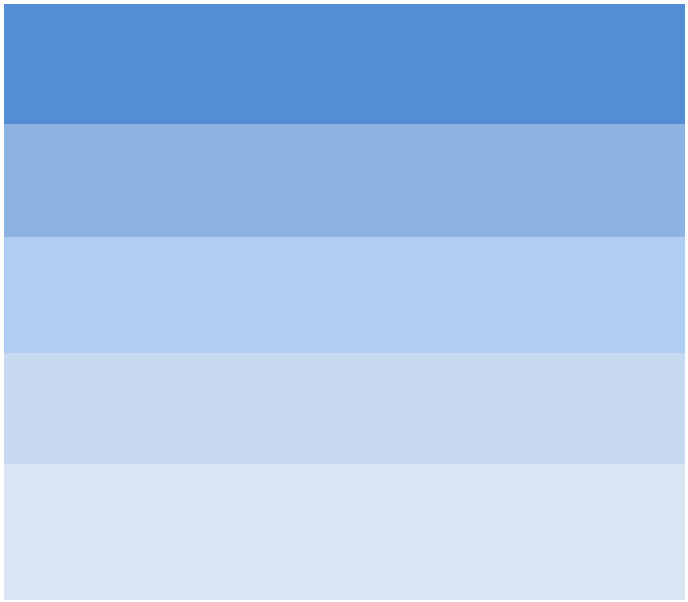
Asphalt Infrastructure



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.

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.

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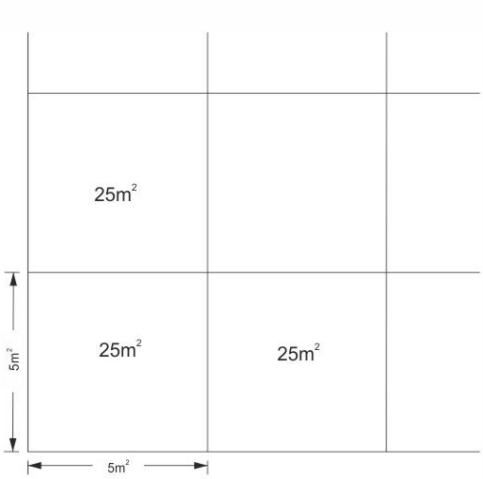

Substrate requirements

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

Tools:

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