KDF
Sports Flooring Systems & Building Materials
50 YEARS OF EXPERIENCE

SYSTEM ECOFLEX

CUSHION SYSTEM

Total Thickness 3.5mm

Outdoor flexible, acrylic sports flooring system ideal for tennis, basketball, volleyball, handball and football courts, as well as any other outdoor sports court.
Combination of wet-pour acrylic coatings, quartz aggregates and natural, sustainable wood-based materials. in total average thickness of 3.5mm.

Steps :

1. **ECOPRIMER 502 - Acrylic primer.**
   Used as primer of acrylic coatings, such as **ECOSURFACER 553, ECOCUSHION 542, ECOCOAT 551** or **ECOPAINT 518**. Applied by roller, squeegee, airless sprayer or brush.
2. **ECOSURFACER 553 - Acrylic, one component, smoothing and repairing wet-pour resurfacer for the eco-line sports systems.**
   Consists of acrylic resins, quartz sand and special improver. It is applied by squeegee on dry compact asphalt to seal the porosity and smooth out the surface before the application of **ECOCUSHION 542**. Highly resistant to adverse weather conditions (snow, frost, heat waves etc.) after drying.
3. **ECOCUSHION COARSE 542 - Highly flexible, pasty, wet-pour cushion flooring for the eco-line sports systems.**
   Consists of acrylic resins and special improver, with natural wooden-based elements in granulometry of 0.4-0.8mm. Applied by squeegee in 2 crossing layers on dry compact smooth asphalt or waterproof concrete substrates or on **ECOSURFACER 553**.
4. **ECOCUSHION FINE 542 - Highly flexible, pasty, wet-pour cushion flooring for the eco-line sports systems.**
   Consists of acrylic resins and special improver, with natural wooden-based elements in fine granulometry of 0.1-0.4mm. Applied by squeegee in 2 crossing layers, on dry compact smooth asphalt or waterproof concrete substrates or on **ECOSURFACER 553**.
5. **ECOCOAT 551 - Acrylic, elastic, slip-resistant, coating for the ecoline sports systems.**

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Consists of acrylic resins, quartz sand and special improver. Highly resistant to adverse weather conditions (snow, frost, heat waves etc.) after drying. Applied by squeegee.

Preparation – Application

Applied only on dry asphalt and concrete surfaces (over 30 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.
- Priming of the surface with joining resin **ECOPRIMER 502** for the proper adhesion on the sub-floor. Application of one or more layers until the surface is saturated with roller, squeegee, brush or airless sprayer. Avoid the creation of puddles of the material. Consumption: 200-400gr/m^2 depending on the absorption of the underlay.
- When the primer begins to dry (approximately 1 hour depending on the ambient temperature), follows the application of acrylic resurfacer **ECOSURFACER 553** for sealing the porosity of the subfloor in 1 or more layers, depending on the desired thickness, the porosity and roughness of the subfloor, by squeegee. Consumption: 1,3kg/m^2 for 1 layer.
- Then follows **ECOCUSHION COARSE 542**, a highly flexible, pasty, wet-pour cushion flooring which is applied by squeegee in 2 crossing layers. Diluted in 25% water. Consumption: 0,7kg/m^2 for 2 layers.
- And then follows **ECOCUSHION FINE 542**, a highly flexible, pasty, wet-pour cushion flooring applied by squeegee in 2 crossing layers. Diluted in 25% water. Consumption: 0,5-0,57kg/m^2 for 2 layers.
- The elastic acrylic coating **ECOCOAT 551** is applied in 3 crossing layers by squeegee, beginning from one edge of the area, going down to the other edge in one squeegees strip, then turning back on the opposite direction overlapping the previous strip by 20-30 cm or so and continuing the same way. Possible traces of the squeegee edges will have to be smoothed out with the squeegee or other tool (e.g. trowel). The next layer follows the other after the previous starts to dry.
  Depending on the ambient temperature **ECOCOAT 551** is diluted with up to 10% water, prior to application, in order to achieve better fluidity
  Consumption : 1,8 kg/m^2 for 3 layers.

Important Remarks

- ✓ In case of extremely rough and sharp cement or asphalt surfaces it is recommended grinding of the surface with a mosaic machine, sandblast before the application of **ECOSURFACER 553**.
- ✓ During temperatures over 40 degrees, ideal time for the application of **ECOFLEX SYSTEM** is between 22:00 and 09:00 and the minimum bearing temperature during application and drying should be over 10^{o}C.
- ✓ 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.

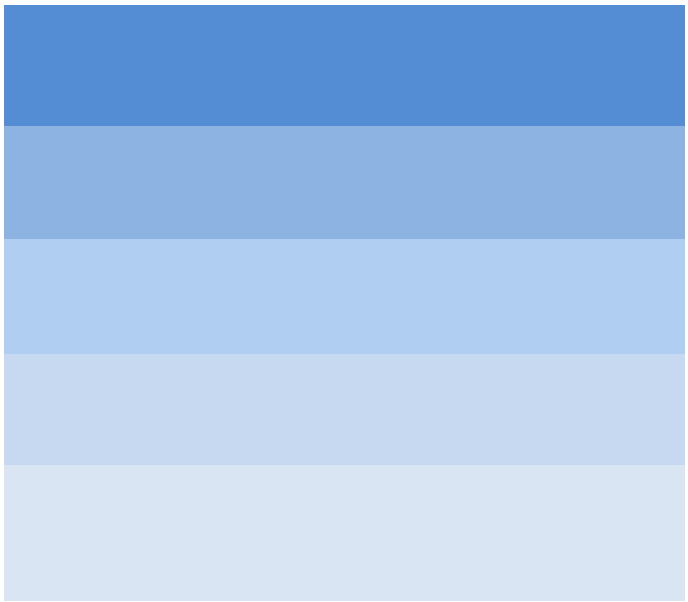
A. Asphalt Substrate

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.

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

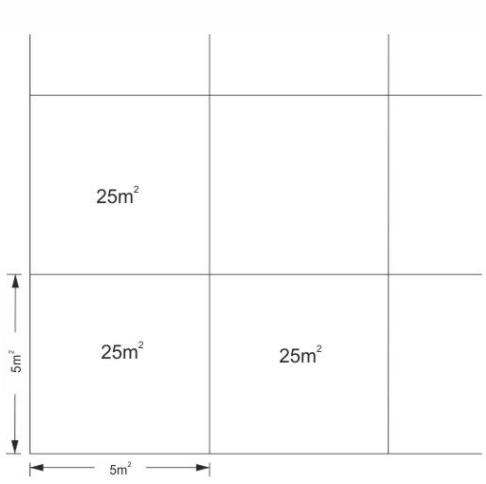
B. Concrete Surface

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.

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: For the application of the system you will need: squeegee, roller and/or airless sprayer, brush.

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