

## **Outdoor Concrete Slab as a Base for Regupol<sup>®</sup> Sports Surfaces**

The strength of a concrete slab must be sufficient to carry the maximum loads that the floor is designed for. Usually the thickness of a reinforced concrete slab for sports fields is 100 - 120 mm with a concrete mixture corresponding to the B 25 norm. The concrete slab can be monolithic or finished with a screed layer of minimum 3 cm in thickness.

The concrete slab is poured over a levelled, compacted crushed stone base following local building codes. Common thickness of crushed stone layer is 200 to 300 mm unless local circumstances do require different practice. The stone-base must be compacted to ~ 98% proctor density and levelled with maximum deviations of +/- 10 mm. Over the compacted crushed stone base, and before the concrete is poured, a moisture membrane from a suitable material must be installed to prevent moisture migrating into the concrete from below or the sides.

Preferably the concrete slab shall have a raised edge in a width of minimum 50 mm and a depth of no more than the thickness of the synthetic material. Courts shall be constructed with a slope of 1%. At the lower side of the court a surface water drainage is preferred that is connected to a sewer system. Optional a "french drain" can serve for seepage of surface water.

The finishing level of the floor is set out in a 3 meter grid before the pouring of the slab to produce the required evenness. Maximum tolerances allowed are deviations of 4 mm in any direction, measured under a straight edge of 4 meters. Step-like deviations are to be completely avoided. Maximum deviation from nominal level is 10 mm over the field length or -width. The top surface of the concrete slab must be smooth and equal to screed in the finishing. A very *slight* broom finish is preferred to ensure a good mechanical bond between the concrete and the polyurethane adhesive. Additives in the concrete admixture are not permissible.

To ensure proper curing and a sufficient hardness of the concrete/screed, the floor is covered with a plastic foil-cover for approximately seven days to prevent the fast vaporizing of water. In an extreme, hot environment it is advisable to keep the floor a moist for several days to prevent the screed from "burning". One or two days after installation it is advisable to create dilatation joints of approximately 3 cm depth. This can be achieved with a disk saw. Cooling water with cement pollution must be removed from the top of the floor. During curing a sand/cement mixture can be sprinkled into wet spots to allow for proper curing. It is not permitted to add curing compounds.

# TRACKS - SPECIFICATION SHEET

The installation of floor – socket - foundations should be completed before the pouring of the slab. The final installation and fixing of sockets is completed after the slab has been poured, using a fast curing mortar. The slab must be kept free of oil, dirt and grease.

To achieve the required maximum moisture content of < 3 %, the curing time of the slab under normal circumstances is 30 days.

Running tracks are constructed with an inclination of 0,8% towards the inner circumference of the track. The inside edge of a running track base shall have a water channel to absorb surface water. As the construction of a track base is more complex than a simple court, details should be requested from BSW. Civil engineering advice and construction consulting services are also available from BSW.

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