



3834 Carrick Bend Dr. • Kissimmee • FL • 34746

ALL SPORT 600

Embedded Sandwich System

A. PRODUCT

ALL SPORT 600 is an impermeable synthetic surface of two-layer sandwich-type construction. The base layer consists of graded black granules of SBR rubber bound together with a mono component polyurethane binder. The surface layer is a composition of colored EPDM granules and similarly colored two-component polyurethane.

The base layer is laid in one course and comprises 80% by weight of ground black SBR rubber of not less than 1mm and not greater than 3mm in diameter. The binding agent is single component polyurethane compounded from Methylene Diphenyle Isocyanate (MDI) and Tolulene Diphenyle Isocyanate (TDI) with no solvent. A colored two-component polyurethane flood coat is applied to the base before the surface layer is poured.

The surface layer, normally 3 to 6mm thick, contains 30% to 40% by weight of colored EPDM granules. The two component polyurethane binder is compounded from polypropylenglycol and isocyanates based on MDI and TDI with no solvents added. The surface is available in a range of colors. The recommended thickness is 5/8" (16mm) and is built up of a base layer of 3/8" (10mm) with a 1/4" (6mm) thick surface layer; however a 1/2" (13mm) thickness is also acceptable.

ALL SPORT 600 can be laid on any smooth, stable base. It forms a resilient, economical and durable surface that is resistant to U.V. degradation, abrasion, shrinkage and mold.

B. MATERIALS

Primer

Polyurethane-based primers specifically formulated to be compatible with the base and track surfacing materials.

Black SBR Granules

The rubber granules for the base mat shall be recycled SBR rubber, processed and chopped to 1 to 3mm size, containing less than 4% dust.

Polyurethane Binder

Binder for the black rubber mat shall be an MDI-based mono-component, polyurethane binding agent. The binding agent shall not have a free TDI monomer level above 0.2%, must be clear or black in color, not milky, and must be solvent free. The binding agent must be specially formulated for compatibility with SBR stranded or rubber crumb.

EPDM Granules

The EPDM granules shall be manmade, a minimum of 20% peroxide cured EPDM, chopped, processed and having a specific density of 1.6 plus or minus 0.08 and a Shore-A hardness of 60.

Sulphur-cured rubber is not acceptable. The granules shall be graded 1mm to 4mm in size unless otherwise specified.

Polyurethane (Seal Coat and Top Layer)

This consists of two-component polyurethane, which is self-leveling and compounded from a proprietary, pigmented polyol and MDI based, "TDI Free", isocyanate. The liquid polyurethane shall contain no more than 60% polyol and no less than 40% isocyanate by volume with no mercury, lead, or any other heavy metals added by design.

Line Marking Paint

The line marking paint shall be polyurethane-based paint specifically manufactured to be compatible with polyurethane synthetic track surfaces.



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C. EXECUTION

Sub-base

The Synthetic Track Surfacing System shall be laid on an approved sub-base. The General Contractor shall provide compaction test results of 95% or greater for the installed sub-base and asphalt surface.

For NCAA certification the following criteria must be followed. The track surface i.e., asphalt substrate, shall not vary from planned cross slope by more than + .1 % with a maximum lateral slope outside to inside of 1% and a maximum slope of .1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".

It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic, but within 24 hours. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt-receiving base, before work can commence.

Priming

The primer shall be spray-applied in accordance with the manufacturer's specifications. Only those areas that can be installed the same day should be primed.

Base Mat

Mix the black SBR granules and binder at a ratio of approximately 5:1 by weight. The exact ratio depends on the dust content of the granules, which should be reduced to a minimum. Mixing time is 2 to 4 minutes, depending on the size of the mixing-batches and the type of mixer used.

The blended materials are then spread onto the asphalt or concrete base using a mechanical tandem leveler. The tandem leveler shall have a heated oscillating screed bar to obtain both smoothness and compaction. The heated screed bar normally works at a temperature of 158 to 176 degrees F.

The laying procedure shall be bay-to-bay and limiting the length of the passes so as not to have any cold (cured) joints between the bays. At the beginning of each new day's work, the traverse joint from the previous day's work shall be tack coated to ensure a good bond. Small irregularities remaining in the surface after the tandem leveler has passed may be removed using a light polyethylene or Teflon roller.

The surface hardens through the reaction of the binding agent with humidity. The speed of the reaction depends on temperature and relative humidity. Usually the surface may be walked upon the next day.

Impermeable Layer

The "A" and "B" components are mixed at the prescribed ratio homogeneously with a suitable mixing device. This may be a strong drilling machine with a mixing paddle, a static mixing machine or an automatic mixer. The mixing process may last approximately 2 to 4 minutes per batch, depending on the employed mixing unit. This coating is squeegee-applied to the base mat, making it impermeable.



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Wearing Layer

The top layer shall consist of a flow applied 3mm layer of the same pigmented two component polyurethane on to which pigmented EPDM granules are broadcast at a rate of approximately 9lbs/square yard prior to the initial set. After the cure is complete, the excess rubber granulate is removed by means of a mechanical sweeper. The EPDM granulate remaining embedded in the surface is approximately 5 lbs. /square yard.

Line Markings

All line and event markings shall be applied by experienced personnel utilizing polyurethane based paint compatible with the synthetic track surfacing. All markings dimensions will be certified in accordance with the specifications issued by the appropriate sanctioning or governing body such as IAAF, NCAA, NFSHSA, etc.

D. PERFORMANCE STANDARDS

Physical Properties (ASTM/IAAF)

Colors: Red, yellow, green, gray, blue as specified by Owner.

Thickness: 13 mm or as specified by architect/engineer or owner

ASTM D-2240 Shore A Hardness: 55 +/- 5

Density: 0.75 – 0.78

ASTM D-412 Elongation at break: Approx. 110%

ASTM D-412 Tensile Strength: 0.80 N/mm²@ 70F

ASTM D-395 Compression Set Recovery: 90% to 95% @ 70F over 24-hour period

ASTM D-501 Abrasion Resistance: 0.25 – 0.425 grams loss after 1000 cycles

ASTM D-822 Chalking: No change > 1000 hours

ASTM D-1984 Coefficient of Friction: Dry: 0.70 to 0.75 Wet: 0.80 – 0.95

ASTM D-2632 Resilience: 37 – 44%

ASTM D-624 Tear Resistance: 60 - 75 PSI

Force Reduction: 35 to 50%

E. CONTRACTOR QUALIFICATIONS

Contractors substituting an “or equal” must provide documentation for their products 10 days prior to the bid opening.

F. INSTALLER

Only trained craftsmen, who are full-time employees of All Sport LLC, shall install ALL SPORT 600.

G. CONTRACTOR QUALIFICATIONS

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H. WARRANTY

ALL SPORT 600 is warranted against defects in workmanship, labor and materials under normal use and service for a period of sixty months. The warranty excludes any damage or defects caused by improper design or engineering, by an inadequate or defective base, by normal wear and tear, vandalism, abuse, neglect or lack of maintenance.

I. MANUFACTURER

ALL SPORT 600 as manufactured by

ALL SPORT LLC. Surfacing & Construction Sport Facilities