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3834 Carrick Bend Dr. • Kissimmee • FL • 34746

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## **ALL SPORT 210**

Structural Spray Base Mat System

### **A. PRODUCT**

ALL SPORT 210 is a porous synthetic sport surface comprising a base layer of polyurethane bound rubber granules topped with a spray-applied coat of one component polyurethane and EPDM granules. ALL SPORT 210 can be laid on any smooth, stable base such as asphalt, concrete or wood. It forms a resilient, economical and hardwearing 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 material.

#### *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.

#### *Black SBR Granules*

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

#### *EPDM Granules*

The rubber granules for the structural spray wearing coats shall be EPDM peroxide cured, man-made rubber containing a minimum of 20% EPDM and having a specific gravity of 1.5 +/-0.1. The EPDM rubber will be 0.5mm to 1.5mm EPDM granules. EPDM granules shall be of the same color as chosen by the owner for the track surface.

#### *Structural Spray Coating*

The spray coating shall be the MDI-based mono-component, moisture cured, pigmented polyurethane, specifically formulated for compatibility with EPDM granules. The coating shall be the color red, or as chosen by the owner of the track surface.

#### *Line Paint*

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

### **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.



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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 14 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.

#### *Curing*

Before application of the synthetic surface can begin, the asphalt should be cured for at least 14 days, and a concrete base a minimum of 28 days.

#### *Cleaning*

The area to be surfaced shall be clean and free of any loose or foreign particles (dirt, oil, etc.) prior to commencement of the work. The surface is usually cleaned by use of a power blower and/or high-pressure washer.

#### *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.

Composition of Mix shall be as follows:

#### *Back Base Mat*

- SBR Rubber Granules 1-3 mm
- Black MDI Binder 20% of total rubber weight
- Application temperature at minimum 40 degrees F

#### *Structural Spray Top Coats*

- EPDM Rubber 0.5 - 1.5 mm (40% by weight)
- Structural Spray 60% by weight
- Application temperature at minimum 40 degrees F

#### *Black Mat*

The black rubber granules and polyurethane binding agent are blended together in a suitable mixer for a period of 2 to 3 minutes. The blended materials are then spread onto the asphalt/concrete base by means of a mechanical tandem leveler at a rate of 16 to 16.5 lbs. per square yard. 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.

#### *Structural Spray Wearing Coats*

After the black mat has properly cured, apply a thixotropic mixture, using red urethane spray and red EPDM granules. Mix in a



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suitable metal container using a drill and paddle and spray applied using air spray equipment. The structural spray coating is applied in applications utilizing 1.80-lbs./ square yard for each application.

*Line Markings*

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

Physical Properties (ASTM/IAAF)

Colors: Red, yellow, green, gray, blue as specified by owner

Thickness: (1/2") 12-13 mm or as specified by architect/engineer or owner

Density:	0.75 – 0.78
ASTM D-2240 Shore A Hardness:	55 +/- 5
ASTM D-412 Elongation at break:	Approx. 90%
ASTM D-412 Tensile Strength:	0.75 N/mm <sup>2</sup> @ 70F
ASTM D-395 Compression Set Recovery:	90% to 95% @ 70F over 24-hour period
ASTM D-501 Abrasion Resistance:	0.25 – 0.325 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 – 40%
ASTM D-624 Tear Resistance:	60 - 75 PSI

**D. CONTRACTOR QUALIFICATIONS**

Contractors wishing to substitute an “or equal” must provide documentation for their product 10 days prior to the bid opening.

**E. WARRANTY**

ALL SPORT 210 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.

**F. MANUFACTURER**

ALL SPORT 210 as manufactured by  
ALL SPORT LLC. Surfacing & Construction Sport Facilities