

# **BSS 300 Encapsulated Synthetic Track Surfacing System System Specifications**

## ***Part 1 – General***

### ***1.1 – Scope***

*The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **BSS 300 Encapsulated Synthetic Track Surfacing System** and related work indicated on the drawings and specified herein.*

*The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.*

### ***1.2 – Specific Scope of Work***

- A. Install an IAAF approved, impermeable polyurethane synthetic track system consisting of SBR Rubber and BEYPUR, a single-component polyurethane binder and BEYPUR, a poured-in-place, two-component U.V. stabilized elastomeric polyurethane wearing layer with an encapsulated textured finish.***
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.***

### ***1.3 - Coordination***

*The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.*

## ***Part 2 – Codes and Standards***

### ***2.1 – Applicable Publications***

*Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing guidelines as published by the American Society of Testing and Materials (ASTM).*

## 2.2 – Performance Standards

*The new synthetic track surfacing system shall exhibit the following minimum performance standards as required by IAAF:*

- |                             |                           |
|-----------------------------|---------------------------|
| A. Thickness:               | (12-13mm) or as specified |
| B. Force Reduction          | 35-50%                    |
| C. Vertical Deformation:    | 0.6mm-2.5mm               |
| D. Coefficient of Friction: | ≥ 0.5 (47 TRRL Scale)     |
| E. Tensile Strength:        | ≥ 0.5 Mpa                 |
| F. Elongation:              | ≥ 40%                     |

## Part 3 – Quality Assurance

### 3.1 – Contractor Qualifications

- A. *The CONTRACTOR and the MANUFACTURER must be the same.*
- B. *The CONTRACTOR must have a minimum of 7 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.*
- C. *The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.*
- D. *The CONTRACTOR must have installed a minimum of 6 outdoor track facilities in the last 2 years using the exact, IAAF certified, poured-in-place, two-component elastomeric polyurethane synthetic track surfacing, as specified herein with the contractor bidding this project.*
- E. *The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.*
- F. *The CONTRACTOR shall have 10 years experience with the aliphatic coating.*
- G. *The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets IAAF Performance Specification for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system as updated on April 1, 1999.*
- H. *CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.*

### 3.2 – Submittals

*The following submittals must be received with the bid submittal:*

- A. *Standard printed specifications of the synthetic track surfacing system to be installed on this project.*
- B. *An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.*
- C. *A synthetic track surfacing system sample, 6” x 6” in size, of the same synthetic track surfacing system to be installed on this project.*
- D. *An installation list of outdoor track facilities installed within the last two years, using the exact synthetic track surfacing system specified herein.*
- E. *Test results from an approved IAAF Testing Laboratory confirming compliance to the performance of athletic tracks test according to the IAAF.*

## **Part 4 – Materials**

### 4.1 – Elastomeric Polyurethane

- A. *BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent (100%) Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.*
- B. *The elastomeric polyurethane shall be red in color.*

### 4.2 – EPDM Granulate

- A. *The EPDM granulates shall be 0.5 to 1.5mm in size.*
- B. *The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.*

### 4.3 – Rubber Granulate of the base course

- A. *Styrene Butadiene Rubber (SBR) processed ground to a graded size of 1-3mm.*
- B. *A maximum of 82%, by weight of the paved-in-place base layer, of SBR will be allowed.*

#### *4.4 – Single Component Polyurethane Binder*

*Shall be BEYPUR 300, a single-component polyurethane binder with a long cure time for use in paved mat specifications. A minimum of 18%, by weight of the paved-in-place base layer.*

#### *4.5 – Seal Coat*

*Shall be BEYPUR 200, a two-component polyurethane pore sealer use with paved rubber granule mats. The granular SBR and binder layer shall be sealed with the BEYPUR 200. The application of EPDM dust is not allowed.*

#### *4.6 – Aliphatic Coating*

- A. *Single Component moisture cured aliphatic coating*
- B. *Aliphatic Coating shall be read in color matching the UV stabilized elastomeric polyurethane.*
- C. *No clear or two component coatings will be allowed.*

#### *4.7 – Line Marking Paint*

*Single-component, moisture cured, aliphatic polyurethane paint.*

### ***Part 5 – Installation***

#### *5.1 – Subbase*

*The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 95% or greater for the installed subbase 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 + .2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% 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.*

## 5.2 – Thickness

*The thickness of the **BSS 300 Encapsulated Synthetic Track Surfacing System** shall be 13mm.*

## 5.3 – Equipment

*The **BSS 300 Encapsulated Synthetic Track Surfacing System** components shall be processed and installed by specially designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.*

## 5.4 – Installation

### A. Base Course

*The SBR granules and BEYPUR 300 shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% in the base mat portion of the system. The BEYPUR 300 shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.*

### B. Seal Coat

*The two BEYPUR 200 components are mixed at the prescribed ratio homogeneously with a suitable mixing device. The coating is squeegee applied to the base mat, making it impermeable.*

**C. Wearing Course**

*The 0.5 to 1.5mm EPDM granules shall be integrated into the BEYPUR to achieve the full depth of the 5 mm wearing course. The resilient textured finish shall be a dense matrix of encapsulated EPDM granules. The homogeneous wearing course shall be applied in situ with the base course.*

**D. Protective Coating**

*The initial red pigmented aliphatic polyurethane coating shall be spray applied over the entire synthetic surfaced area at a rate of 200-250 square feet per gallon. The second red pigmented aliphatic polyurethane coating shall be spray applied over the initial application at a rate of 200-250 square feet per gallon in the opposite direction.*

**5.5 – Site Conditions**

- A.** *Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.*
- B.** *If, in the opinion of the installer of the synthetic material, the weather and/or climatic conditions are detrimental to the proper installation of the surfacing materials, work shall be delayed until conditions are acceptable. Preferred installation temperature is fifty degrees Fahrenheit and rising. Installation shall be executed only in dry conditions.*

**Part 6 – Line Striping and Event Markings**

**6.1 – Layout**

*Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.*

**6.2 – Certification**

*Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.*

***Part 7 – Guarantee***

*The BSS 300 Synthetic Track Surfacing System shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.*

*Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.*