

SECTION 32 18 23.40
SYNTHETIC TRACK SURFACING

Part 1 – General

1.1 OVERALL SCOPE

The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of an 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 TRACK SURFACING SCOPE OF WORK

- a. A 2-layer, 13mm impermeable full pour track system consisting of a renewable gel polyurethane base layer and a flood and chip coat of polyurethane and embedded EPDM rubber granules with an aliphatic encapsulating top coat. The minimum depth of the system shall be 13mm with the depth of the top-wearing layer a minimum of 4mm.
- 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 & 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 synthetic track surfacing system shall exhibit the following minimum performance standards as required by IAAF:

- A. Thickness $\geq 13\text{mm}$

B.	Force Reduction	35 to 50%
C.	Modified Vertical Deformation	0.6 to 1.8mm
D.	Friction	≥ 47 TRRL Skid Resistance
E.	Tensile Strength	≥ 0.5 MPa
F.	Elongation at Break	$\geq 40\%$

2.3 APPROVED PRODUCTS

- a. Rekortan G13 Running Track Surface as manufactured by Advanced Polymer Technology, or pre-approved equal.
- b. Advanced Polymer Technologies
109 Conica Lane / PO Box 160
Harmony, PA 16037
Phone: 724-452-1330

Part 3 QUALITY ASSURANCE

3.1 CONTRACTOR QUALIFICATIONS

- A. The CONTRACTOR must have a minimum of five (5) years of experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- B. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 5 years, under the present name, and if required, furnish financial statements for each of the past 5 years.
- D. The CONTRACTOR shall also be required to have a full-time employee on staff with a "Certified Track Builder (CTB)" designation as awarded by the American Sports Builder's Association.
- E. 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 to present day.
- F. The CONTRACTOR is to provide a list of completed facilities, minimum of 10 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.
- G. The CONTRACTOR shall have 10 years experience with the aliphatic coating.
- H. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.

- I. The MANUFACTURER must offer a minimum of four (4) IAAF Certified Track Systems.

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 QUALIPUR RENEWABLE GEL POLYURETHANE

Rekortan® G-13 Running Track Surface: A two layer, full pour track surface, consisting of a 9mm base layer of Qualipur renewable gel polyurethane, and a 4mm layer of Qualipur self-leveling polyurethane with an embedded EPDM broadcast rubber that is encapsulated with a two component Qualipur aliphatic.

Materials include:

- 1. Qualipur Primer
- 2. SBR Spray Rubber
- 3. Two Component Qualipur Renewable Polyurethane
- 4. Two Component Qualipur Polyurethane
- 5. Melos EPDM Rubber
- 6. Two Component Qualipur Aliphatic
- 7. The elastomeric polyurethane shall be Purple in color.

4.2 LINE MARKING PAINT

Single-component, moisture cured, aliphatic polyurethane paint.

Part 5 INSTALLATION

5.1 SUB-BASE

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 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 gel polyurethane base mat 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 Synthetic Track Surfacing System shall be 13mm.

5.3 INSTALLATION

- a. The first application is a 9mm self-leveling, force reduction layer of polyurethane that is approximately 76% renewable. The final layer has a self-leveling full-pour, flood and chip topcoat of polyurethane that is embedded EPDM broadcast rubber granules with an encapsulated top.
- b. Rubber (Black SBR Spray): The rubber in the base layer shall be specifically graded Styrene Butadiene Rubber (SBR). SBR is to be dried to no less than 2.5% moisture and sealed in bags.

- c. Colored Rubber (.5-1.5mm EPDM): Must be Melos rubber, or approved equal. Black SBR rubber is not allowed in the wearing course. Color: Purple, unless otherwise specified by the Owner. All relay exchange zones and long jump/triple jump runways to be gray. Submit colored color shop drawings prior to installation.
- d. Full Pour Polyurethane: The full pour polyurethanes shall be a renewable, gel polyurethane compound and a full pour top layer, with no solvents or fillers added. The specified products are Qualipur 5052 (A&B) in the base layer and Qualipur 5050 (A&B) in the top layer.
- e. Aliphatic Coating: Qualipur 6510, a pigmented two component aliphatic elastomeric top coating.

5.4 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.

5.5 LAYOUT & STRIPING

- 1. Wait forty-eight hours before applying line paint.
- 2. All work of this section shall conform to IAAF and NCAA specifications.
- 3. The Contractor shall supply all labor, materials and equipment necessary to perform the following:
 - 1. Locate and establish all radius points.
 - 2. Establish and set all necessary control points.
 - 3. Lay out all lines and markings to within ½ inch (13 mm) tolerance.
 - 4. Prepare all necessary drawings.
 - 5. Provide all computations and measurements in organized form.
 - 6. Establish all locations on the curves using a transit or Theodolite capable of reading direct to 20 seconds.
 - 7. Identify all markings, where appropriate, by painting the identification directly onto the track surface in 4 inch (10.16 cm) letters just below or in front of each mark in the right hand portion of the lane.
 - 8. Paint all the large 3 feet (91.4 m) high lane numbers, 4 sets in 2 colors with shadowed backgrounds. Colors to be selected by Owner.
 - 9. All lines shall receive sufficient paint to assure complete opacity and uniformity of color.
- 4. The marking shall include all the events and marks required or recommended for the following

track events:

- a. Starting Line (white): 55/60 meters, 55/60 meter hurdles, 100 meters, 100/110 meter hurdles, 200 meters, 300 meters, 400 meters, 1,500 meters, mile, 3,000 meters, steeplechase, 5,000 meters, 10,000 meters;
- b. Starting Line (green): 800 meters;
- c. Starting Line (red): 800 meter relay;
- d. Starting Line (blue): 1,600 meter relay;
- e. Multiple waterfall starting lines: (white with green dashes)
- f. Finish Line (white): All Events;
- g. Steeplechase (white)
- h. Relay exchange zones: 400 meter relay (yellow), 800 meter relay (red), 1,600 meter relay (blue), 3,200 meter relay (green);
- i. Hurdle locations: 100 (yellow), 110 (blue), 300 (red), 400 (green), steeplechase (white);
- j. Break line: (green)
- k. Coordinate all line markings with Landscape Architect prior to installation.

6.0 CERTIFICATION

Upon completion of the track markings, a licensed professional engineer, registered land surveyor or certified track builder shall furnish an acceptable letter of, or certificate of, accuracy to the owners attesting to the accuracy of the track markings and measurement and shall include copies of the computations, calculations and drawings that were used to obtain this accuracy. The engineer or surveyor should affix his stamp to the drawing and the certificate.

7.0 GUARANTEE

The 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.

8.0 CLEAN-UP

Clean-Up: Clean up and remove all excess materials as a result of this section.

END OF SECTION

Rekortan®

G13



THE
WORLD'S
MOST
CERTIFIED
TRACKS

GEL SERIES

ENVIRONMENTALLY
FRIENDLY WITH
FORCE REDUCTION
TECHNOLOGY



SMART
ATHLETE PERFORMANCE
DIAGNOSTIC SYSTEM

**GET
SMART** 

**THE WORLD'S ONLY
SMART SURFACE.**

Ask for SMART.
Available exclusively from Rekortan.



THE WORLD'S GREENEST TRACK

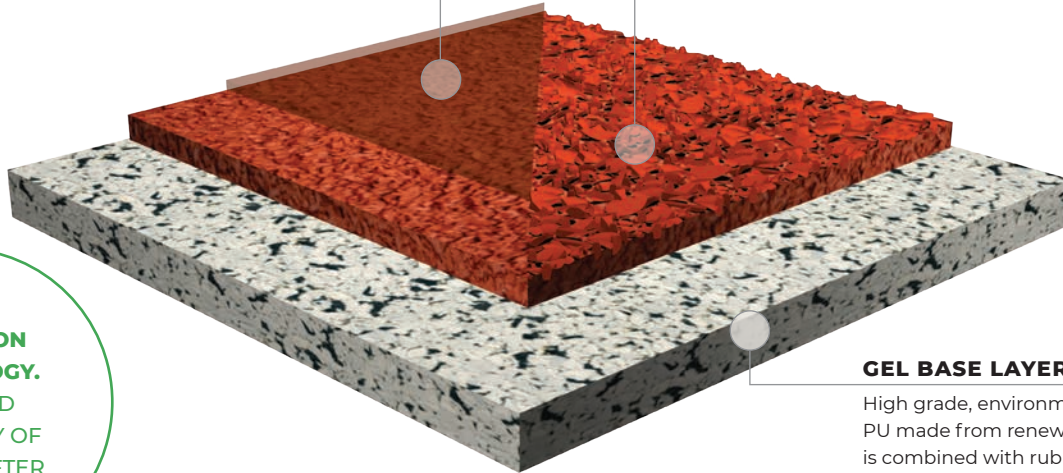
This dual durometer 13mm, impermeable system features 2 specialized layers, with a durable wear layer and a unique environmentally friendly force reduction base.

FAST TRACK WEAR LAYER

Smaller rubber granules are encapsulated for increased durability

TRADITIONAL WEAR LAYER

Seamless, dense matrix of PU and rubber granules for longevity



GEL BASE LAYER

High grade, environmentally friendly PU made from renewable resources is combined with rubber granules. Provides planarity for consistent footing and energy return for maximum speed

FORCE REDUCTION TECHNOLOGY.
RETAINED FLEXIBILITY OF 95%-97% AFTER 10 YEARS!

HIGHLIGHTS

- ▶ World Athletics Certified System
- ▶ Featuring a unique green layer, based on 70% renewable polyurethane, resulting in a total of 88% renewable/recyclable content
- ▶ Force reduction and energy return sustained over a greater temperature range than typical PU systems
- ▶ Formulated to resist UV degradation in the world's harshest climates
- ▶ Top wear layer is poured-in-place and embedded to a seamless, predictable surface that resists spikes
- ▶ Hydrophobic formulation repels water, enabling these surfaces to resist water damage

COLORS

Additional & Special Colors are available on request.



Red



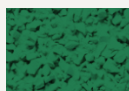
Black



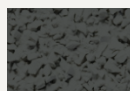
Rainbow Blue



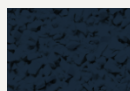
Berlin/Hertha Blue



Signal Green



Charcoal



Steel Blue

FOR MORE INFORMATION:

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Rekortan®