epiQ TRACKS™ V300

FASTER. SMARTER. STRONGER.

IMPERMEABLE STRUCTURALLY SPRAYED BASE MAT SYSTEM
PRODUCT SPECIFICATIONS
EPIQ TRACKS™ V300

Part 1 – General

1.1 Summary

The Synthetic Surfacing Contractor shall furnish all materials, labor, supervision and equipment necessary for the accurate completion of the **epiQ TRACKS™ V300** synthetic track installation and all project specific work indicated on the plans and specifications.

The guidelines established in this specification are to be considered minimum acceptable standards for installing a synthetic polyurethane track surface.

It is the responsibility of the Synthetic Surfacing Contractor to review the plans, specifications, field conditions and verify the locations where the **epiQ TRACKS V300** surface is to be installed.

Contractors wishing to be considered as an "or equal" must provide documentation for their products at least 10 days prior to the bid opening.

1.2 Scope of Work

a. The Synthetic Surfacing Contractor shall install an impermeable paved-in-place synthetic sport surface comprising of a base layer of polyurethane bound rubber granules, sealed, then topped with a spray-applied coat of one or two-component polyurethane and EPDM granules.

b. Layout and paint all track line and event markings in accordance with the latest edition of the IAAF, NCAA, NFHS or UIL rules and regulations, as applicable.

1.3 Coordination

Conduct operations while minimizing interference with other subcontractors on site. Do not obstruct walks, or other occupied facilities without permission from the Owner. Perform work while minimizing disturbance to Owner's scheduled events on the facility.

Part 2 – Standards and Codes

2.1 Guidelines

Guidelines to be followed on this project are those set forth by the IAAF, NCAA, NFHS or UIL, as applicable; along with the current material testing guidelines as set forth by the American Society of Testing and Materials (ASTM).

2.2 System Performance

a.	Thickness:	1/2" (13mm) or as specified
b.	Shore A Hardness (ASTM D-2240):	55 +/-5
c.	Elongation at break (ASTM D-412):	≥ 40%
d.	Tensile Strength (ASTM D-412):	0.80 N/mm2 @ 70F
e.	Compression Set Recovery (ASTM D-412)	90-95% @ 70F over a 24-hour period
f.	Abrasion Resistance (ASTM D-501):	0.25 grams loss after 1000 cycles
g.	Chalking (ASTM D-822):	No change after 1000 hours in weather meter.
h.	Coefficient of Friction (ASTM D-1984):	Dry: 0.70-0.75 / Wet: 0.60-0.65
i.	Resilience (ASTM D-2632):	38-42%
j.	Tear Resistance (ASTM D-624):	60-75 psi

2.3 Quality Assurance

a. The Synthetic Surfacing Contractor shall have a minimum of 8 years of experience in the installation of polyurethane synthetic tracks similar to the one being installed on this project.
b. The polyurethane materials shall be made in the United States.
c. Manufacturer's chemist must have at least 10 years of experience in the manufacturing and compounding of two-part polyurethane designed specifically for sports surfaces.
d. The Synthetic Surfacing Contractor shall have experience installing IAAF certified track systems.
e. The Synthetic Surfacing Contractor shall attest that all track surfacing material meets or exceed the requirements defined by the project specifications. Test data shall be submitted which shows that the product meets the required quality standards.
f. The Synthetic Track Installation Supervisor must have installed a minimum of 10 similar polyurethane tracks in the last 3 years.

Part 3 – Submittal Data

The following submittal data must be received as part of the bid submittal.

a. Standard printed specifications of the polyurethane track system being installed as part of this project.
b. A reference list showing similar projects installed in the last 8 years.
c. A synthetic track surface sample a minimum of 8”x11” in size of the track system being installed on this project.

Part 4 – Materials

1. Primer

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

2. Black SBR Granules

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

3. EPDM Granules

   The rubber granules for the structural spray wearing coats shall be EPDM peroxide cured, man-made rubber containing a minimum of 18-20% EPDM and having a specific gravity of 1.5 +/-0.08. The EPDM rubber will be 0.5mm-1.5mm EPDM granules. EPDM granules shall be of the same color as the polyurethane. Color to be red, or as chosen by the Owner.

4. Polyurethane Binder

   Binder for the black rubber mat shall be an MDI-based and or MDI/TDI mixture, mono-component, polyurethane-binding agent. The binding agent shall not have a 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 rubber crumb.

5. Polyurethane (Seal Coat)

   A pore sealer; minimizing component stretching shall be applied directly onto the base mat. The **epiQ TRACKS V300** Single Cast Sealer (SCS) provides a thixotropic effect to seamlessly bind the base mat and polyurethane layer together, eliminating the need for rubber dust. Rubber dust application prevents effective pore sealing, as the dust acts as a deterrent to the chemical bind.

The SCS technology seals the pores by creating a mechanical lock with the subsequent layer, without the use of rubber dust. This chemistry creates a better bond minimizing porosity and the potential for delamination.

The seal coat is solvent free, two-component, thixotropic polyurethane-based on MDI. It is designed to completely seal base mat prior to topcoat application.

The topcoat is a UV stabilized, self-leveling, two-component polyurethane based on 100% MDI. The polyurethane is solvent free, "TDI Free", and contains no mercury, lead, or any other heavy metals as defined by the EPA. All polyurethane materials shall be made in the United States.

6. Structural Spray Coating

   The spray coating shall be the MDI-based and or MDI/TDI mixture, one or two 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.

7. Line Marking Paint

   The line marking paint shall be polyurethane-based, single component, moisture cured paint specifically manufactured to be compatible with polyurethane synthetic track surfaces.

Part 5 – Execution

1. Sub-base

   The Synthetic Track Surfacing System shall be laid on a sub-base designed and approved by a licensed engineer. The General Contractor shall provide compaction test results of 95% or greater for the installed sub-base and the finished 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 +/-0.1% 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 Synthetic Surfacing Contractor to determine the method of correction. No cold tar patching, skin patching or sand and oil mix patching will be acceptable.

Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, by either 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 is 14-21 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.

Upon completion of surface test and correction of any defects, track surface contractor shall submit to Engineer or Owner a signed certificate stating the existing surface is acceptable and satisfactory for the installation of his track surface system.

2. Synthetic Track Surface

epiQ TRACKS V300 can be laid on any smooth, stable base such as asphalt or concrete. It forms a resilient, economical and hardwearing surface that is resistant to UV degradation, abrasion, shrinkage, mold and most common oils and chemicals.

Color: Red, yellow, green, gray, blue as specified by Owner. Colors other than red must be custom-blended and carry additional cost.

1. Curing

Before application of the synthetic surface can begin, the asphalt should be cured for at least 14-21 days, and a concrete base for a minimum of 28 days.

2. 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.

3. 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.

4. Black Mat

Job mix formulas shall be as follows:

SBR Rubber	1mm-3mm
Binding Agent	18-20% of total rubber weight

The black SBR rubber granules and polyurethane binding agent are blended together using state of the art automatic metering mixer for a period of 2-3 minutes for a precise measured ratio. No hand mixing is allowed.

The blended materials are then spread onto the asphalt/concrete base by means of a fully automatic paving machine with control sensors at a rate of 16-16.5 pounds per square yard. The fully automatic paving machine shall have a heated oscillating screed bar to obtain both smoothness and compaction. The heated screed bar normally works at a temperature of 158°F to 176° F.

The laying procedure shall be bay-to-bay and limiting the length of the passes to avoid having 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 fully automatic paving machine has passed, may be removed using a light polyethylene or Teflon roller or hand trowelled.

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.

Synthetic track materials are to be placed only when temperature is above 45°F and rising.

No materials should be placed when surfaces are wet or damp, precipitation is falling or imminent, or when other unsuitable conditions for the installation of the system are present.

5. Impermeable Layer

The polyurethane seal coat A and B components are mixed at the prescribed ratio using a state of the art automatic metering mixer for a precise measured ratio, then squeegee-applied to the base mat, making it impermeable.

6. Structural Spray Wearing Coats

   Job mix formulas shall be as follows:

Structural Spray	60% by weight
EPDM Rubber 0.5mm-1.5mm	40% by weight

   After the black mat has properly cured, apply a thixotropic mixture, using red structural spray and red EPDM granules, mixed using state of the art automatic metering mixer for a precise measured ratio, then spray-applied using the latest air spray equipment designed to handle this heavy rubber mixture. The structural spray coating is applied in two applications utilizing 1.80 pounds per square yard for each application.

7. 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, NFHS or UIL, as applicable.

   No striping operations may commence if temperature is 45°F and falling.

   Do not place any paint under wet or damp conditions or when relative humidity is above 85%.

   The line-striping machine shall be capable of producing neat, clean edges on all lines.

Part 6 – Warranty

epiQ TRACKS V300 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, lack of maintenance, or acts of God.

Part 7 – Installer

epiQ TRACKS V300 shall be installed only by trained craftsmen who are full time employees. No outside installer or distributor will be sold or furnished with **epiQ TRACKS** material for installation unless licensed by Manufacturer.

It is a requirement of this specification that the selected installer be required to supply proof of insurance and conformance to the Prevailing Wage Laws, if applicable for location.

Certified Installer
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