



Revolution™

SS Track System

Two Spray-Applied
Top Layers of EPDM
Rubber Granules
& Polyurethane

Paved-In-Place
Polyurethane
Bound Base Mat



Revolution SS Track System Features

- Polyurethane content of base mat is a true 20% of total surface.
- Permeable all-weather surface.
- Seamless finish.
- Various color choices.
- U.V.A. Protection greater than that of Revolution system.
- Greater durability and low maintenance.
- Backed by comprehensive warranty.



SPECIFICATIONS

Part 1 GENERAL

1.1 Description of Product

Paved-in-place track surface of permeable design consisting of a polyurethane-bound black rubber base mat with two spray-applied structural coatings of polyurethane-based pigmented binder and encapsulated pigmented EPDM rubber granules. The result is a durable, textured, all-weather surface.

1.2 Scope of Work

- Surfacing contractor shall furnish materials, labor equipment, and supervision to install resilient surfacing as per manufacturers recommended guidelines, drawings, & specifications as set forth by design professional specified herein.
- Lane lines and event markings shall be applied by qualified painter experienced in layout measurement and painting 400 meter tracks.

1.3 Supervision

Surfacing contractors shall have qualified supervisor on job site at all times during application of surface and to coordinate with other contractors to provide proper installation as per specifications herein. Surfacing supervisor must have a minimum of fifteen similar installations to be qualified.

Part 2 CONFORMANCE STANDARDS

2.1 Applicable Local and State Codes

Contractor shall abide by any local and state codes/laws and obtain required permits.

2.2 Governing Bodies

Standards and guidelines provided by one of the following groups:

International Amateur Athletic Association (IAAF); National Collegiate Athletic Association (NCAA); or the National Federation of State High School Association (NFHS) shall be followed as designated by the design professional and as specified herein. American Sports Builders Association (ASBA) guidelines shall be followed regarding design profile and grade tolerances. All testing requirements in regards to the project shall be in accordance with current testing guidelines as published by the American Society of Testing Materials (ASTM).

2.3 Safety

Safety is of the utmost concern on projects. Contractor shall implement their own safety protective program to provide a safe working environment for its employees and other project personnel.

2.4 Physical Properties & Performance

COLOR Black, Red, Blue, Green, or as specified by owner.

THICKNESS 13mm average or as specified by architect, engineer, or owner.

HARDNESS (ASTM D-2240) Cannot be measured because of porous structure.

ELONGATION (ASTM D-412) 56%

TENSILE STRENGTH (ASTM D-412) 0.60 N/mm²

COEFFICIENT OF FRICTION (ASTM D-1894) Wet 0.53

Part 3 QUALITY ASSURANCE

3.1 Contractor Qualifications

Surfacing contractor shall have a minimum of five years experience in the surfacing business with a minimum of 25 installations of the same product being bid. A minimum of ten of these installations must be four years or older. The surfacing contractor must be a member of the American Sports Builders Association in good standing.

3.2 Submittals

- Submittals must include the following standard specifications of track product system to be proposed as per specifications herein.
- Affidavit attesting that the surface materials meet or exceed manufacturers printed specifications.
- Manufacturers certification of materials.
- 4" x 4" samples of surfacing product is being bid.
- Submit a reference list of ten or more installations complete with owner name, telephone, e-mail, and address or owner and contact person.

Part 4 MATERIALS

4.1 Polyurethane Primer

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

4.2 Base Mat Rubber Granules

Recycled SBR crumb rubber-chopped, processed, and graded to 1–3mm in size with not less than 4% retained on a number 50 sieve with no trace of fiber or steel. **OPTIONAL**— black EPDM rubber— chopped, processed, and graded to 1–4mm in size.

4.3 Polyurethane Base Mat Binding Agent

Single component MDI based urethane that is compatible with SBR or EPDM rubber granules.

4.4 Structural Spray Wear Coat Rubber Granules

Synthetic pigmented EPDM rubber— chopped, processed, and graded to 0.5–1.5mm in size. Color as requested by owner.

4.5 Structural Spray Wear Coat Polyurethane Binding Agent

A two component system consisting of a single component MDI based polyurethane binder, mixed with a polyurethane base color paste. Color as requested by owner.

4.6 Line Marking Paint

A polyurethane based paint specifically formulated for painting polyurethane track systems and is compatible with surfacing system proposed. Other paints may be used if they are compatible with surfacing materials.

Part 5 INSTALLATION

5.1 Granular Stone Sub-Base

A stone sub-base, minimum 4" thick, shall be applied over a prepared sub-grade meeting proper grade and slope with a minimum compaction density of 96%. The stone materials shall be a porous aggregate that provides structural stability and allows free draining qualities for the sub-base. Compaction shall meet 96% of standard proctor established.

5.2 Asphalt Base Criteria

- Coarse asphalt base shall be applied in a minimum of two layers (for new construction) at a minimum thickness of 4" compacted.
- **Surface inspection** Prior to the application of the synthetic track surface, the asphaltic or concrete base shall be inspected for conformity to planarity requirements. The surface shall not deviate more than $\frac{1}{8}$ " in 10 feet from the specified grade when checked with a 10 foot straight edge. The surface may also be flooded with water to determine if any "bird baths" or low areas exist. Any areas found not to be in conformance with the above requirements shall be repaired by others and allowed to cure prior to the application of the synthetic surface with compatible materials. The architect will provide to the surfacing contractor, prior to surface installation, a letter stating that all repairs, if any, asphalt planarity, and specifications for the base are in compliance with the project documents.
- **Curing** An asphaltic base shall be allowed to cure a minimum of 21 days and a Portland Cement Concrete base shall be allowed to cure a minimum of 28 days and moisture content must be less than 3.0% prior to the commencement of the work.
- **Cleaning** The area to be surfaced shall be clean and free of any loose or foreign particles (dirt, oil, etc.) prior to the commencement of work.

5.3 Thickness

The thickness of the resilient layer finish shall be an average depth of 13mm.

5.4 Color

The color shall be specified by owner.

5.5 Machinery and Equipment

Specially designed equipment shall be used to proportion, mix, and finish the proposed resilient surface. Polyurethane primer shall be applied by an airless sprayer with a minimum of 50 P.S.I. and provide a uniform coverage. The base mat shall be applied by a mechanically operated finisher with a thermostatically controlled heat screed with variable speed control. Full-pour material and EPDM rubber dust shall be mixed using a drill and mixing paddle and applied over cured base mat with squeegees to provide an impervious layer and ready to receive the structural top coats. Structural spray top coats shall be mixed using a drill and mixing paddle. It will be spray-applied using air spray equipment approved by the

structural spray manufacturer. The mixing unit shall be specifically designed to proportion the amount of polyurethane binder and rubber to maintain quality control. The mixing unit shall be calibrated for each installation.

5.6 Installation of Resilient Track Surfacing

- The entire area to be surfaced shall receive an application of polyurethane primer. Primer applied uniformly at a rate of not less than .2 lbs per square yard. Allow a minimum of thirty minutes curing time before applying the base mat.
- **Base mat installation** Blend black crumb rubber and polyurethane binding agent in suitable mixer for 2–3 minutes. Spread blended materials onto asphalt base by using a mechanical tandem leveler with heated screed bar to obtain both smoothness and compaction. Mat will be laid bay to bay, limiting length of each pass to avoid cold (cured) joints. Ensure a good joint by tack coating traverse joint from previous days work at beginning of each days work. Remove small irregularities with a light weight polyethylene or Teflon roller. Monitor relative humidity conditions and relative curing rates. Restrict all traffic from mat until curing is complete. Polyurethane content of base mat is a minimum of 20% as determined by the overall weight of rubber granules per mix.

- **Structural spray wearing coats** Ensure base mat and sealer layer curing is complete. Apply thixotropic mixture containing polyurethane binder and EPDM granules into suitable metal container using a drill and mixing paddle. Spray-apply using air spray equipment approved by the structural spray manufacturer. Monitor relative humidity conditions and relative curing rates. Restrict all traffic from mat until curing is complete. Protect installed materials from damage due to foot and/or vehicular traffic and deleterious weather. Limit surface slope deviations to not more than $\frac{1}{8}$ " in ten feet measured in any direction. Structural Spray Wear Coat Polyurethane Binding Agent is 60 percent of weight of the structural spray wear coat as determined by the overall weight of the rubber granules per mix. No thinner is used. Structural spray coat shall be applied at a rate of 1.8 lbs. per square yard per coat. Two coats shall be applied resulting in a total weight of 3.6 lbs. per square yard.

- **Line marking** The measurement and marking of lines and events shall be performed according to the recommendation of the National Federation of Track and Field Standards, NCAA, IAAF, and state roles and/or in accordance with the drawings and specifications of the manufacturer.

5.7 Site Conditions

- Installation of base mat and structural spray top coats shall not take place if, in the opinion of the surfacing supervisor, the temperature, excessive dust, threatening weather, and/or other conditions exist that may be unacceptable for installing any of three layers.
- All fencing shall be in place with lockable gates to provide security.
- No irrigation of the infield shall be done while installation is in process.
- The public shall be notified by the owner that the track area is closed and off limits to the public. Signs shall be posted by the owner that the athletic field and athletic track are closed for repairs/renovations.

Part 6 LANE LINES AND EVENT MARKINGS

- Line markings shall be laid out by duly qualified contractor or design professional.
- Radius point monuments shall be in place and installed by a civil engineer before the line marking contractor can perform measurements and layout.
- All layout and painting shall be in accordance with one of the following governing bodies: NCAA, IAAF, or NFHS standards and state regulations as set forth in the specifications.
- Line painting contractors shall submit a certification of accuracy attesting to the layout and lines, and shall submit a color coding chart with a certificate of accuracy.

Part 7 WARRANTY

Revolution™ SS synthetic track surfacing system is warranted against defects in material and workmanship. The warranty excluded damage or defects caused by improper construction or design of the base materials, vandalism, abuse, neglect, lack of maintenance, or acts of God.

