

3-Part Specification: PlayBound™ TurfTop™



SURFACEAMERICA®

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PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes: PlayBound™ TurfTop™ playground surfacing system.

Specifier Note: Revise paragraph below to suit project requirements. If a reader of this section could reasonably expect to find a product or component specified in this section, but it is actually specified elsewhere, then the related section number(s) should be listed in the paragraph below. In the absence of related sections, delete paragraph below.

Specifier Note: Site materials and methods, drainage, playground equipment, fencing, substrate preparation and similar work is provided by others and is described in other sections. Consult manufacturer for specific substrate preparation requirements. Edit, retain or delete paragraph below to suit project requirements and specifier practice.

B. Related Sections: Division 2 Sitework Sections: Materials and Methods, Excavation, Asphalt Paving, Concrete Paving, Sub-Drainage, Storm Drainage, Fencing, Playground Equipment and Structures.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard. It is a listing of all references used in this section.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.
2. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
3. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
4. ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials.
5. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.

6. ASTM F1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.

7. ASTM F1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.

Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties required to link components of a system together and to interface with other systems.

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide a 2-layer (bottom layer rubber-polyurethane/top layer synthetic grass (with or without rubber infill)) playground surfacing system that has been designed, manufactured and installed to meet the following criteria:

1. Shock Attenuation (ASTM F1292):

a. Gmax: Less than 200.

b. Head Injury Criteria: Less than 1000.

2. Flammability (ASTM D2859): Pass.

3. Tensile Strength (ASTM D412): 60 psi (413 kPa).

4. Tear Resistance (ASTM D624): 140%.

5. Water Permeability: 0.4 gal/yd²/second.

6. Accessibility: Comply with requirements of ASTM F1951.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

1.04 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

B. Product Data: Submit manufacturer's product data and installation instructions.

C. Verification Samples: Submit manufacturer's standard verification samples of 9" x 9" (229 mm x 229 mm) minimum.

D. Quality Assurance/Control Submittals: Submit the following:

1. Certificate of qualifications of the playground surfacing installer.

E. Closeout Submittals: Submit the following:

1. Warranty documents specified herein.

Specifier Note: Article below should include statements of prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 1 Quality Assurance Section.

1.05 QUALITY ASSURANCE

A. Qualifications: Utilize an installer approved and trained by the manufacturer of the playground surfacing system, having experience with other projects of the scope and scale of the work described in this section.

B. Certifications: Certification by manufacturer that installer is an approved applicator of the playground surfacing system.

Specifier Note: Article below should include specific protection and environmental conditions required during storage. Coordinate article below with Division 1 Product Requirements Section.

1.06 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 1 Product Requirement Section.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

Specifier Note: In article below, state physical or environmental limitations or criteria for installation such as weather, temperature, humidity, ventilation or illumination required for proper installation or application.

1.07 PROJECT/SITE CONDITIONS

A. Environmental Requirements: Install surfacing system when minimum ambient temperature is 40 degrees F (1 degree C) and maximum ambient temperature is 90 degrees F (32 degrees C). Do not install in steady or heavy rain.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section. Use this article to require special or extended warranty or bond covering the work of this section.

1.08 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

Specifier Note: Coordinate subparagraph below with manufacturer's warranty requirements.

1. Warranty Period: 5 years from date of completion of work.

PART 2 – PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 PLAYBOUND TURFTOP PLAYGROUND SURFACING SYSTEM

Specifier Note: Retain or delete paragraph below per project requirements and specifier's practice.

A. Manufacturer: Surface America, Inc.

1. Contact: PO Box 157, Williamsville, NY 14231; Telephone: (800) 999-0555, (716) 632-8413; Fax: (716) 632-8324; E-mail: info@surfaceamerica.com; website: http://www.surfaceamerica.com.

B. Proprietary Products/Systems. PlayBound TurfTop playground surfacing system, including the following:

1. PlayBound Primer:

a. Material: Polyurethane.

2. PlayBound TurfTop Basemat:

a. Material: Blend of 100% recycled SBR (styrene butadiene rubber) and polyurethane.

Specifier Note: The type of playground equipment determines the required basemat thickness, and the basemat thickness may be different at various locations on the playground site. Depending on ASTM F1292 requirements for critical fall height (6' or 8' (1829 mm or 2438 mm)), select basemat thickness from options provided in subparagraph below (2" or 3" (51 mm or 76 mm), respectively). Specify project requirements below and coordinate with working drawings.

b. Thickness: [2" (51 mm)] [3" (76 mm)].

c. Formulation Components: Blend of strand and granular material or blend of strand.

3. PlayBound TurfTop:

The synthetic turf material and (optional) resilient infill shall be in accordance with the following:

The fiber shall be low friction fiber, measuring not less than 1-1/4" high. The low friction fiber shall be specifically designed to virtually eliminate abrasion.

The tufted fiber weight shall not be less than 70 ounces per square yard. The fiber shall be tufted on a 3/8" tufting machine at a rate of 3 stitches per inch minimum. The low friction non-abrasive fiber shall be treated with a UV inhibitor.

The primary backing shall consist of a one part, two or three component polyester/polypropylene backing with a minimum weight of 7 ounces per square yard. The secondary backing shall consist of an application of polyurethane (minimum of 20 ounces per square yard); heat activated to permanently lock fiber tufts in place. Products using latex based secondary backings will not be acceptable. The synthetic grass system shall be perforated with 3/16" holes every four (4") inches in both directions to provide for maximum drainage. Complete synthetic grass system (including base pad) shall drain in excess of 15" per hour. Non-perforated systems shall not be acceptable alternates for purposes of this specification.

The carpet shall be delivered in 12' or 15' wide rolls by lengths best suited for the project.

The fiber shall be field green in color to simulate natural grass as closely as possible and treated with UV inhibitor, guaranteed a minimum of five years.

If infill is included in system, it shall consist of a non-compacting mixture of ambiently recycled SBR or EPDM crumb rubber, black in color, 1-4 mm in size. The rubber shall be applied at approximately 3 pounds per square foot.

2.02 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

Specifier Note: Specify proportions and procedures for site mixing materials. Mixing is the preparation of materials for use and is considered to be part of the manufacturing process.

2.03 MIXES

A. Required mix proportions by weight:

1. Basemat: 16+% polyurethane (as ratio: 14% polyurethane divided by 86% rubber). 14% polyurethane, 86% rubber (based on entire rubber & polyurethane mix).

PART 3 – EXECUTION

Specifier Note: Revise article below to suit project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

A. Comply with the instructions and recommendations of the playground surfacing manufacturer.

Specifier Note: Specify actions to physically determine that conditions are acceptable to receive primary products of the section.

3.02 EXAMINATION

A. Site Verification of Conditions: Verify that substrate conditions are suitable for installation of the playground surfacing system. New asphalt must be fully cured – up to 30 days. New concrete must be fully cured – up to 7 days.

B. Do not proceed with installation until unsuitable conditions are corrected.

Specifier Note: Specify actions required to physically prepare the surface, area, or site or to incorporate the primary products of the section.

3.03 PREPARATION

A. Surface Preparation:

1. If asphalt or concrete base, using a brush or short nap roller, apply primer to the substrate perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft²/gal (7.5 m²/L).

2. If crushed stone base, must be contained by wood or concrete border, which the material will abut.

Specifier Note: Coordinate article below with manufacturer's recommended installation requirements.

3.04 INSTALLATION

A. Do not proceed with playground surfacing installation until all applicable site work, including substrate preparation, fencing, playground equipment installation and other relevant work, has been completed.

B. Basemat Installation:

1. Using screeds and hand trowels, install the basemat at a consistent density of 29 pounds, 10 ounces per cubic foot (466 kg/m³) to the specified thickness.

2. Allow basemat to cure for sufficient time so that indentations are not left in the basemat from applicator foot traffic or equipment.

3. Do not allow foot traffic or use of the basemat surface until it is sufficiently cured.

C. TurfTop installation:

1. Rough cut synthetic grass rolls for installation.

2. Using 15" wide cordura seam tape and 1-part urethane adhesive, seam synthetic grass rolls to form monolithic surface. Adhere synthetic grass to basemat around playground perimeter.

3. If infill is included in system, using manual or machine-operated spreading equipment, distribute rubber infill throughout synthetic grass installation to within 1/4" to 1/2" of fiber tip. (3 pounds per square foot).

3.05 PROTECTION

A. Protect the installed playground surface from damage resulting from subsequent construction activity on the site.