



Synthetic Grass Safety Surface System with Rubber Impact Layer Specification

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications apply to this section.

1.2 DESCRIPTION OF WORK

- A. Provide all labor, materials, equipment, and tools necessary for the complete installation of synthetic grass safety surface. Surface shall meet the requirements of ASTM F 1292 that states that the surface must yield both a peak deceleration of no more than 200 g's and a Head Injury Criteria (HIC) value of no more than 1,000 for a headfirst fall from the accessible height of the play equipment. The system shall consist of, but not necessarily be limited to, the following:
 - 1. Synthetic grass consisting of fibers that are a minimum of 2.125 inch long. Turf fiber construction consisting of polyethylene monofilament and either texturized monofilament fibers tufted to a 2-layer stabilized woven polypropylene fabric (primary backing), with a secondary backing (stitch binder) of DuraFlo. (XGrass® synthetic turf or equivalent).
 - 2. Pad underlayment system consisting of porous closed cell composite materials. Thickness and density of panels shall be sufficient so that system meets the requirements of ASTM F 1292. SofPad™ or equivalent.
 - 3. Synthetic Grass Infill, consisting of anti-microbial acrylic coated round silica particles, designed to provide the look, feel, and performance of optimally maintained natural grass. EnviroFill™ or equivalent.
- B. Work included in this Section includes grading necessary to shape and drain the area and base preparation and installation of the synthetic grass in areas shown on Drawings.

PART 2 - PRODUCTS

2.1 SYNTHETIC GRASS SAFETY SURFACE

- A. Aggregate Base – Crushed angular hard stone, ¾" minus compactible stone (not clean). (Refer to Section 3.2-B)
- B. Synthetic grass: 2.125 inch XGrass® Synthetic Turf for Play areas from XGrass, 210 Howell Drive : Dalton, GA 30721 : Phone (877) 881-8477 or approved equal
 - a. Face Weight 80 oz/sy
 - b. Face Yarn Type: Polyethylene
 - c. Yarn Size 10800/7300
 - d. Pile Height: 2.125 inches
 - e. Color: Blend & /Spring Green
 - f. Construction: Broadloom tufted
 - g. Stitch Rate: 8 per 3 inches
 - h. Tufting Gauge: 1/4"
 - i. Primary Backing: Stabilized dual layered woven polypropylene
 - j. Secondary Backing 10 oz. DuraFlo
 - k. Total Product Weight 99.7 oz/sy
 - l. Finished Roll Width 180" untrimmed
 - m. Warranty: 10-year fade



- C. Lower Base/Impact Course: Mixture of black SBR rubber shreds and binding agent.
 - a. Binder to Rubber Ratio: 18.75%
 - b. Thickness: Sufficient to meet impact attenuation requirements as determined by designated fall height of playground equipment.

- D. Synthetic Grass Infill : EnviroFill™ from XGrass, 210 Howell Drive : Dalton, GA 30721 : Phone (877) 881-8477 or approved equal Coating: Priority acrylic, iron oxide and chromium oxide
 - a. Grain shape: Hardness: 6-8 Mohs
 - b. Curvature: 0.7+
 - c. Specific Gravity: 1.76 g/cm³
 - d. Bulk Density: 110 lb/cu ft
 - e. Uniform coefficient 1.10 to 1.40
 - f. Effective Size .84 –1.68 mm

- E. Splicing Material: 1000 denier coated nylon (Cordura®) 12" wide minimum.

- F. Adhesive: Synthetic Turf Adhesive (from XGrass)

PART 3 - EXECUTION

3.1 GROUND PREPARATION

- A. General: The ground area to receive synthetic grass safety surface is indicated on the Drawings.

- B. Leveling and Site Preparation: All organic material and organic debris to be removed. Soil to be graded level and stabilized (compacted). Compaction shall be done with mechanical compactors, including vibratory compactors, and/or powered tampers, and rollers.

3.2 BASE AND SYNTHETIC GRASS CONSTRUCTION

- A. General: The area to be smooth and graded to allow proper drainage. Refer to grading plan. The overall grade of the playground is not to exceed 3%.

- B. Compacted Aggregate Base: Place 4 inches of aggregate base as leveling layer compacted to 90% of max density per AASHTO T99. Compaction shall be done with mechanical compactors, including vibratory compactors, and/or powered tampers, and rollers. Aggregate size should be ¾" minus (compactable).

- C. Synthetic Grass: Place turf and cut to fit configuration as shown on Drawings. Splice seams. All seams must be attached with splicing film/fabric and adhesive as approved by the manufacturer for this type of installation of their product.

- D. Infill: Apply layers of synthetic grass infill evenly with a spreader and broom the turf fibers with stiff bristle broom to stand fibers up and allow infill to settle into the bottom. Broom in infill round quartz silica sand approximately 3.5 pounds per square foot.

- E. Anchoring/Edging: Edges of turf will be secured to ground with mechanical fasteners, stakes or edging.

PART 4 - WARRANTY

4.1 WARRANTY

- A. Please refer to the updated XGrass warranty for details.