

SECTION 32 18 23

ATHLETIC AND RECREATIONAL SURFACING

PART 1 GENERAL

1.01 QUALITY ASSURANCE

- A. The synthetic turf manufacturer must have a minimum of 5 years experience.
- B. The synthetic turf installer must have a minimum of 5 years experience and have installed a minimum of 5 acceptable installations of comparable size within the last 3 years.
- C. Do not apply adhesive if temperatures are expected to go below 40 degrees within a 24 hour period.

1.02 WARRANTY

- A. The warranty shall guarantee the usability and playability of the synthetic turf for its intended uses for and eight year period starting at Substantial Completion date.
- B. The warranty may not be prorated or place limitation on the field's usage.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Components:
 1. A carpet made of polyethylene fibers tufted into a fibrous, perforated or permeable backing.
 2. An infill mixture of graded sand and ground SBR rubber that partially covers the carpet.
 3. Glue, paint, thread, seaming fabric and materials used to install/mark the synthetic turf.
- B. Monofilament Synthetic Turf:
 1. Fiber Denier: 9,000 dtex minimum.
 2. Structure: Straight Monofilament.
 3. Yarn Thickness: 120 – 80 microns.
 4. Yarn Width: 1 mm.
 5. Yarn Tensile Strength: 135 N, Minimum.
 6. Tuft Gauge: ¾ inch maximum.
 7. Face Weight: 45 oz. minimum.
 8. Pile Height (consistent throughout material):
 - a) ECE: 1 ¾inch minimum, 2 ½inch maximum.
 - b) Other: 2 ½ inch.
 9. Primary Backing: Two part composite, comprised of both woven and non-woven components.
 10. Primary Backing Weight: 8 oz/sy, minimum.
 11. Primary Backing Dimensional Stability: 47.10 n/SQ. Meter.
 12. Secondary Backing Coating: Solid polyurethane.
 13. Secondary Backing Coating Weight: 26 oz/sy, minimum.
 14. Backing Tear Strength - Grab Tear Strength: (X-Y) > 250-400 lbs.
 15. Perforated Backing: ¼inch minimum holes at 3inch o.c. both directions.
- C. Slit Film Synthetic Turf:
 1. Fiber Denier: 9,000 dtex minimum.

2. Structure: Fibrillated Tape.
3. Yarn Thickness: 120 – 80 microns.
4. Yarn Width: 17 mm.
5. Yarn Tensile Strength: 135 N, Minimum.
6. Tuft Gauge: ¾inch maximum.
7. Face Weight: 45 oz. minimum.
8. Pile Height (consistent throughout material):
 - a) ECE: 1 ¾inch minimum, 2 ½inch maximum.
 - b) Other: 2 ½ inch .
9. Primary Backing: Two part composite, comprised of both woven and non-woven components.
10. Primary Backing Weight: 8 oz/sy, minimum.
11. Primary Backing Dimensional Stability: 47.10 n/SQ. Meter.
12. Secondary Backing Coating: Solid polyurethane.
13. Secondary Backing Coating Weight: 26 oz/sy, minimum.
14. Backing Tear Strength - Grab Tear Strength: (X-Y) > 250-400 lbs.
15. Perforated Backing: ¼inch minimum holes at 3inch o.c. both directions.

D. Infill:

1. Bottom Layer: Sand.
 - a) Siliceous (95% minimum) washed and dried.
 - b) Sieve size: 20-40 mesh.
 - c) Minimum quantity:
 - i) 1 ¾inch pile height: 1 lb/sf.
 - ii) 2 ½inch pile height: 2 lb/sf.
2. Top Layer: Rubber:
 - a) Rubber must be ambient or cryogenic ground, recycled tire granules.
 - b) Sieve size: 10-20 mesh.
 - c) Minimum quantity:
 - i) 1 ¾inch pile height: 2.5 lb/sf.
 - ii) 2 ½inch pile height: 3 lb/sf.
3. Install rubber and sand mixture per manufacturer's specification.
4. Coconut fiber infill will not be accepted.

E. At sports field, carpet shall be furnished in 15' wide rolls, and shall be long enough to extend sideline to sideline without splicing.

F. At non-sports field installations, carpet shall be in as large of pieces as practical with a minimum of seams. No seams allowed within 24inch (parallel) of edges.

G. Surplus Material: The turf contractor shall provide the following surplus material with each installation, to be stored at the manufacturer's or installers facility.

1. Turf Fabric: 5% extra by square footage.
2. Infill Material: as required to infill 500 sq. ft. for sports field, 50 sq. ft. at non-sports fields.
3. Seaming Tape: 5%.
4. Seaming Epoxy: 5%.

H. Nyloplast drainage or similar systems for athletic field storm drainage systems.

PART 3 EXECUTION

3.01 EXECUTION

- A. The installation shall be performed in full compliance with the approved shop drawings.
- B. The installation shall be in accordance with the manufacturer's specifications and recommendations.
- C. Striping shall be to NHSF standards, or as shown on plans.
- D. All inlaid lines shall be straight and true.
- E. Gmax testing shall be completed following the turf installation. Testing shall be done at a minimum of 5 locations on the field. The average Gmax shall be below 110, with an individual maximum of 120. Testing to be paid for by the contractor.

END OF SECTION 32 18 23