

## **SECURE LOCK INTERLOCKING TILES**

### **Product Guide Specification**

#### **PART 1 - GENERAL**

##### **1.1 SECTION INCLUDES**

- A. Resilient, Interlocking, Playground safety surfacing tiles.

##### **1.2 REFERENCES**

- A. ASTM F1292-17a - Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- B. ASTM D 2859 – Standard Test Method for Flammability of Finished Textile Floor Covering Materials as directed in Federal Document DOC FF 1-70.
- C. ASTM C 1028 – Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull Meter Method.
- D. ASTM D 3676 – Standard Specification for Rubber Cellular Cushion Used for Carpet or Rug Underlay.
- E. ASTM D 3389 – Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Double-Head Method).
- F. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers.
- G. ASTM D 624 – Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
- H. ASTM C 1026 – Standard Test Method for Measuring the Resistance to Freeze-Thaw Cycling
- I. ASTM D 573 – Standard Test Method for Rubber-Deterioration in an Air Oven (*Heat Aged*).
- J. ASTM E 648-10 – Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
- K. ASTM F 1951-09 – Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.

- L. ASTM F 1551-03 – Standard Test Methods for Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials: Suffix-DIN 18-035, Part 6: Water Permeability of Synthetic Turf Systems and Permeable Bases.
- M. ASTM D 395 – Standard Test Methods for Rubber Property-Compression Set Method B: Compression Set Under Constant Deflection in Air.
- N. ASTM D 2240 – Standard Test Method for Rubber Property-Durometer Hardness.
- O. ASTM C 501, 2009 – Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser.
- P. IPEMA Certified

### **1.3 SUBMITTALS**

- A. Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including installation and/or subsurface recommendations.
- C. Samples: Submit manufacturer's sample of 1 full tile.
- D. Test Reports: Submit certified test reports from qualified independent testing agency indication results of the following tests:
  - 1. Impact Attenuation: ASTM F1292-17a.
  - 2. Freeze Thaw: ASTM C 1026.
  - 3. Rubber Deterioration/ Air oven: ASTM D 573.
  - 4. Compression Set: ASTM D 395.
  - 5. Tensile Strength: ASTM D 412.
  - 6. Elongation at Break: ASTM D 412.
  - 7. Tear Strength: ASTM D 624.
  - 8. Wear Coarse Density (durability).
  - 9. Durometer Hardness: ASTM D 2240.
  - 10. Taber Abrasion: ASTM C 501.
  - 11. Flammability: ASTM D 2859
  - 12. Static Coefficient of Friction: ASTM C 1028.
- E. Certificate of Compliance: Submit manufacturer's certificate of compliance indicating materials comply with specified requirements.

- F. Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions.
- G. Warranty: Submit Manufacturer's standard warranty.

#### **1.4 QUALITY ASSURANCE**

- A. Installer's Qualifications:
  - 1. Installers must have successful experience in installation of playground safety surfacing tiles of similar type to that specified, with a minimum of 20 projects completed within last 5 years.
  - 2. Employ persons trained for installation of playground safety surfacing tiles and are approved by manufacturer

#### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage:
  - 1. Store materials in accordance with manufacturer's instructions.
  - 2. Playground Safety Surfacing Tiles:
    - a. Store tiles in a dry area prior to installation.
    - b. Protect tiles from direct sunlight before installation.
  - 3. Adhesive: Store adhesive in a dry area at a minimum temperature of 40 degrees F.
- C. Handling: Protect materials during handling and installation to prevent damage.

#### **1.6 ENVIRONMENTAL REQUIREMENTS**

- A. Air Temperature: The air temperature should be a minimum of 40 degrees F (4 degrees C) and preferably climbing for a minimum of 24 hours before and during installation.
- B. Tile Temperature: Ensure surface temperature of playground safety surfacing tiles is a minimum of 50 degrees F (10 degrees C) at the time of installation.
- C. Tile or Air Temperatures: Consult manufacturer's installation instructions for modified installation procedure when tile or air temperatures are above 85 degrees F (29 degrees C).

## 1.7 WARRANTY

- A. Materials and Workmanship: Playground safety surfacing tiles shall be warranted for defects in materials and workmanship for 10 years from date of Final Acceptance (i.e. Notice of Completion).

## PART 2: PRODUCTS

### 2.1 MANUFACTURER

RUBBER DESIGNS LLC. 3125 Skyway Circle Melbourne, FL 32934 Toll Free 800-858-0519: [www.totturf.com](http://www.totturf.com)

### 2.2 PLAYGROUND SURFACING TILES

- A. Tiles: "SECURE LOCK INTERLOCKING TILE".
1. Series: Interlocking Tile
  2. Description: Resilient, interlocking, playground safety surfacing tiles.
  3. Compliance: Meet and exceed CSPC guidelines for impact attenuation.
  4. Material: Compression-molded, recycled rubber and binding agents.
  5. Tile Locking: U-shaped male and female configuration running full length on all 4 sides to lock tiles to adjacent tiles.
  6. Top Edges: Chamfered.
  7. Tile Bottom: Hollow core Tunnel Shaped Grid pattern.
  8. Wear Layer:
    - A. Standard Series: Rubber Buffings: 10 Mesh. Minimum .50 inch thick.
    - B. Premium Series: EPDM Granules: .5-1.5mm. Minimum .50 inch thick.
  9. Size: 23.8125 X 23.8125 Nominal. Installed size: 24" X 24"

10. Thickness:

- A. Critical Fall Height 4 Feet: 2.25 inches
- B. Critical Fall Height 8 Feet: 3.25 inches
- C. Critical Fall Height 10 Feet: 4.25 inches

11. Minimum Weight Each Tile:

- A. 2.25-Inch Thickness: 27.0 pounds.
- B. 3.25-Inch Thickness: 31.0 pounds.
- C. 4.25-Inch Thickness: 38.5 pounds.

12. Colors:

- 1. Standard Series: [Black] [Green] [Red] [Tan] [Brown] [Grey]
  - 1) Percent Color: [100 percent color].
- 2. Premium Series: EPDM Granules
  - 1) Percent Color: [100 percent color on top]: [Red] [Orange] [Gold] [Yellow] [Lt Blue] [Teal] [Dark Blue] [Purple] [Brown] [Beige] [Eggshell] [Grey] [Black]

**B. Testing Results:**

- 1. Freeze Thaw, ASTM C 1026: no appearance of the presence of cracking, chipping, or breaking of the tile.
- 2. Rubber Deterioration/Air Oven, ASTM D 573: No deterioration.
- 3. Compression Set, ASTM D 395: 2.29 percent Compression Set.
- 4. Tensile Strength, ASTM D 412: 132.92 psi.
- 5. Elongation at Break, ASTM D 412: 56.46 percent.
- 6. Tear Strength, D 624: 34.66 lbs./force/inch.
- 7. Flammability:
  - a. Burning Pill, ASTM D 2859: Pass.
  - b. Critical Radiant Flux, ASTM E 648: No Classification.
- 8. Determination of Accessibility, ASTM F 1951: Meets/Exceeds requirements.
- 9. Water Permeability, ASTM F 1551: 43.8 inches/hour.

10. Durometer Hardness, ASTM D 2240: 55.1.
11. Static Coefficient of friction, ASTM C 1028:
  - a. Dry: .63
  - b. Wet: .47
12. Taber Abrasion, Wear index, ASTM C 501: 94.4

### **2.3 ACCESSORIES**

- A. Corners:
  1. Prefabricated outside and inside corners.
  2. Material: Same as playground safety surfacing tiles.
- B. Ramps:
  1. Prefabricated Ramps:
  2. Prefabricated ADA-Compliant Ramps:
  3. Material: Same as playground safety surfacing tiles.
- C. Edging:
  1. Prefabricated Curb Edging:
  2. Material: Same as playground safety surfacing tiles.
- D. Adhesive: Furnished by manufacturer.

## **PART 3: EXECUTION**

### **3.1 EXAMINATION**

- A. Examine areas to receive playground safety surfacing tiles. Notify responsible parties if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

### **3.2 PREPARATION**

- A. Prepare subsurface in accordance with manufacturer's instructions to ensure proper slope, support and drainage for playground safety surfacing tiles.

**Notes: Specify subsurface of concrete, or asphalt.**

**It is critical that a proper subsurface drainage system be constructed, or the tile surface may not stay level and may cause damage to the surfacing.**

C. Concrete Subsurface:

1. Concrete subsurface shall be as specified.
2. Apply light broom finish.
3. Ensure concrete is sound with no loose material.
4. Ensure concrete is a minimum of 28 days old.
5. Power wash existing concrete in accordance with manufacturer's instructions.

D. Asphalt Subsurface:

1. Asphalt subsurface shall be as specified.
2. Ensure asphalt is sound with no loose material or cracks.
3. Ensure asphalt is a minimum of 28 days old.
4. Power Wash existing asphalt.

### **3.3 INSTALLATION**

- A. Install Secure Lock “Interlocking tiles” in accordance with manufacturer's instructions at locations indicated.
- B. Ensure prepared subsurface and tiles are dry and clean.
- C. Layout tile surface in accordance with manufacturer's instructions.
- D. Install tiles in single installation session, if possible.
- E. Apply adhesive in accordance with manufacturer's instructions for tile-to-tile as well as tile-to-base for all keystone and strategic tile rows.

### **3.4 CLEANING**

- A. Remove adhesive spills from playground safety surfacing tiles and equipment in accordance with manufacturer’s instructions.
- B. Clean tiles in accordance with manufacturer's instructions.

**3.5 PROTECTION**

- A. Protect playground safety surface tiles from foot traffic for a minimum of 12 hours after installation.
- B. Protect completed tiles from damage during construction.

**END OF SECTION**