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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The Project Resource Manual—CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” when editing this section.

Section numbers and titles are from *MasterFormat* 1995 Edition, with numbers and titles from *MasterFormat* 2004 Edition in parentheses. Delete version not required.

SECTION 02791 (32 18 16.13)

DUAL COMPONENT PLAYGROUND SURFACING SYSTEM

Specifier Notes: This section covers Rubberecycles “Accessamat” interlocking, dual component playground surfacing system consisting of a combination of interlocking accessamat tiles and Playsafer rubber mulch. Consult Rubberecycle for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Rubber, interlocking, dual component playground surface consisting of a combination of interlocking tiles and rubber mulch.

1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

Include the section number and title of the following two Division 2 (Division 32) sections, if they are referenced in this section.

- A. Section 02_____ (32 ___ ___) – _____ : Granular aggregate subsurface.
- B. Section 02_____ (32 ___ ___) – _____ : Asphalt subsurface.
- C. Section 02792 (32 18 16.13) – Poured-in-Place Playground Surfacing.
- D. Section 02880 (11 68 13) – Playground Equipment.
- E. Section 03300 (03 30 00) – Cast-in-Place Concrete: Concrete subsurface.

1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. ASTM C 642 – Standard Test Method for Density, Absorption, and Voids in Hardened Concrete.
- B. ASTM D 2240 – Standard Test Method for Rubber Property – Durometer Hardness
- C. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-- Tension.
- D. ASTM D 573 – Standard Test Method for Rubber-Deterioration in an Air Oven.
- E. ASTM D 575 – Standard Test Method for Rubber Properties in Compression
- F. ASTM D 746 – Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact
- G. ASTM C 672 – Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
- H. ASTM C 531 – Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing and Polymer Concretes.
- K. ASTM F 1292 – Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.

- L. US Consumer Product Safety Commission (CPSC) Handbook for Playground Safety.

1.4 SUBMITTALS

- A. Comply with Section 01330 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including installation and subsurface instructions.
- C. Samples: Submit manufacturer's sample of at least 6"X6" in size.
- D. Test Reports: Submit certified test reports from qualified independent testing agency indicating results of the following tests:
 - 1. Impact Attenuation: ASTM F 1292.
 - 2. Density: ASTM C 642.
 - 3. Rubber Deterioration/Air Oven: ASTM D 573.
 - 4. Compression Deformation: ASTM D 575.
 - 5. Tensile Strength: ASTM D 412.
 - 6. Brittleness at Low Temperature: ASTM D 746.
 - 7. Freeze Thaw resistance using deicing chemicals: ASTM D 672.
 - 8. Durometer Hardness: ASTM D 2240.
 - 10. Coefficient of Thermal Expansion: ASTM C 531.
- E. Certificate of Compliance: Submit manufacturer's certificate of compliance indicating materials comply with specified requirements.
- F. Manufacturer's Project References:
 - 1. Submit list of successfully completed projects.
 - 2. Include project name and location, name of architect, and type and quantity of playground safety surfacing furnished.
- G. **Installer's Project References:**
 - 1. **Submit copy of manufacturer issued installation certification**
- H. Maintenance Instructions: Submit manufacturer's maintenance instructions.
- I. Warranty: Submit manufacturer's standard warranty.

1.5 QUALITY ASSURANCE

- A. Installer's Qualifications:
 - 1. Approved by manufacturer.

1.6 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 Dual Component Surfacing System
 - a. Store top and bottom components in a dry area
- C. Handling: Protect materials during handling and installation to prevent damage.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Tile Temperature: Ensure surface temperature of playground tile system is a minimum of 50 degrees F (10 degrees C) at time of installation.
- B. Air Temperature: Ensure air temperature is a minimum of 40 degrees F (4 degrees C) for a minimum of 24 hours before during and after installation.
- C. Tile or Air Temperatures: Consult manufacturer's installation instructions for specific installation methods when tile or air temperatures are above 85 degrees F (29 degrees C).

1.8 WARRANTY

- A. Materials and Workmanship: Playground surfacing system shall be warranted for defects in materials and workmanship for 5 years from date of completed installation.
- B. Performance: Playground surfacing system shall be warranted to meet drop height performance requirements of ASTM F 1292 for 5 years from date of completed installation.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Rubberecycle, LLC., 1985 Rutgers University Blvd. Lakewood, New Jersey, 08701, USA. Toll Free (888) 436-6846. Phone (732) 363-0600. Fax (732) 370-4247. Website www.rubberecycle.com. E-mail info@rubbermulch.com.

2.2 PLAYGROUND SURFACING SYSTEM

- A. Tiles: "Accessamat"
 - 1. Description: Compression Molded, interlocking, tile system
 - 2. Compliance: Meet and exceed CPSC guidelines for impact attenuation.
 - 3. Material: Recycled SBR rubber.
 - 4. Tile Locking: Shiplap perimeter configuration with predrilled holes to rivet tiles together
 - 5. Configuration: Hollow cavity reverse pyramid tray consisting of 64 cavities
 - 6. Size: 32.5"X 32.5" Nominal.
 - 7. Thickness: 2.5"
 - 8. Weight per tile: 28 lbs.

B. Infill Component: "Playsafer Rubber Mulch"

1. Description: Shredded whole passenger tire with all loose fiber and foreign material removed. 99.99% free of steel content.
2. Compliance: Meet and exceed CPSC guidelines for impact attenuation.
3. Material: Recycled SBR rubber
4. Size: 3/8"-3/4"
5. Thickness:
 - a. Under layer: 3.00 inches
 - b. Top Layer: 2.00 inches
 - c.. Total system thickness: 6.00 inches compacted to 5.00 inches

6. Colors:

- a. [Terra Cotta] [Green] [Black] [Blue] [Brown] [_____] [As indicated on the Drawings].

C. Test Results:

1. Impact Attenuation, ASTM F 1292:
 - a. g-max Score: Less than 125.
 - b. Head Injury Criteria (HIC) Score: Less than 500.
2. Freeze Thaw, ASTM C 672: No deterioration.
3. Rubber Deterioration/Air Oven, ASTM D 573: No deterioration.
4. Density ASTM C 672: 0.6 oz. per cubic inch
5. Tensile Strength, ASTM D 412: 195 psi
6. Compression Deformation ASTM D575: 10% at 70 psi 68F
7. Brittleness at Low Temperature ASTM D 746:
8. Coefficient of thermal expansion ASTM C531:
9. Durometer Hardness ASTM D2240: 55A +/- 7

2.3 ACCESSORIES

A. Perimeter Edging:

1. Prefabricated interlocking curb retainers:
2. Material: Compression molded SBR Rubber
3. Length: 6'
4. Height: 4", 6" and 8"
5. Color: Brown

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive playground surfacing system. Notify Architect 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 surfacing system.

Specifier Notes: Specify subsurface of compacted stone, concrete, or asphalt.

Include the following sentence when a compacted stone subsurface is required. Include the section number of the Division 2 section specifying the compacted stone subsurface preparation. Ensure materials, compaction, thickness, and slope are clearly specified. Consult Rubberecycle for additional information.

- B. Granular Aggregate Subsurface: Compacted, granular aggregate subsurface shall be as specified in Section 02_____ (32 ____).

Specifier Notes: Include the following paragraph when a concrete subsurface will be used.

- C. Concrete Subsurface:
 - 1. Concrete subsurface shall be as specified in Section 03300 (03 30 00).
 - 2. Apply light broom finish.
 - 3. Ensure concrete is sound with no loose material or cracks over 1/8 inch wide.

Specifier Notes: Include the following paragraph when an asphalt subsurface will be used.

- D. Asphalt Subsurface:
 - 1. Asphalt subsurface shall be as specified in Section 02_____ (32 ____).
 - 2. Ensure asphalt is sound with no loose material or cracks over 1/8 inch wide.
 - 3. Variations in Elevation: Repair variations in elevation of completed subsurface greater than plus or minus 1/4 inch over 10 feet in any direction.

3.3 INSTALLATION

- A. Install playground tile system in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Ensure prepared subsurface and tiles are dry and clean.

- C. Install rubber mulch base layer in accordance with manufacturers instructions
- D. Layout tile surface in accordance with manufacturer's instructions.
- E. Install rivets in accordance with manufacturer's instructions.
- F. Install rubber mulch top layer in accordance with manufacturers instructions
- G. Installation to be completed by installers that are trained and approved by manufacturer.

3.4 FIELD QUALITY CONTROL

- A. Installed Surface Performance Test: ASTM F1292
 - 1. Perform impact attenuation testing according to ASTM F1292 in presence of Owner's representative within 30 days of installation.
 - a. Confirm Impact Attenuation Performance of Playground Tile System:
 - 1) g-max Score: Less than 125
 - 2) Head Injury Criteria (HIC) Score: Less than 500
 - 2. Test Equipment Operator Qualifications:
 - a. Trained in the proper operation of Triax test equipment by competent agency.
 - 3. Determine compliance with ASTM F 1292, unless otherwise specified in this section.

3.5 PROTECTION

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

END OF SECTION