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## **SPECIFICATIONS FOR QUAD BLOK™ INSTALLATION SYSTEM FOR PLAYGUARD® PLAYGROUND SAFETY SURFACING**

### **SECTION 02792**

#### **Athletic and Recreational Surfacing**

**These specifications were current at the time of publication but are subject to change at any time without notice. Please confirm the accuracy of these specifications with the manufacturer and/or distributor prior to installation.**

PlayGuard playground safety tiles are uniquely designed to reduce the risk of serious injury associated with falls from playground equipment. All PlayGuard products are compliant with guidelines established by the U.S. Consumer Product Safety Commission, American Society for Testing Materials, and meet accessibility requirements of the Americans With Disabilities Act. ECORE International™ is also one of the few playground surfacing manufacturers to take its product through the rigorous process of becoming IPEMA™ certified.

### **PART 1 GENERAL**

#### 1.01 Description

The work specified in this section consists of the installation of PlayGuard tile in 2 ½" thickness by means of the Quad Blok system in accordance with the provided specifications and required labor, material, and installation equipment.

#### 1.02 Quality Assurance

##### A. Design and Detailing

1. Installation of PlayGuard tiles via the Quad Blok system is engineered to add to the protection of the roofing membrane, permitting the development of roof deck areas for recreational purposes.
2. PlayGuard in conjunction with Quad Blok can be installed on single-ply EPDM (mechanical or fully adhered), asphalt BUR, and modified bitumen systems. ECORE must approve all other roofing substrates prior to installation.
3. PlayGuard and Quad Blok are not approved as ballast for loose laid roofing systems.
4. Contact ECORE to verify all proposed substrates meet the requirements for the installation of its PlayGuard and Quad Blok products with regard to structural performance.

##### B. Warranty

1. PlayGuard and Quad Blok are under warranty by ECORE for any defects in materials and workmanship for a period of 15 years from the date of purchase.

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### 1.03 Submittals

- A. An Ecore representative shall submit product literature, all pertinent specifications, installation details, and samples in the colors required.

### 1.04 Delivery, Storage, and Handling

- A. All material is delivered in satisfactory condition in its original unopened packaging units with a label intact.
- B. Prior to and during installation, store all material for protection from the weather and vandalism. Store adhesive and fill compound at temperatures above 40°F (4°C).
- C. All material and equipment should be handled utilizing proper protective clothing and eye protection.
- D. All empty containers, excess material, and scrap must be disposed of in accordance with governmental and environmental regulations.

### 1.05 Job Conditions

- A. During installation, the ambient air temperature must be a minimum of 35°F (2°C) and should remain this degree of temperature for a minimum of 72 hours following the completion of work.
- B. The material must be protected from weather or other potential damaging agents during installation or while the adhesive cures.
- C. Do not begin work if rain is imminent.

### 1.06 Alterations and Allowances

- A. All systems to be considered equal to those specified shall be approved by the project architect prior to the bid date.

## **PART 2 PRODUCTS**

### 2.01 General

All components of the PlayGuard and Quad Blok system must be obtained from Ecore or from its list of authorized agents. No substitution of other material will be permitted without written permission from Ecore.

### 2.02 Materials

- A. PlayGuard tile: 24" x 24" modular, factory-molded surface, composed of high-quality recycled SBR rubber and colored EPDM rubber granules bound with a wear and weather resistant polyurethane. The polyurethane binder contains 0% TDI monomers.
  - 1. Contains recycled SBR rubber ground at ambient temperatures and consists of special particulate blends designed specifically to enhance tile durability, energy absorption, and UV and fire resistant characteristics.
  - 2. Weight: 24 to 26 pounds, but will vary depending upon color choice
  - 3. Supported by conical legs
  - 4. Slip resistant, both wet and dry
  - 5. Water permeable allowing multi-directional drainage
  - 6. Abrasion resistant
  - 7. Fire resistant per ASTM D-2859-96 burning pill
  - 8. Exhibits excellent resistance to weathering and aging

9. Available in 4 traditional pigmented tile colors (red, green, black, and grey) in 2 ½" thickness or in 18 PlayGuard Ultra designs in 2 ½" thickness. Custom color and logo capabilities on PlayGuard Ultra. Color variation among traditional pigmented tile is unavoidable.
- B. Playground reducer: factory molded reducer strip to provide a trip-free transition from the tile surface to the surrounding grade.
1. Reducer design will contain lengthwise rain collector groove and widthwise drain channels to prevent drainage restrictions at the tile perimeter.
  2. ADA access ramp also available as a custom order configuration for thicker tile requirements.
- C. Quad Blok connector: 8"x 8" x 17 mm, highly durable, water permeable system made of high-quality SBR rubber granules and polyurethane, featuring precisely located multiple apertures that interface with the corner leg understructure of PlayGuard tile in 2 ½" thickness. This unique design facilitates a strong and tight-fitting placement between adjoining tile.
1. Each Quad Blok will require a 3/8" diameter bead of E-Grip III adhesive over 15 linear inches prior to installation.
- D. E-Grip III Adhesive: a single component, high solid moisture cured, polyurethane adhesive.
1. Rapid curing adhesive, reaching a firm set within 3-4 hours at 75° F and 50% relative humidity
  2. Available in 10.1 oz cartridge tubes
  3. Zero VOCs calculated
  4. Resists shrinkage
  5. Withstands varying weather conditions
  6. Trowelable when surface or air temperatures are between 40°F - 100°F
  7. Coverage rate is approximately 13 linear feet per tube if applied in a 3/8" diameter bead.

### **PART 3 EXECUTION**

Verify that substrate conditions are suitable for installation of the playground surfacing system and do not proceed with installation until unsuitable conditions are corrected. Consult the PlayGuard installation manual for proper substrate and site conditions for conformity of the contract documents and ECORE specifications. For site conditions not specified or described in the manual, contact ECORE at 1-800-851-4746. ECORE is not responsible for improper substrate preparation by the contracting installer or distributor.

#### **3.01 Installation**

- A. Please refer to the PlayGuard installation manual.
- B. Cleanup
  1. Clean adhesive spills (or any tools contaminated with adhesive) with mineral spirits before the adhesive dries. Once the adhesive has cured, remove by mechanical means. Wear solvent-safe rubber gloves and provide adequate ventilation.

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### C. General Precautions

1. Wear solvent-safe, long cuff, rubber gloves, proper protective clothing, and eye protection when handling adhesives.
2. Remove uncured adhesive from skin immediately and wash affected areas with soap and water.
3. Follow all other safety precautions printed on product labels. Refer to MSDS sheets available from ECORE, for complete safety information.
4. All substrates should have a minimum 1/8" per 12" slope to promote positive drainage.
5. Protect the surfacing from rain for a minimum of four hours following application of adhesive using plastic sheeting.

## PART 4 QUAD BLOK TILE RETENTION PAD SPECIFICATION

### 4.01 Physical Specifications

Quad Blok is a highly durable, water permeable engineered locking system featuring precisely located, multiple apertures for an optimized combination of mechanical/adhered installation of PlayGuard playground safety surfacing tile in 2 1/2" thickness.

### 4.02 Component Specifications

Quad Blok is composed of a formulation of high quality recycled SBR rubber granules bound with a wear and water resistant polyurethane. The polyurethane binder is composed of MDI (diphenylmethanediisocyanate) isocyanate and polyether (polypropyleneglycol) polyols. TDI (toluene diisocyanate) isocyanate or catalysts based on lead or mercury are not used in its manufacture. Rubber granules are specially blended to enhance strength and durability.

Dimensions (at 72° F): 8" x 8" x 17mm

Weight: .70 lbs. each

Utilization: 1 unit per tile required; requires 3/8" diameter bead of E-Grip III adhesive over 15 linear inches

### 4.03 Characteristic Testing

Property	Test Method	Result
Density	ASTM D297	46-lbs./cu. ft. min.
Tensile Strength	ASTM D412, DIE C	116 psi. min.
Elongation	ASTM D412, DIE C	74% min.
Compression	ASTM F36	Recovery
@50 psi	15%	81%
@100psi	28%	92%
@200psi	45%	95%
Shore A Hardness	ASTM D2240	50 +/- 5 points
Tear Strength	ASTM D624, DIE C	30 PPI
Flexibility	ASTM F147	0-1 Factor
Compression Set B 25% deflection, 22 hrs. 158° F	ASTM D395	26%
Compression Set (Foam) 50% deflection, 22hrs. 158° F	ASTM D3676	19%

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