



SECTION 02790

Athletic and Recreational Surfaces

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.

PART 1: GENERAL

1.01 Work Included

- A. This work includes furnishing and installing the Child Safe safety surface.

1.02 Description of System and General Conditions

- A. CSP shall be poured in place hand trowel resilient rubber surface installed over the specified base. The surfacing manufacturer shall be responsible for all labor, materials, tools, equipment and services for the installation of the surface. The surface shall be stable and slip resistant to comply with all requirements set forth in the Americans with Disabilities Act.

1.03 Quality Assurance

- A. Test Results
 - a. Impact Attenuation – ASTM F1292 Impact attenuation test results shall meet or exceed Consumer Product Safety Commission Guidelines for impact attenuation (G-max and Head Injury Criteria "H.I.C"). Testing laboratory must be certified to meet calibration program requirements of MIL-STD-45662A.
 - b. Accessibility of Surface Systems – ASTM F1951: All playground surfacing products must pass testing to ensure wheelchair access under and around playground equipment as required by the American Disabilities Act.
 - c. Coefficient of Friction – ASTM D2047-82: All products must meet a minimum standard on coefficient of friction of .9-wet, 1.0-dry. No exceptions will be made to this requirement in an effort to ensure ample slip-resistant conditions.
 - d. Permeability: Product shall permit a minimum of 8" of rainfall per hour.
 - e. Flammability of Finished Floor Cover – ASTM D2859: Product shall pass flammability.
 - f. UPIIT Test for Combustion Product Toxicity: Product shall pass the Pittsburgh Protocol Test for toxicity. The passing result is that the product is considered no more toxic than wood.
 - g. Tensile Strength – ASTM D412-87 and Tear Resistance – ASTM D624-86
 - h. Total recovered materials content (RMC) 90%
 - i. Sun Reflective Index SRI – ASTM E 1980-01

Black EPDM SRI	(Sun Reflective Index) -1	Reflectivity 6%	Emit 86%
Color EPDM SR	(Sun Reflective Index) 28	Reflectivity 26%	Emit 92%

- B. Contractor Pre-Qualifications
 - a. A list of at least twenty (20) of these projects five (5) years old.
- C. Manufacturers Assurance
 - a. All bidders must also submit Material Safety Data sheets (MSDS) and Product Data Sheets on all materials.
- D. Insurance Requirements
 - a. All bidders must carry minimum insurance of \$1,000,000 general liability; \$1,000,000 product liability with excess liability.

1.04 Color EPDM Materials (Top Cap/Wearing Surfacing).

- A. All EPDM cap materials will be peroxide cured rubber.

1.05 Submittals

- A. Alternate product must be submitted 10 days prior to bid date with submittals.

1.06 Warranty

- A. Child Safe safety surface shall be warranted for labor and materials for a period of no less than three (3) years. Written warranty must be submitted by the surface manufacturer.

1.07 Approved Manufacturer/Installer, Child Safe Products 1-800-730-0064

- A. Any product or surfacing manufacturer not meeting prior approval requirements of this section shall not be approved.

PART 2: PRODUCTS

2.01 Materials

- A. Polyurethane Primer and Binder – 100% Single Component Polyurethane (MDI) based binder.
- B. Wear Course Poured Cap – EPDM synthetic rubber granules (1-3mm) with a minimum EPDM content of 25% by weight.
- C. Cushion Impact Course – SBR or EPDM select rubber. The impact layer is to be a precise combination of recycled black rubber and polyurethane binder.

PART 3: PROCEDURES

3.01 Base Requirements

- A. The base shall have the specific minimum slope (2%) and shall vary no more than 1/8" when measured in any direction with a 10' foot straight edge. Asphalt base shall be allowed to cure a minimum of fourteen (14) days and new concrete shall be allowed to cure a minimum of seven (7) days prior to commencement of surfacing. A compacted stone base will not require cure time but will be subject to planarity tolerance specification. Surface Manufacturer shall supply and install geo-textile fabric cloth on compacted stone if selected for the base.

NOTE: *Stone base must be properly treated with herbicides (by others) prior to arrival of surface installation crew. Minimum of 1½" of surface (total depth) is required over a stone base.*

3.02 Preparation

- A. Scheduling – Child Safe shall be installed following installation of play equipment. The temperature should be 40 degrees and rising during installation of surface.
- B. Cleaning – The entire subsurface shall be clean, dry and free from any loose material.

3.03 Installation

- A. Thickness – Total depth of the surface shall be determined to meet the critical fall requirement of the equipment. Surface thickness will vary in the impact course according to fall height. The architect or owner's representative should contact the equipment manufacturer to determine exact fall height requirements.
- B. Review Child Safe IPEMA Certified fall height chart for correct surface depth.
- C. Cushion Impact Course – The cushion impact course must be composed of recycled rubber and be free of foreign matter. The impact course will be poured in place and trowel to maintain a seamless application.
- D. Wear Course Poured Cap – The 3/8" minimum poured cap material shall be composed of EPDM granular rubber only. The cap will have a minimum weight of 2.2 pounds per square foot. The cap will be poured in place and trowel to maintain a seamless application.
- E. All rubber shall remain consistent in gradation and size. Installation method shall use a measured screed rod 1/16" thicker than the required depth
- F. Edges – Surface edges shall be flush with edge of adjacent area or tapered to provide safe transition. Surface shall be sloped to drain as indicated on plans.
- G. Large Areas – Although seldom visible, large areas or adjacent colors require the Child Safe material to be installed on separate days.

3.04 Protection

- A. Surface installation crew shall be responsible for the protection of Child Safe surface during the installation process. Owner or general contractor shall be responsible for the protection of the surface during the curing period upon completion of the installation.

PART 4: COLORS

4.01 The color of Child Safe will be as indicated on plans.

- A. Standard Color Blends – Will be chosen by owner or owner's representative.

NOTICE: *These specifications are merely guides for use by Landscape Architects, engineers, contractors. It is hoped that these specifications will be of particular value to those who do not have detail knowledge of synthetic safety flooring and that it will aid in maintaining high construction standards. CSP, its agents and employees do not warrant the specifications as proper under all conditions.*

FOR OTHER SPECIFICATIONS OR COLORS PLEASE CONTACT:

Child Safe Products 1-800-434-5616