



## ATHLETIC & RECREATIONAL SURFACES 02790

Pro-Techs Surfacing LLC v05.2020

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### 1. Product Name

Perma-Play 2-Layer Poured-In-Place Playground Surfacing w/ Aliphatic Urethane

### 2. Manufacturer

Pro-Techs Surfacing LLC  
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### 3. Product Description

#### BASIC USE

Perma-Play 2-Layer Poured-In-Place Playground Surfacing is designed for playgrounds and water play areas.

#### COMPOSITION & MATERIALS

Perma-Play 2-Layer Poured-In-Place Playground Surfacing is a 2-layer system. The basemat material consists of 100% post-consumer recycled, 3/8" shredded, SBR (styrene butadiene rubber) and high-grade aromatic polyurethane. The top surface consists of EPDM (Ethylene Propylene Diene Monomer) rubber, with the black EPDM being recycled post-industrial material, ranging in size from 1 – 3 mm, and high-grade aromatic or aliphatic polyurethane.

#### PRODCUT DEMINSIONS:

The height of the playground equipment determines the required basemat thickness. Basemat thicknesses may vary throughout a playground site. Basemat thicknesses are determined by the "Critical Fall Height" requirements through ASTM testing. All ASTM test results are available upon request.

#### Thicknesses Available

- 2.0" – up to 4ft. CFH
- 2.75" – up to 6ft. CFH
- 3.0" – up to 7ft. CFH
- 3.5" – up to 8ft. CFH
- 4.0" – up to 10ft. CFH
- 5.0" – up to 12ft. CFH

#### TOP SURFACE THICKNESS:

0.5" thickness nominally

#### Standard Colors

- P1 Black
- P2 Red
- P3 Blue
- P4 Beige
- P5 Green
- P6 Brown
- P7 Grey

#### Premium Colors

- P8 Yellow
- P9 Orange
- P10 Purple
- P11 White
- S31 Bright Green
- S32 Terracotta Red
- S33 Light Green
- S34 Purple
- S35 Brown
- S36 Light Grey
- S38 Blue
- S39 Dark Green
- S40 Light Beige
- S42 Yellow
- S43 Pearl
- S44 Teal
- S47 Dark Blue
- S48 Gold
- S49 Light Blue
- S51 Orange
- S59 Tan
- S61 Blue Grey
- S62 Eggshell
- S63 Capri Blue
- S64 Signal Green
- S65 Charcoal



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### LIMITATIONS

As a precautionary maintenance measure, a list of chemicals known to damage Perma-Play 2-Layer Poured-In-Place Playground Surfacing and similar rubber safety surfaces is available upon request. In water play areas, pool surrounds and similar applications. Pool chemicals may affect coloration of the rubber safety surface over time. This condition, should it occur, is not considered to be a product failure. A “YELLOWISH” shading of the rubber top surface will be noticeable in some colors when using standard aromatic polyurethane binder. This slight yellowing is more pronounced in certain colors and is a common affect in the pour in place rubber safety surface industry. An aliphatic binder, which greatly minimizes the yellowish shading, is available at a higher cost. Both binding materials can be used on a project to maximize aesthetics with lighter colors that are affected by the yellowing and minimize cost. Consult Pro-Techs Surfacing LLC for more information.

### 4. Technical Data

#### APPLICABLE STANDARDS

##### ASTM International

- ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension
- ASTM D624 Standard Test Methods for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
- ASTM C1028 Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull Meter Method
- ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials
- ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
- ASTM F1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment
- ASTM F1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment

#### ENVIRONMENTAL CONSIDERATIONS

This system makes extensive use of recycled tire rubber as a major component.

#### PHYSICAL/CHEMICAL PROPERTIES

- Shock Attenuation (ASTM F1292)
  - Gmax - Less than 200
  - Head Injury Criteria – 1000 or less
- Accessibility (ASTM 1951)
  - Straight Baseline Propulsion - 12.15 lbs Work/ft-Force
  - Turning Baseline Propulsion - 7.30 lbs Work/ft-Force
- Tensile Strength (ASTM D412) - 17.51 PSI
- Tear Resistance (ASTM D624) - 6.26 lbs/force/inch
- Dry Static Coefficient of Friction (ASTM C1028) - 0.77
- Wet Static Coefficient of Friction (ASTM C1028) - .56
- Wet Skid Resistance (ASTM E303) – 51
- Flammability (ASTM D2859) – Pass
- Water Permeability (ASTM F1551-03) gal/min/yd<sup>2</sup> = 363.5

Required mix proportions by weight:

Basement – 14% - 16% polyurethane, 100# rubber

Top course – 22% - 26% polyurethane, 100# - 110# rubber



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### 5. Installation

#### PREPARATORY WORK

EPDM Rubber materials should be protected from exposure to harmful environmental conditions (moisture) and at a minimum temperature of 50 degrees F and a maximum temperature of 90 degrees F. Install surfacing system when minimum ambient temperature is 50 degrees F and maximum ambient temperature is 90 degrees F. Basemat may be installed in a light rain. Do not install Top Coat in any type of moisture or precipitation.

#### SUBSTRATE PREPARATION

##### 1. Compacted Stone Base

Substrate must be in accordance with surfacing manufacturers Compacted Stone Base Installation Instructions before Perma-Play 2-Layer Poured-In-Place Playground Surfacing can be applied.

##### 2. Asphalt Substrate

New asphalt substrates must be allowed to cure for a minimum of 30 days before Perma-Play 2-Layer Poured-In-Place Playground Surfacing can be applied.

##### 3. Concrete Substrate

New concrete substrates must cure for a minimum of 10 days before Perma-Play 2-Layer Poured-In-Place Playground Surfacing can be applied.

**NOTE:** Proper drainage is crucial to the longevity of the Perma-Play 2-Layer Poured-In-Place Playground Surfacing. Inadequate drainage will cause premature breakdown of the product in affected areas; and void the warranty.

#### BASIC METHODS

##### Installation

Perma-Play 2-Layer Poured-In-Place Playground Surfacing can not proceed until all applicable site work, including substrate preparation, fencing, playground equipment installation and other relevant work, has been completed and approved by a Pro-Techs Surfacing LLC representative.

##### Basemat Primer

Using a bristle brush, apply ample urethane primer to all curbing and or vertical substrates, which the rubber surfacing system will contact.

##### Basemat Installation

Using screed sticks and gauge poles, install the basemat rubber materials to 1/8” – 1/4” higher than required thickness. Using pool trowels, pull the basemat material together using consistent pressure throughout. Repeat the process until all areas, including use zones, comply with the architectural plans and specification requirements. Allow basemat to cure for sufficient time (24 hours) so that indentations are not left in the basemat material. Installation contractor must verify that the basemat has cured sufficiently before applying the finished topcoat

##### Topcoat Primer

Using a bristle brush apply urethane binder to the existing 1/2” of curbing and any other vertical structures within the installation areas, and also to the basemat material at a minimum of 2” around the perimeter of the topcoat area.

##### Topcoat Installation

Screed the EPDM topcoat rubber granules to a nominal 5/8” thickness to allow for compaction. Using a pool trowel, pull together material using consistent pressure throughout to produce the end result of 1/2” thickness. Any area in excess of 2500 sf may be seamed as deemed necessary by Pro-Techs Surfacing, LLC. Any area less than 2500 sf will be completed seamlessly as conditions allow.



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\* **NOTE** – Allow topcoat to cure for 24 hours to 72 hours contingent on the humidity and temperature. Protect newly installed topcoat from foot traffic or equipment usage until the Perma-Play 2-Layer Poured-In-Place Playground Surfacing has fully cured. Complete installation recommendations are available from a Pro-Techs Surfacing LLC representative.

### **6. Warranty**

Standard warranty period for Perma-Play 2-Layer Poured-In-Place Playground Surfacing is for 5 years from completion of installation. Contact Pro-Techs Surfacing, LLC for 7 year & 10 year warranty options.

### **7. Maintenance/Cleaning – Outdoor & Indoor Applications**

#### **Outdoor Applications -**

Using a standard leaf blower or broom, remove any light weight debris such as leaves, trash, etc. Using a watering hose or a pressure washer, not exceeding 1000 PSI, rinse off all excess debris from the surface. While surface is wet, apply a mild cleaning detergent and agitate lightly with a soft bristle brush. Repeat as necessary. Once clean, final rinse with low-pressure water from a hose to remove any excess- cleaning agents.

#### **Indoor Applications –**

Using a standard vacuum cleaner/shop vac, or broom, remove any light weight unwanted debris. Apply a mild cleaning detergent and agitate lightly with a soft bristle brush or mop. Repeat as necessary. Once clean, final mop with clean hot water to remove any excess detergent. Be sure to not saturate the mop head. Mop head should be damp at most.

### **8. Technical Services**

Pro-Techs Surfacing LLC works closely with the contractor to ensure the site is prepared and the installation is on schedule. For technical assistance, contact Pro-Techs Surfacing LLC.

### **9. Quality Assurance**

Qualifications – Utilize an installer certified and trained by the manufacturer of playground surfacing system, having experience with other projects of the scope and scale of the work described in this section.

Certifications – Certification by manufacturer that installer is an approved applicator of Perma-Play 2-Layer Poured-In-Place Playground Surfacing.

International Play Equipment Manufacturers Association (IPEMA) Certified