

Playpave Pour-in-Place Rubber Safety Surfacing

Manufacturers Specification

Part 1: General Specifications

1.1 Work Included

- Provide all labor, materials, equipment, and supervision necessary for the supply and installation of Playpave Pour-in-Place (PIP) rubber safety surfacing as specified herein.
- Identify all areas of application and complete a fully integrated poured-in-place safety surfacing system in accordance with these specifications.
- Scope of work includes, but is not limited to:
 - Surface Coverage: Resilient poured-in-place rubber surfacing for playground use.
 - Supplementary Work: Coordination with playground equipment installation and preparation of a resilient surfacing sub-base.
 - Quality Assurance:
 - The manufacturer/installer shall have a minimum of five (5) years of experience producing and installing poured-in-place playground safety surfacing.
 - All materials and installation methods shall comply with ASTM F1292 impact attenuation requirements.
 - Installation of the Playpave system shall be performed by Playpave LLC or Playpave-certified installers only.
 - Manufacturer installation procedures shall be submitted for review by the Architect and incorporated into the bid documents.

1.2 Submittals

- Product data for Playpave PIP safety surfacing, including installation procedures and maintenance instructions.
- Detailed shop drawings showing edge conditions, transitions, thicknesses, and cross-sections.
- Color palette illustrating available EPDM or 'TPV' color options.
- Material Safety Data Sheets (MSDS) for all system components.
- Sub-base preparation and drainage requirements.

- Details for transitions to adjacent materials and beveled edges.
 - Written confirmation that installation will be completed exclusively by Playpave-certified installers.
 - Warranty documentation outlining duration, exclusions, remedies, and compliance procedures.
 - Declaration confirming adhesives are purpose-designed for playground safety surfacing.
 - Third-party certification for testing at three temperature drops.
 - A minimum 3" x 3" physical sample of the surfacing system.
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1.3 Definitions

- EPDM Granules: Ethylene Propylene Diene Monomer synthetic rubber meeting ASTM D-1418 (M-Class).
 - SBR: Styrene-Butadiene Rubber, a synthetic rubber used for impact-absorbing base layers.
 - Polyurethane Binder (MDI): A moisture-cured binder used to encapsulate EPDM and SBR granules.
 - Aliphatic Binder: UV-stable binder resistant to ambering or blooming.
 - Critical Fall Height (CFH): Maximum fall height for playground equipment as defined by ASTM F1292.
 - PIP: Pour-in-Place rubber surfacing (also known as wet-pour).
 - GMAX: Measurement of surface hardness related to impact attenuation.
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1.4 Quality Assurance

A. Applicable Standards

Playpave surfacing shall meet or exceed the following:

- Impact Attenuation: ASTM F1292 / CPSC /
 - Maximum peak deceleration: ≤ 200 g
 - Head Injury Criterion (HIC): ≤ 1000
- Coefficient of Friction: ASTM D2047
- Slip Resistance: ASTM E303
- Permeability: ASTM D2047
- Flammability: ASTM D2859
- Accessibility: ASTM F1951
- Tear Strength: ASTM D624
- Tensile Strength: ASTM D412 (minimum 80 PSI)

- Solar Reflective Index (SRI): ASTM C1959 / E903

B. Installer Qualifications

- Installation shall be completed exclusively by Playpave LLC. or Playpave-certified installers.
- Installation crew shall include at least one certified installer with a minimum of two full seasons of experience installing Playpave systems.

C. Contractor Pre-Qualifications

- Submission of a portfolio with ten (10) comparable projects, including contact references.
- At least five (5) projects must be over five years old.
- Projects should demonstrate similar complexity, including graphics and color transitions.
- Submission of MSDS and product data sheets.

1.5 Warranty

- Playpave LLC. warrants the Playpave PIP system to be free from defects in materials and workmanship and to maintain impact attenuation for five (5) years from substantial completion.
- Any material failure or delamination shall be repaired at no cost upon written notice.
- Seller liability is limited to repair or replacement of defective materials only.
- Proper drainage is required; inadequate drainage voids the warranty.
- Written notice of defects must be provided within thirty (30) days of discovery.
- Warranty exclusions include:
 - Normal wear and tear
 - Color variation or gloss reduction
 - Initial ambering within first year
 - Damage from misuse, vehicles, high heels, wildlife, staining, moisture intrusion, or substrate movement
- Pricing reflects the agreed limitation of liability.
- See Playpave's Warranty sheet for project specific details.

1.6 Maintenance

- Playpave shall provide maintenance and care instructions to the Owner.
- Include cleaning procedures, inspection schedules, and repair methods.

- Playpave Sealer (or approved equivalent) recommended every three (3) years.
 - Surface shall be kept free of debris to extend lifespan.
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Part 2: EPDM Material Specifications

2.1 System Description

- Playpave is a seamless poured-in-place rubber system consisting of:
 - SBR impact cushion layer
 - EPDM colored wear layer
 - Both layers are bound using a 100% solids, moisture-cured polyurethane binder.
 - This system is porous, slip-resistant, UV-stable, and installed at variable thicknesses to meet CFH requirements.
 - Compatible substrates include concrete, asphalt, and compacted stone.
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2.2 Physical Properties

EPDM Granules

- Angular cut, 1–4 mm
- $\geq 20\%$ polymer content (EPDM only)
- Tensile strength: >5 MPa
- Elongation: 600–700%
- Hardness: 60–65 Shore A
- Density : 1.5 g/cm^3
- REACH & EN 71-3 compliant

SBR

- Angular or buffings cut
- Polymer content $\sim 50\%$
- Moisture $< 1\%$
- Free of metal and fiber contaminants

Binder

- Single-component moisture-cure polyurethane
- Aliphatic or aromatic

- Installation temperature >41°F
 - Non-pigmented (clear or amber)
 - Cure time: 6–8 hours at 77°F
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2.3 Safety & Environmental Compliance

- PAH compliant (REACH / AfPS GS 2019)
 - EN 71-3 compliant
 - Latex free binders and granules
 - Non-toxic once cured
 - No TDI binders with filler minerals permitted
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Part 3: Site Preparation and Base

3.1 Site Conditions

- Substrate must be dry, clean, and free of debris.
- Installation shall not proceed during rain or unsuitable weather.
- Playpave reserves the right to adjust installation schedule based on conditions.
- Installation occurs after playground equipment placement unless noted.

3.2 Base Construction

- Owner or GC responsible for sub-base preparation per Playpave guidelines.
 - Acceptable bases: compacted stone, concrete, or asphalt.
 - Minimum slope: 2%
 - Asphalt cure: 21 days
 - Concrete cure: 30 days
 - Granular base: 4–6 inches at 95% compaction
 - Geotextile fabric required with 12" overlap
 - Surface preparation may include scarifying or etching
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Part 4: Execution and Installation

4.1 Surface Installation

Primer

- Apply urethane primer at 200–250 sq ft/gal.
- Prime immediately prior to rubber installation.

SBR Impact Layer

- Mix on-site per manufacturer guidelines.
- No less Than 1" thickness, thickness based on playground critical fall height
- Binder ratio: No less than 16% binder polyurethane to the weight of the SBR
- Install to specified depth and cure 24 hours.

EPDM Wear Layer

- EPDM mixed at no less than 22% polyurethane to the weight of the EPDM
- Installed thickness: ½" to 1" per specification.
- No less than ½" thickness.
- Seam overlaps minimum 1 ½".
- Mix thoroughly to a uniform consistency with no noticeable binder globs of uncoated, dry material
- Cure time: 24–72 hours.

Foot traffic damage is excluded from warranty unless security fencing is provided by Playpave.

4.2 Site Requirements

- Site access for installation equipment required.
 - Owner/GC responsible for overnight security, unless provided by Playpave.
 - Optional fencing available at additional cost.
 - Site to be left clean and free of debris.
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4.3 Final Acceptance

- Final inspection to confirm compliance with all specifications and standards.
- Submission of final documentation and compliance report required.

Note: This outline should be tailored to the specific needs of the project, taking into account local regulations, environmental conditions, and user requirements. Collaboration with a professional experienced in PIP rubber surfacing is recommended to ensure that all technical details are adequately addressed.