



Pacific Playground
POURED-IN-PLACE Surfacing

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NPSI Certified Playground Inspector #15561-0113

State of California Building Contractor #348791

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Poured-in-place playground surfacing system.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.
2. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
3. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
4. ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials.
5. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
6. ASTM F1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
7. ASTM F1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide a 2 layer rubber-polyurethane playground surfacing system which has been designed, manufactured and installed to meet the following criteria:

1. Shock Attenuation (ASTM F1292):
 - a. Gmax: Less than 200.
 - b. Head Injury Criteria: Less than 1000.
2. Flammability (ASTM D2859): Pass.
3. Tensile Strength (ASTM D412): 60 psi (413 kPa).
4. Tear Resistance (ASTM D624): 140%.
5. Water Permeability: 0.4 gal/yd²/second.
6. Accessibility: Comply with requirements of ASTM F1951.

1.04 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

B. Product Data: Submit manufacturer's product data and installation instructions.

C. Verification Samples: Submit manufacturer's standard verification samples of 9" x 9" (229 x 229 mm) minimum.

- D. Quality Assurance/Control Submittals: Submit the following:
 - 1. Certificate of qualifications of the playground surfacing installer.
- E. Closeout Submittals: Submit the following:
 - 1. Warranty documents specified herein.

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1.05 QUALITY ASSURANCE

- A. Qualifications: Utilize an installer approved and trained by the manufacturer of the playground surfacing system, having experience with other projects of the scope and scale of the work described in this section.
- B. Certifications: Certification by manufacturer that installer is an approved applicator of the playground surfacing system.
- C. International Play Equipment Manufacturers Association (IPEMA) certified.

1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirement Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

1.07 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: Install surfacing system when minimum ambient temperature is 40 degrees F (1 degree C) and maximum ambient temperature is 90 degrees F (32 degrees C). Do not install in steady or heavy rain.

1.08 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.
 - 1. Warranty Period: 5 years from date of completion of work.

PART 2 PRODUCTS

2.01 POURED-IN-PLACE PLAYGROUND SURFACING SYSTEM

- A. Manufacturers: See below.
- B. Poured-in-place playground surfacing system, including the following:
 - 1. Poured-In-Place Binder:
 - a. See Marchem manufacturer's specifications for "Aeromatic MDI binder". Marchem Pacific Inc., 212 West Taft Ave., Orange, CA 93865. (714 921-2300).
 - 2. Poured-in-Place Basemat:
 - a. See West Coast Rubber manufacturer's specifications for "Buffings Material". West Coast Rubber Recycling, Inc. 1501 Lana Ln., Hollister, CA 95020. (831) 634-2800.
 - 3. Poured-In-Place Top Surface:
 - a. See American Recycling manufacturer's specifications for "TPV topcoat material (Colored Granule)". American Recycling Center, Inc., 655 Wabasse Dr., Owosso, MI 48867. (989) 725-5100.
 - b. Thickness: Nominal 1/2" (12.7 mm), minimum 3/8" (9.5 mm), maximum 5/8" (15.9mm).
 - c. Dry Static Coefficient of Friction (ASTM D2047): 1.0.

- d. Wet Static Coefficient of Friction (ASTM D2047): 0.9.
- e. Dry Skid Resistance (ASTM E303): 89.
- f. Wet Skid Resistance (ASTM E303): 57.

2.03 MIXES

- A. Required mix proportions by weight:
 - 1. Basemat: See manufacturer's specifications.
 - 2. Top Surface: See manufacturer's specifications.

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PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the instructions and recommendations of the playground surfacing manufacturer.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that substrate conditions are suitable for installation of the playground surfacing system.
- B. Do not proceed with installation until unsuitable conditions are corrected.

3.03 PREPARATION

- A. Surface Preparation: Using a brush or short nap roller, apply primer to the substrate perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft²/gal (7.5 m²/L).

3.04 INSTALLATION

- A. Do not proceed with playground surfacing installation until all applicable site work, including substrate preparation, fencing, playground equipment installation and other relevant work, has been completed.
- B. Basemat Installation:
 - 1. Using screeds and hand trowels, install the basemat at a consistent density of 29 pounds, 1 ounce per cubic foot (466 kg/m³) to the specified thickness.
 - 2. Allow basemat to cure for sufficient time so that indentations are not left in the basemat from applicator foot traffic or equipment.
 - 3. Do not allow foot traffic or use of the basemat surface until it is sufficiently cured.
- C. Primer Application: Using a brush or short nap roller, apply primer to the basemat perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft²/gal (7.5 m²/L).
- D. Top Surface Installation:
 - 1. Using a hand trowel, install top surface at a consistent density of 58 pounds, 9 ounces per cubic foot (938 kg/m³) to a nominal thickness of 1/2" (12.7 mm).
 - 2. Allow top surface to cure for a minimum of 48 hours.
 - 3. At the end of the minimum curing period, verify that the top surface is sufficiently dry and firm to allow foot traffic and use without damage to the surface.
 - 4. Do not allow foot traffic or use of the surface until it is sufficiently cured.

3.05 PROTECTION

- A. Protect the installed playground surface from damage resulting from subsequent construction activity on the site.