



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

1. General

- 1.1.**Manufacturer:** Flecks Systems, Inc., Mailing Address: 870 Route 530, Suite 5, Whiting, NJ 08759. Physical Address: 885 Bangert Blvd., Toms River, NJ 08757. Toll Free: 1-833-435-3257 • Phone: +1-732-569-6161 • Fax: +1-732-408-6180 • Website: www.FlecksSystems.com • Email: info@FlecksSystems.com
- 1.2.**Scope:** These are the manufacturers' specifications for the Play Flecks®, porous resurfacing system.
- 1.3.**Description:** Play Flecks® is a seamless poured-in-place playground protective thermoplastic rubber surface designed to be used in the surfacing of dry play applications. It will bond to most surfaces and will resist surface movements. It has been designed to be light-stable, durable, and will stand up to the outdoor elements. Play Flecks® is porous and water will drain through the entire system.
- 1.4.**Basis of Design:** The Basis-of-Design system is a complete tested and documented assembly. Product substitutions that have not been demonstrated to provide equivalent performance as a complete system are not acceptable.
- 1.4.1. Where substitutions or "or equal" products are permitted by the Contract Documents and applicable procurement requirements, submit complete-system documentation demonstrating equivalency in materials, construction, performance, testing, warranty, and installation requirements. Approval shall not be based solely on similarity of individual components or isolated ASTM test results.
- 1.5.**Work:** Provide all necessary materials, labor, tools, and equipment to perform the work included in the section for the installation of the poured-in-place resurface.
- 1.6.**Trained Installer:** The installation of the new surface shall be completed by Flecks® Trained Contractors who have been trained to install the Play Flecks® System. Manufacturer's detailed installation procedures shall be submitted to the Architect and made part of the Bid Specifications.
- 1.7.**Weather:** Temperature must remain above 50°F (10°C) throughout the installation and curing process. Weather and surface must be dry and there should be no rain in the immediate forecast.
- 1.8.**Security:** Site must be made secure against vandalism during installation and curing period.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

- 1.9.**Delivery:** Deliver materials to site in manufacturer's original, unopened containers/packaging, with labels that clearly identify the product name and manufacturer.
- 1.10. **Storage & Handling:** Store materials in accordance with manufacturer's instructions.
- 1.10.1. Store Flecks® TPR in a dry, secure area.
- 1.10.2. Store Flecks® Liquids in a dry area at a minimum temperature of 50°F (10°C) for short term storage. Long term storage, liquids should be kept at room temperature, 72°F (22°C). Protect Flecks® Liquids from extreme temperatures.
- 1.10.3. Where proper Personal Protection Equipment when handling. Protect materials during handling and installation to prevent damage.
- 1.11. **References:**
- ASTM F1292-22 – Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment.
 - ASTM F1951-21 – Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment/
 - ASTM F3313-20 – Standard Test Method for Determining Impact Attenuation of Playground Surfaces Within the Use Zone of Playground Equipment as Tested in the Field.
 - ASTM F2479-24 – Standard Guide for Specification, Purchase, Installation and Maintenance of Poured-In-Place Playground Surfacing.
- 1.12. **Performance Requirements:** Provide a complete installed system capable of meeting the specified Fall Height based on the manufacturer's documented test results for the complete system configuration.
- 1.13. **Crushed Stone Base / Minimum Thickness:** Flecks® Systems, Inc. does not recommend installation of less-than-2.0-inch Play Flecks® system over a crushed stone base.
- 1.13.1. Minimum recommended Play Flecks® system over crushed stone: 2.0 inches
- 1.13.2. Systems thinner than 2.0 inches shall not be installed over crushed stone without prior written approval from Flecks® Systems, Inc. and documentation that the proposed substrate assembly are suitable for the intended application.
- 1.13.3. Select surfacing thickness based on required Fall Height, substrate condition, drainage design, and manufacturer requirements.
- 1.14. **Warranty:** Provide the manufacturer's standard limited product warranty for the complete Play Flecks®, subject to the manufacturer's published terms and conditions.
- 1.14.1. Warranty protection is conditioned on installation in accordance with Flecks® requirements by qualified trained installers and proper maintenance.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

- 1.14.2. Installer shall submit their workmanship warranty.
- 1.14.3. Submit warranties with closeout documentation.

2. Submittals

- 2.1. Manufacturer's Product Literature, SDS and Product Data sheets for items in Section 3 "Products".
- 2.2. Submit manufacturer's written maintenance and care guide for recommended maintenance practices.
- 2.3. Color selections from Flecks® color chart.
 - 2.3.1. Color samples for customer verification.
- 2.4. Test results from a Weatherometer exposure test from an independent lab shall be submitted by the installer to the requiring agency prior to installation of the surface. The surfacing system (granules and binder) shall be tested for a minimum of 3,000 hours and show no less than 15% tensile strength (PSI) degradation.
- 2.5. Written manufacturer's warranty for playgrounds.
- 2.6. Product liability insurance certificate with project owner as certificate holder.
- 2.7. Installer qualifications and evidence of Flecks® training/approval.
- 2.8. ASTM F1292-22 & F3313-20: Where critical fall height is required or specified, the installer shall provide, upon request of the requiring agency, impact attenuation test results submitted by the installer to the requiring agency upon request. The results shall be submitted on the letterhead of the independent testing lab. Impact attenuation results will need to comply with ASTM F1292 *Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment* for the critical fall height of the equipment

3. Products

- 3.1. **Product:** Play Flecks® surfacing system for Playgrounds.
- 3.2. **Materials:**
 - 3.2.1 **Top Layer:** Flecks® Single Component Polyurethane Primer, Flecks® Thermoplastic Rubber Granular 1-2mm, Flecks® UltraBond™ Single Component Aliphatic Polyurethane Binder.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

The colors shall be selected from the drawings, submitted as samples, and mixed on site to the ratios in the samples. Black material, if included, must be a Thermoplastic Rubber Granular and not a rubber such as EPDM or "EPR" (marketed as TPV).

3.2.2 **Impact layer:** EnviroFluff® Recycled Foam, EnviroFluff® Aromatic Binder.

The impact layer is to be made of recycled thermoplastic rubber foam that can be mixed and applied on site and not to be pre-made foam mats. Each of the systems layers shall be a poured-in-place, seamless surface.

3.3. **Equal Materials:** The Flecks® Granules are a thermoplastic rubber granular. The system is 100% color. The Flecks® binder is a 100% solids aliphatic polyurethane. Any equal product must be Thermoplastic rubber based, not rubber based such as EPDM or "EPR" (marketed as TPV), must include an aliphatic binder and must be 100% color. The cushioned layer is comprised of EnviroFluff®, a 100% recycled thermoplastic foam rubber mixed on site with EnviroFluff® Aromatic Binder. Any black rubber recycled material is not considered equal.

3.4. **Finish Texture:** Granular grain.

3.5. **Color:** Selected from Manufacturer's Color Chart by owner prior to bid.

4. Surface Preparation

4.1. **Stone Base:** Installation of a sound stone base is critical to the longevity of Play Flecks® Safety Surface.

- Excavate to the required depth, allowing for the full thickness of the stone base and surfacing.
- Subgrade must be smooth, well-compacted, and free of organic material.
- **Minimum Depth:** A minimum of 4 inches for light-use playgrounds; 6 inches or more for high-use or vehicular access areas.
- **Stone Type & Composition:** Material shall be clean, angular, free-draining crushed stone. ASTM #57 stone or ¾-inch minus with fines shall be used for bulk fill; ASTM #89 or #8 stone shall be used for the top lift. This blend ensures both compaction and stability.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

- **Layering & Compaction:** Install in lifts. Compact the first 2 inches, then add and compact the next 2 inches, continuing until the final layer is compacted. Aim for 95% Standard Proctor compaction.
- **Slope:** The base shall have a minimum of 1% away from structures and a maximum slope of 2% that shall vary no more than 1/8" in any direction with a 10' straight edge.
- **Containment:** Crushed stone bases should be fully contained (e.g., by curbs) to maintain edge stability.
- **Drainage:** Depending on the region and soil on site, additional drainage may be needed to ensure the subbase does not wash out. Ensure perimeter drainage is adequate to prevent water from pooling under the rubber surfacing. Consider installing subsurface drain or geotextile if site drainage is poor.
- **Permeable Geotextile Fabric Liner (When necessary):** In certain cases when the sub-soil is unstable the installation of a geotextile fabric between the sub-soil and subbase may be required; especially in areas where there is freeze thaw, moist silty subgrade soils and in areas where the soil remains saturated for part of the year. Overlap joints by a minimum of 12 inches (300mm). The fabric should be free of wrinkles on all sides.

4.2. **New or Existing Concrete:** New concrete must be at least 28 days old with a broom finish.

4.2.1. **pH Testing:** Conduct pH testing of concrete substrates to determine the acidity level of the concrete. Concrete pH level shall be between 6 – 9 pH for proper bonding.

4.2.2. **Acid etching:**

- Clean the concrete surface. Remove any dirt, oil or other contaminants.
- Dampen the surface to be etched with clean water. The concrete should be uniformly wet. Avoid puddles or dry spots. These will affect the etching process. The concrete must remain damp during the etching process. To prevent dry spots, divide a large surface into smaller areas and etch them one at a time.
- Put on protective gear. Muriatic acid can cause severe damage to your eyes, skin, nose, throat, and lungs. Do not open the container before putting on your protective safety gear. Care should be taken to prevent splashing on workers.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

Protective clothes such as, safety glasses, rubber gloves, boots, etc. should be used.

- **Add acid slowly to water** in clean polyethylene buckets at a ratio of five (5) parts water to one (1) part acid. Do not put acid in the bucket and add water. The reverse order is dangerous and can cause the acid to bubble violently. The acid solution should be used on the floor at a rate of 200 square feet per 5 gallons of acid solution. Make sure to first dampen the concrete before applying the solution. Using a stiff broom, scrub acid solution into the surface where the solution was poured and continue the process to other areas. Never let the floor dry with acid on it. After 5 minutes, rinse the floor with adequate amounts of clean water to remove all the acid solutions, and then allow the floor to dry.
- 4.3. **Power-wash:** Old concrete that is contaminated with grease or oil can be cleaned with a power-washer. Use a degreasing agent before power-washing.
- 4.4. **Concrete Grinding:** For concrete where a power-washer cannot be used, a diamond grinder can be used to lightly grind the surface to remove contamination.
- 4.5. **Coated Concrete and Cementitious Overlays:** Check for any hollow spots not properly bonded. Sand, diamond grind or power-scarify as required to obtain optimum bond of the Deck Flecks® material to the concrete. Remove sufficient coated material to provide a sound surface, free of glaze, efflorescence, or from release agents. Remove grease, oil, and other penetrating contaminants. Remove and/or replace any loose or unstable concrete. Concrete will have a pitch of 0.25 inches per foot and should not have low areas that will hold water under the system.
- 4.6. **Metal Preparation:** All metal surfaces must be rigid and structurally sound. Contamination such as grease, oil, dirt, etc. must be removed prior to coating. Rust or scale should be removed through mechanical means such as sanding or sand- blasting. The surface should be abraded until bright metal is shown. If the surface is to be left for an extended period of time, it should be treated with a 10% phosphoric acid solution to prevent new rust formation.
- 4.7. **Wood Preparation:** Play Flecks® should not be applied over plank or strip flooring. Sheets of one-half inch or thicker plywood may be used to cover this type of floor. Exterior grade "C" plugged, with extended glue line should be used. The plywood sheets should be staggered for strength. Allow 24 hours for wood to dry thoroughly. Wood must be primed twice before applying EnviroFluff® or Flecks® Systems Granules.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

- 4.8. **Stone or Tile Preparation:** Any unstable or loose tile must be removed. Contamination should be removed with a power-washer or mechanically abraded. Any glazing on tile must be abraded off with a grinder or shot blaster.
- 4.9. **Fiberglass Preparation:** Power-wash any contaminants off the surface. Allow 24 hours for the surface to dry. Glaze coating must be abraded/sanded. Solvent wipe the fiberglass surface before coating with primer.
- 4.10. **Asphalt Preparation:** New asphalt must be 15 days old. Broom scrub using a degreaser to remove any surface oils. Power wash any contaminants off the surface. Allow 24 hours for the surface to dry. **PLAY FLECKS® CAN NOT BE INSTALLED OVER ASPHALT CURED FOR LESS THAN 15 DAYS.**
- 4.11. **Paver or Brick Preparation:** Existing pavers must be clean, free of dirt, debris, and contaminants. Joints must be filled with a joint filler made for pavers or Flecks® Vertical Gel and Crack Filler, a 100% solids, two-component, flexible epoxy gel, to seal the joints and create a stable substrate. Sealing the joints will assist in the reduction of water getting under the substrate.

5. Installation

- 5.1. **Thickness:** The total depth of the surface shall be installed in strict accordance and conformity to the Manufacturer's drawings and these specification requirements. Surface thickness will vary in the impact layer. The thickness of the impact layer will be installed according to the fall height(s) of the play equipment called for. The installer must contact the equipment manufacturer to determine the exact fall height requirements. These requirements must be verified in the field prior to starting the installation of the impact layer.
- 5.2. **Impact Cushion Layer:** The impact layer is to be EnviroFluff®, a recycled thermoplastic foam rubber. EnviroFluff® will be mixed on site with EnviroFluff® Aromatic Binder. The manufacturer's minimum depth or greater shall be installed as required by the fall height(s) required by the playground apparatus/equipment that exists or is to be installed and to meet the test results of the finished surface as expressly required within this specification. If no fall height protection is required, a minimum depth of 1.5 inch of EnviroFluff® will be applied as the cushion layer over a crushed stone base layer.
- 5.2.1. **EnviroFluff® Cushioned Layer Mixing and Finishing:**
- 5.2.1.1. Over a hard substrate, adhere EnviroFluff® to the sub-base by applying a coat of Flecks® Primer over the entire surface. (The spread rate over top of a hard substrate is 150 - 250 square feet per gallon). Be careful not to prime to far if



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

it is hot and humid otherwise primer will cure up before EnviroFluff® is poured.

5.2.1.2. For compacted stone sub-base, apply a layer of geotextile material over the entire surface where needed.

5.2.2. Mix (22) lbs. of EnviroFluff® with (3) three quarts of EnviroFluff® aromatic binder so that EnviroFluff® particles are covered evenly. Spread the mix to the appropriate depth immediately after the application of the primer.

5.2.2.1. **Slope:** The base shall have a maximum slope of 2% and shall vary no more than 1/8" in any direction with a 10' straight edge.

5.2.3. Let cure for 12-24 hours.

5.3. **Top Layer:** The overall thickness of an average of 1/2-inch-thick shall be comprised of Play Flecks® material with a single component aliphatic binder supplied by the manufacturer.

5.3.1. **Priming:** Roll or brush Flecks® Primer on the surface being sure to liberally cover the entire area. (The spread rate over top of EnviroFluff® Cushioned layer is 100 square feet per gallon). Use an amount of primer that will be used in less than 30 minutes. If it is warmer, the primer will cure faster, and less material should be applied. **Be careful not to prime too far if it is hot and humid otherwise primer will dry/cure and will cause delamination.**

5.3.2. **Play Flecks® Mixing and Finishing:**

5.3.2.1. **Mixing Ratios:**

5.3.2.1.1. **Flecks® TPR Rubber Dry Blend:** Flecks® TPR Granules to be measured and added to mixer per the chosen color blend.

5.3.2.1.2. **Flecks® Binder Mixing Ratios:** (4) Four Quarts of Flecks® UltraBond™ Aliphatic Single Component Binder.

5.3.2.1.3. **Flecks® TPR and Flecks® Binder Mixing Ratio:** (1) bag/45 lbs. of Flecks® TPR to (4) Quarts of UltraBond™ Single Component Binder.

5.3.2.1.3.1. Add the pre-measured (4) Four Quarts of UltraBond™ single component aliphatic urethane binder onto 45 lbs. of Flecks® TPR dry blend in a Flecks® Approved Vertical Shaft or Paddle Mixer. Mix thoroughly so that each granule is covered evenly (approximately 3 minutes).

5.3.2.1.3.2. Empty mix into a wheelbarrow and wheel the mix near the designated primed area.

5.3.2.1.3.3. Dump the mix onto the primed area and spread it at an average thickness of 0.75 (3/4") inch and troweling it to an average finish of 1/2" thickness keeping the surface as level as possible.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

5.3.2.1.4. **Finishing:** A light mist of Flecks® “Trowel E-Z” is used to lubricate trowel when applying Flecks® thermoplastic rubber colored wear course and EnviroFluff® thermoplastic foam. Trowel E-Z will allow for easier manipulation when hand troweling, power troweling or when using a roller. ***Be sure not to use an excess amount of “Trowel E-Z” to lubricate trowels. A light mist on the trowel is all that is needed.*** A solution of Dawn dish soap and water may be used as an alternative trowel lubricant.

5.3.3. Let the surface set for 72 hours or until dry to the touch before using.

5.5. **CAD Drawings:** Visit Flecks® Systems CADdetails Link: [Flecks® Systems | CAD Drawings, BIM Files, Specifications & More - CADdetails](#) or contact Flecks Systems, Inc., for a copy of our CAD drawings for your specific application.

6. Cleaning

- 6.1. The contractor should clean the jobsite of excess materials and if necessary, backfill any excavation around the perimeter with earth or other appropriate material.
- 6.2. The contractor shall instruct the owner's personnel on proper maintenance and repair of the Play Flecks® surface. It is recommended that a small quantity (1/2 – 1 full bag per color blend) of the Flecks® TPR dry blend be left to store at the project in case there are any repairs necessary in the future.

7. Special Considerations

7.1. Large Areas/Patterns & Designs

All areas in excess of 1500 square feet or areas that require adjacent color pours due to designs shall have this work done in strict accordance with the manufacturer's installation requirements with adjacent poured cap layer surfaces being flush throughout. Large areas or adjacent color patterns may require the poured layer cap to be installed on different days. Using Flecks® Systems polyvoid 3/8” forms layout your' designs, patterns, or borders. Use spray glue to hold the forms down. The installer shall employ proper techniques to ensure that no gaps or separation will occur during the warranty period. Be sure to prime existing seams using aliphatic binder thinned out with 25% of Trowel EZ (by volume) before installing next color to ensure seams are bonded properly.  Seams should overlap to provide extra support when installed over a cushion base. Ensure forms are laid out creating a sharp, clean, crisp edge.

7.2. **Non-Porous, High Wear Finish:** For areas under swings, entrance and exit areas a non-porous finish is recommended.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

- 7.2.1. **Flecks® Grout:** Pre-Mix Flecks® Grout Part A and Flecks® Grout Part B (3 Part A to 2 Part B **by volume**). **Flecks® Grout has a spread rate of approximately 40 square feet per gallon.** Apply Pre-Mixed solution of Flecks® Grout by pouring a small amount of material onto the surface and using a rubber float to tightly spread the material, forcing Flecks® Grout into the surface. Apply in small areas to ensure an even coat throughout the entire surface. Be careful not to pour excess Flecks® Grout onto the surface, otherwise it will soak in before it can be evenly spread with rubber float. Back roll using a 3/8" Napth roller to even out any puddled areas. **Be sure not to apply too much material in the same area causing the surface to become a glazed uneven finish.** Let cure for 12-24 hours until dry to touch (tack free). Recoat window < 24 hours.
- 7.1.1. **Flecks Sealcoat:** Using Flecks® Sealcoat, determine the square feet of the area to be coated. **(Flecks® Sealcoat has a spread rate of approximately 200-250 square feet per gallon).** Pre-Mix (1) Part Sealcoat A to (1) Part Sealcoat B **by volume**, mix for 30 seconds and then add (0.5) Parts of Trowel-EZ. Mix Sealcoat solution using a drill and mixing paddle on a medium speed being careful not to incorporate too much air. Add Trowel E-Z and re-mix for an additional 30 seconds. Once all components are mixed, Apply Flecks® Sealcoat using a 3/8" – 1/2" Napth roller. A paint screen/grid is to be used to remove any excess material. Apply an even coat onto the entire surface. Work in small areas to ensure the entire surface is coated. Let fully cure for 72 hours prior to heavy use or furniture is used. (12-24 hours for light foot traffic, temperature dependent)
- 7.3. **Flecks® Guard Maintenance Coating:** Using Flecks® Guard aliphatic urethane topcoat, determine the square feet of the area to be coated. **(Flecks® Guard has a spread rate of approximately 250 square feet per gallon).** Apply Flecks® Guard using an airless paint sprayer to ensure an even coat. A 1/4" to 3/8" Napth roller can be used if a paint sprayer is not available. A paint screen/grid is to be used to remove any excess material. Let fully cure for 24 hours. (12 hours for light foot traffic)
- 7.4. **Existing Caulk-filled Edges:** Prepare edges of existing pad to meet surrounding concrete. Remove any and all silicone or caulking where the pad and the surrounding concrete meet.

Disclaimers and System Protection Notice:

Specifications, installation methods, product descriptions, system components, and technical documentation provided by Flecks Systems, Inc. constitute proprietary system information.



Manufacturer's Specifications

Flecks® Playground Protective Surfacing

Architects, engineers, contractors, and project owners may reference Flecks Systems specifications only for the purpose of specifying Flecks Systems products and systems.

No party is authorized to:

- Copy or adapt Flecks Systems specifications for use with competing products
- Substitute alternative materials while retaining Flecks Systems system descriptions
- Use Flecks Systems installation procedures with non-Flecks Systems materials
- Represent another product as “equivalent” without written approval from Flecks Systems, Inc.

Any attempt to replicate or substitute Flecks Systems system specifications without authorization may result in improper installation and system failure.

Flecks Systems, Inc. shall not be responsible for performance, safety, or durability of any installation in which its specifications are used with non-authorized materials or products or installed by anyone who has not been properly trained and is listed as a Flecks® Authorized Installer. Unauthorized installation methods, material substitutions, field modifications, or improper maintenance may result in product failure and may void applicable warranties.