



## Manufacturer's Specifications

### 1. General

- 1.1. **Manufacturer:** Flecks Systems, Inc., 885 Bangert Blvd., Toms River, NJ 08757. Toll Free: 1-833-435-3257 • Phone: +1-732-569-6161 • Fax: +1-732-608-7657 • Website: [www.fleckssystems.com](http://www.fleckssystems.com) • Email: [info@fleckssystems.com](mailto:info@fleckssystems.com)
- 1.2. **Scope:** These are the manufacturer's specifications for the Play Flecks®, porous resurfacing system.
- 1.3. **Description:** Play Flecks® is a porous thermoplastic rubber 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 weather.
- 1.4. **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.
- 1.5. **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.
- 1.6. **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.
- 1.7. **Security:** Site must be made secure against vandalism during installation and curing period.
- 1.8. **Delivery:** Deliver materials to site in manufacturer's original, unopened containers/packaging, with labels that clearly identify the product name and manufacturer.
- 1.9. **Storage & Handling:** Store materials in accordance with manufacturer's instructions.
  - 1.9.1. Store Flecks® TPR in a dry, secure area.
  - 1.9.2. 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.
  - 1.9.3. Where proper Personal Protection Equipment when handling. Protect materials during handling and installation to prevent damage.

### 2. Submittals

- 2.1. Manufacturer's Product Literature and Specification Data.
- 2.2. Submit manufacturer's written instructions for recommended maintenance practices.

- 2.3. 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. (M)SDS and Product data sheets for items in Section 3 "Products".
- 2.8. ASTM 1292: If critical fall height is required, attenuation test results shall be 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.

The colors shall be as 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 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



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“EPR” (marketed as TPV), must include an aliphatic binder and must be 100% color. The cushioned layer is comprised of EnviroFluff®, a 100% recycled 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. A minimum of 4 inches of ¾” crushed stone capped with 2” of stone dust is required to create a subbase suitable to install Play Flecks® on top of.

- **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.
- **Drainage:** Depending on the soil on site, additional drainage may be needed to ensure the subbase does not wash out.
- **Ground Level:** Borders are recommended. When excavating, preparing for the crushed stone subbase, factor in the thickness of the system to be applied and dig down so that the top of the stone base is below grade at the depth of the system being installed. This will create a surface level with the surrounding landscape. This will prevent tripping hazards and create a safer environment.
- **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.

**pH Testing:** Conduct pH testing of concrete substrate to determine the acidity level of the concrete. Concrete pH level shall be between 8 – 9 pH for proper bonding.

#### **Acid etching:**

- Clean the concrete surface. Remove any dirt, oil or other contaminants.



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- 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. 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.

**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.

**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.

- 4.3. **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 showing. 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.
- 4.4. **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.
- 4.5. **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.



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- 4.6. **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.
- 4.7. **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.**

## 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 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 1.0 inch of EnviroFluff® will be applied as the cushion 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 - 200 square feet per gallon). Be careful not to prime too far if 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 a geotextile material over the entire surface where needed.

- 5.2.2. Mix (22) lbs. of EnviroFluff® with (2) two quarts of EnviroFluff® aromatic binder so that EnviroFluff® particles are covered evenly. Spread the mix and trowel 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.



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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 mixed. **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™ AL Single Component Aliphatic 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 Paddle Mixer. Mix thoroughly so that each granule is covered evenly (approximately 3 minutes).

5.3.3. 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.

5.3.3.1. 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 and when a roller is used to remove any imperfections.. ***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.***

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

5.5. **CAD Drawings:** Visit Flecks® Systems CADdetails Link:

<https://www.caddetails.com/Main/Company/ViewCompanyContent?companyID=5195> for detailed CAD drawings or contact Flecks Systems, Inc. directly 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.

## **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 can 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.

- 7.2. **Coated Concrete:** For a coated concrete surface, diamond grind or power-scarify as required to obtain optimum bond of the Play 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.

- 7.3. **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.