**FGP Flexible Flake System**

Flexible Decorative Flake System for Active/Dynamic Slab Conditions

## PART 1 – GENERAL

### 1.1 SUMMARY

A. Section Includes:
1. Resinous flexible flake broadcast flooring system applied to concrete and approved structural substrates.
2. Crack-bridging epoxy membrane flooring system.
3. Decorative vinyl flake aggregate broadcast flooring.
4. Seamless flexible flooring system designed for substrates subject to minor movement and non-structural cracking.

B. Related Requirements:
1. Division 01 Sections for administrative, procedural, and temporary requirements.
2. Section 03 30 00 – Cast-in-Place Concrete.
3. Section 06 10 00 – Rough Carpentry (where wood substrates are applicable).
4. Section 07 92 00 – Joint Sealants.
5. Section 09 05 61 – Common Work Results for Flooring Preparation.

### 1.2 SUBMITTALS

A. Product Data
1. Manufacturer's Technical Data Sheets (TDS).
2. Safety Data Sheets (SDS).
3. Preparation and installation instructions.

B. Shop Drawings
1. Flooring layout.
2. Transitions and terminations.
3. Interface with adjacent materials.

C. Samples for Initial Selection
1. Manufacturer's standard flake blend selections.

D. Samples for Verification
1. Minimum 6-inch square samples illustrating color, texture, and finish.

E. Qualification Data
1. Installer qualifications.
2. Manufacturer qualifications.

F. Field Quality Control Reports
1. Moisture test reports.
2. Surface preparation verification.

G. Closeout Submittals
1. Maintenance data.
2. Warranty documentation.

## 1.3 QUALITY ASSURANCE

A. Installer Qualifications
1. Installer shall be approved by manufacturer.
2. Minimum five (5) years documented experience installing comparable resinous flooring systems.
3. Employ personnel trained in specified products and application techniques.

B. Manufacturer Qualifications
1. Manufacturer shall specialize in resinous flooring systems.
2. Provide documentation of successful comparable installations.

C. Mockups
1. Install minimum 100 $Ft^2$ mockup demonstrating workmanship, preparation, and appearance.
2. Approved mockup may remain as part of completed work.

D. Preinstallation Conference
1. Review substrate conditions.
2. Review environmental conditions.
3. Review sequencing and protection requirements.

## 1.4 DELIVERY, STORAGE, AND HANDLING

1. Deliver materials in original unopened containers with manufacturer labels intact.
2. Store materials in clean, dry, temperature-controlled environment.
3. Protect materials from freezing, moisture, excessive heat, and direct sunlight.
4. Condition materials to 65°F–75°F prior to installation.

## 1.5 PROJECT CONDITIONS

A. Environmental Limitations
1. Maintain ambient temperature between 60°F and 85°F.
2. Maintain substrate temperature between 50°F and 85°F.
3. Relative humidity shall not exceed 80%.
4. Substrate temperature shall remain minimum 5°F above dew point.
5. Provide adequate ventilation during installation and curing.

B. Lighting
1. Provide permanent lighting or equivalent illumination for installation and inspection.

C. Substrate Conditions
1. Concrete compressive strength shall be minimum 3,000 psi.
2. Substrate shall be structurally sound and free of contaminants.
3. Surface profile shall comply with ICRI CSP 2-4.
4. Substrates may include properly prepared:
   a) Concrete.
   b) Elevated slabs.

c) Wood assemblies.
d) Structural substrates approved by manufacturer.

5. Concrete pH shall be between 7.0 and 10.0.
6. Moisture conditions shall comply with manufacturer recommendations.

### 1.6 WARRANTY

A. Manufacturer Warranty
1. Provide manufacturer's standard written warranty against material defects.

B. Installer Warranty
1. Provide written workmanship warranty for one (1) year.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

A. Basis-of-Design Product
1. Floorguard Products.

B. Source Limitations
1. Obtain primary flooring system materials from single manufacturer.

C. Substitutions
1. Comply with Division 01 requirements.

### 2.2 RESINOUS FLOORING SYSTEM

A. System Description
1. FGP Flexible Flake System.
2. Flexible crack-bridging epoxy flooring system designed for concrete, elevated, wood, and structural substrates subject to minor movement, deflection, and non-structural cracking. Flexible membrane technology enhances elongation and stress absorption while maintaining adhesion and monolithic integrity. System provides seamless decorative flake finish with improved crack resistance and long-term aesthetic consistency in dynamic environments.

B. System Components

1. Primer
a) Clear HyperFLEX.
b) Applied at 80 $Ft^2$/Gal.
c) Thickness: 20 mils.

2. Basecoat

a) Pigmented HyperFLEX.
b) Applied at 80 $Ft^2$/Gal.
c) Thickness: 20 mils.

3. Aggregate Broadcast
a) Decorative blended flake.
b) Broadcast to full refusal.
c) Coverage rate: 0.13 lbs/$Ft^2$.

4. Topcoat
a) Clear Aspartic 85.
b) Applied at 135–150 $Ft^2$/Gal.
c) Thickness: 10.7–12 mils.

## 2.3 PERFORMANCE REQUIREMENTS

A. System Thickness
1. 70–80 mils nominal.

B. Physical Properties
1. Hardness: Shore D 80 per ASTM D2240.
2. Tear Strength: 236 in-lbs per ASTM D624.
3. Tensile Strength: 2,450 psi per ASTM D638.
4. Flexural Strength: 5,000 psi per ASTM D790.
5. Elongation: 150% per ASTM D638.
6. Abrasion Resistance: 20 mg loss per ASTM D4060.
7. Bond Strength: 400 psi concrete failure per ASTM D7234.
8. Impact Resistance: 200 in-lbs per ASTM D2794.
9. Moisture Vapor Emission Tolerance: 3 lbs/1,000 $Ft^2$/24 hrs per ASTM F1869.

C. Slip Resistance
1. 0.65–0.75 DCOF per ANSI A326.3.

D. Fire Performance
1. Class B per ASTM E84.

E. Cure Schedule
1. Foot Traffic: 12 hours.
2. Vehicular/Equipment Traffic: 72 hours.
3. Full Cure: 5–7 days.

## 2.4 ACCESSORIES

**A. Provide manufacturer's standard accessory materials compatible with flooring system.**

**B. Accessories may include:**

1. Substrate Repair Materials.
2. Joint Fill Materials.

3. Crack Suppression Materials.
4. Flexible Membrane Transition Materials.
5. Cove Base Materials.
6. Edge Detailing Materials.
7. Termination Strips.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

1. Verify substrates are acceptable for installation.
2. Proceed only after unsatisfactory conditions are corrected.

### 3.2 PREPARATION

1. Remove contaminants including oil, grease, curing compounds, sealers, and laitance.
2. Mechanically prepare substrates to achieve required CSP profile.
3. Perform moisture testing:
   a) ASTM F1869.
   b) ASTM F2170.
4. Repair cracks, spalls, and voids prior to installation.
5. Vacuum and remove all dust and debris.

### 3.3 INSTALLATION

1. Install flooring system in accordance with manufacturer written instructions.
2. Apply materials at specified coverage rates and film thicknesses.
3. Apply flexible membrane components uniformly without voids or thin spots.
4. Broadcast decorative flake aggregate to full refusal.
5. Remove excess aggregate prior to topcoat application.
6. Apply topcoat within manufacturer recommended recoat windows.
7. Finished surface shall be uniform and free of defects, puddles, roller marks, and dry areas.

### 3.4 FIELD QUALITY CONTROL

1. Inspect completed flooring for uniformity, texture, thickness, and appearance.
2. Verify proper cure prior to opening to traffic.
3. Repair or replace defective work.

### 3.5 CLEANING AND PROTECTION

1. Remove debris and clean finished surfaces.
2. Protect installed flooring from damage during construction.
3. Restrict traffic during cure schedule.
4. Use pH-neutral cleaners for routine maintenance.
5. Avoid harsh solvents, caustic cleaners, and abrasive cleaning pads.
6. Reapplication of finish coats may be required over time due to abrasion, UV exposure, weathering, chemical exposure, and traffic wear.

**END OF SECTION**