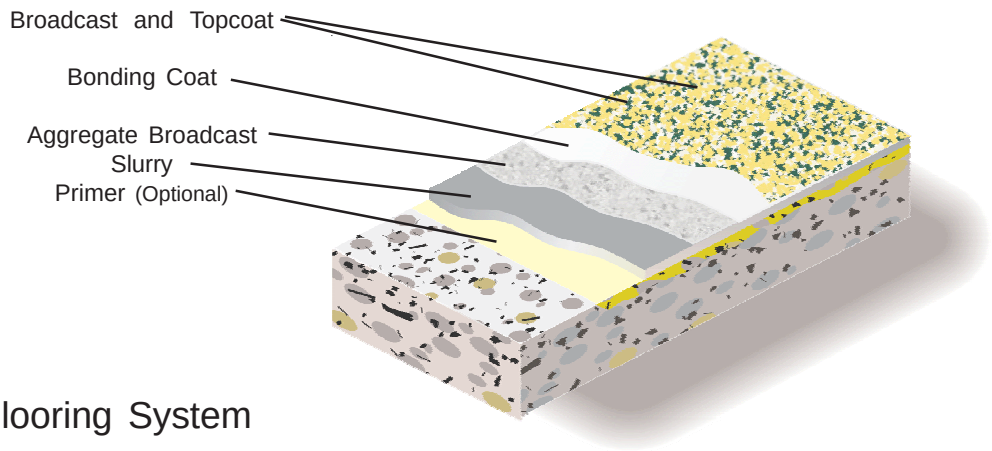
Bio-Flake®
Decorative Flooring System

General Polymers ***Bio-Flake*** **Decorative Flooring System** is a low odor, 3/16" slurry, designed to provide a functional yet aesthetic floor system for pharmaceutical, research and biotech applications. The system combines a fast curing , moisture insensitive, three-component base material with a mosaic broadcast, sealed with a high gloss, UV stable, clear top coat. ***Bio-Flake*** **Decorative Flooring System** is applied with a screed rake or flat trowel over a properly prepared concrete substrate or as an overlay to existing well bonded resinous floors.



3/16" Flooring System

Advantages
- Fast turnaround time
- Low VOC, Low odor
- Moisture insensitive
- High temperature resistance
- Attractive yet functional
- Wide selection of colored chip blends
- Withstands vapor emissions up to 15 lbs.
- Chemical Resistant to a broad range of sterilants and disinfectants to include:
  Steris: CIP 100, 200, 220, 300, Spor-Klenz, Vesphene, LPHSE Unicide 256, SaF Kleen, Acidulate 45T, Bleach, IPA, Clidox S, Dilute Phosphoric

Uses
- Production floors
- Animal holding / Vivarium
- Laboratories
- Clean rooms
- Rest rooms
- Change rooms
- Corridors

Typical Physical Properties

Color		As approved
Cure Time	Recoat	3-4 hours
	Foot Traffic	6-8 hours
	Full Service	10-12 hours
Abrasion Resistance ASTM D 4060, CS-17 Wheel		20-30 mgs lost
Adhesion ASTM D 4541		300 psi concrete failure
Hardness, Shore D ASTM D 2240		75
Coefficient of Friction		>0.6
Tensile Strength ASTM C 307		550-600 psi
Compressive Strength ASTM C 579		5,000 psi
Flexural Strength ASTM C 580		3,700 psi
Impact Resistance MIL-D-3134, Sec.4.7.3		Withstands 16 ft lbs without cracking, delamination or chipping

Installation

The following information is to be used as a guideline for the installation of the ***Bio-Flake*** **Decorative Flooring System**. Contact the Technical Service Department for assistance prior to application.

Surface Preparation - General

General Polymers systems can be applied to a variety of substrates, if the substrate is properly prepared. Preparation of surfaces other than concrete will depend on the type of substrate, such as wood, concrete block, quarry tile, etc. Should there be any questions regarding a specific substrate or condition, please contact the Technical Service Department prior to starting the project. Refer to Surface Preparation (Form G-1).

Surface Preparation - Concrete

Concrete surfaces shall be abrasive blasted to remove all surface contaminants and laitance. The prepared concrete shall have a minimum surface profile equal to 40-60 grit sandpaper. Consult the Technical Service Department if oil or grease is present.

After initial preparation has occurred, inspect the concrete for bug holes, voids, fins and other imperfections. Protrusions shall be ground smooth while voids shall be filled with a General Polymers system filler. For recommendations, consult the Technical Service Department.

Temperature

Throughout the application process, substrate temperature should be 50ºF. Substrate temperature must be at least 5ºF above the dew point. Applications on concrete substrates should occur while temperature is falling to lessen offgassing. The material should not be applied in direct sunlight, if possible.

Application Information @ 3/16"

Material	Mix Ratio	Theoretical Coverage	Packaging Per Coat
Primer			
3477	2:1	300-400 sq ft / gal	3-15 gals
Slurry			
4050	One Unit	27-30 sq. ft. /unit	2 gals (Short Filled)
5050	One Unit	44 lbs / unit	44 lbs /bag
Bonding Coat			
3745	2:1 Premeasured units	200-300 sq. ft. / gal	1,5, or 15 gals
Broadcast			
6750/6755 Mosaic	Broadcast For Seeding	100 lbs / 1,000 sq. ft.	25-50 lbs
Grout Coat			
3745	2:1 Premeasured units	200-300 sq. ft. / gal	1,5, or 15 gals
Seal Coat:			
4685 (1coat)	1:1	300-400 sq. ft. / gal	2 or 10 gals

Under certain conditions, an exudate can form on the surface of cured 4685. If an additional coat of 4685 is required, the surface should be sanded with a fine grit medium, (150 grit or finer), and then solvent wiped prior to recoating, even if within the recoat window.

Different optional seal coats - Consult individual Technical Data Sheet for mixing and application instructions.

4844 PAce-Cote

Primer

Mixing and Application

When the flooring system is a thin mil coating or slurry system, a primer must be applied to the concrete prior to the application of ***FasTop***. This will prevent issues related to outgassing from the slab. Always use **Prime with Epoxy Water Emulsion Primer / Sealer** (3477) at 300-400 feet to the gallon 1-2 hours prior to placing the ***FasTop***. DO NOT USE HIGH SOLIDS EPOXY PRIMERS AS THEY WILL SEAL THE CONCRETE.

1. Premix 3477A (resin) and 3477B (hardener) separately, using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to whip air into the materials.

2. Add 2 parts 3477A (resin) to 1 part 3477B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. DO NOT mix more material than can be used within 4 hours. Apply material with a short nap roller at a spread rate of 300-400 sq. ft. per gallon.

DO NOT ALLOW TO PUDDLE. Any uneven or textured surfaces will require more material than an even surface.

Slurry Coat

Mixing and Application

DO NOT PREMIX 4050 PART B HARDENER. OVER EXPOSURE TO AIR EFFECTS PHYSICAL PROPERTIES

1. Add 4050A (resin) to 4050B (hardener) and mix with low speed drill and Jiffy blade for 15 seconds or until uniform.

2. Slowly pour 44 lbs. 5050 Neutral aggregate and blend materials for 30 seconds or until no lumps remain. Immediately pour mixed material onto the substrate and pull out using a pin rake, screed rake or flat trowel. Use a looped roller to evenly distribute material. If concrete displays excess outgassing, use a spiny roller to break bubbles. Allow material to self-level (5-10 minutes).

3. Allow to cure 4-6 hours, must be hard enough to stand or walk on without leaving marks.

Bonding Coat

Mixing and Application

1. Sand or grind surface of slurry coat to provide proper intercoat adhesion with bonding coat.

2. Premix 3745A (resin) using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to whip air into the materials.

3. Add 2 parts 3745A (resin) to 1 part 3745B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. Apply material using a 1/4" nap roller at a spreada rate of 200-300 sq. ft. per gallon.

4. Broadcast 6750/6755 Mosaic Broadcast to saturation (about 100# per 1000 square feet). Broadcast floor within 20-30 minutes of placement.

5. Allow to cure for a minimum of 6-8 hours. All imperfections such as high spots should be smoothed before the application of the grout coat.

NOTE: Even and complete distribution of the 6750/6755 Mosaic Broadcast is critical to the success of the application. The floor's finished appearance depends on the manner in which the 6750/6755 has been applied. In grass seed like fashion, allow the 6750/6755 to fall after being thrown upward and out. **DO NOT THROW DOWNWARD AT A SHARP ANGLE USING FORCE.**

Grout Coat

Mixing and Application

1. Premix 3745A (resin) using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to whip air into the materials.

2. Add 2 parts 3745A (resin) to 1 part 3745B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. Apply material using a 1/4" nap roller at a spreada rate of 200-300 sq. ft. per gallon.

3. Allow to cure for a minimum of 6-8 hours. All imperfections such as high spots should be smoothed before the application of the seal coat. **NOTE: If using 4844 PAce-Cote as the final seal coat, you must lightly and uniformly sand the cured 3745 grout to remove surface gloss.**

Seal Coat

Mixing and Application

1. Premix 4685A (resin) using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to introduce air into the material.

2. Add 1 part 4685A (resin) to 1 part 4685B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. To insure proper system cure and performance, strictly follow mix ratio recommendations.

3. 4685 may be applied via spray, roller or brush. Apply at a spread rate of 300-400 sq. ft. per gallon to yield 4-5 mils WFT evenly with no runs.

4. Allow to cure overnight.

Under certain conditions, an exudate can form on the surface of cured 4685. If an additional coat of 4685 is required, the surface should be sanded with a fine grit medium, (150 grit or finer), and then solvent wiped prior to recoating, even if within the recoat window.

Different optional seal coats - Consult individual Technical Data Sheet for mixing and application instructions.

4844 PAce-Cote

Cleanup

Clean up mixing and application equipment immediately after use. Use toluene or xylene. Observe all fire and health precautions when handling or storing solvents.

Safety

Refer to the MSDS sheet before use. All applicable federal, state, local and particular plant safety guidelines must be followed during the handling and installation and cure of these materials.

Safe and proper disposal of excess materials shall be done in accordance with applicable federal, state, and local codes.

Material Storage

Store materials in a temperature controlled environment (50ºF - 90ºF) and out of direct sunlight.

Keep resins, hardeners, and solvents separated from each other and away from sources of ignition.

Maintenance

Occasional inspection of the installed material and spot repair can prolong system life. For specific information, contact the Technical Service Department.

Shipping

- Destinations East of the Rocky Mountains are shipped F.O.B. Cincinnati, Ohio.

- Destinations West of the Rocky Mountains are shipped F.O.B. Victorville, California.

For specific information relating to international shipments, contact your local sales representative.

Disclaimer

The information and recommendations set forth in this document are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product(s) offered at the time of publication. Published technical data and instructions are subject to change without notice.

Consult www.generalpolymers.com to obtain the most recent Product Data information and Application instructions.

Warranty

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams, NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.