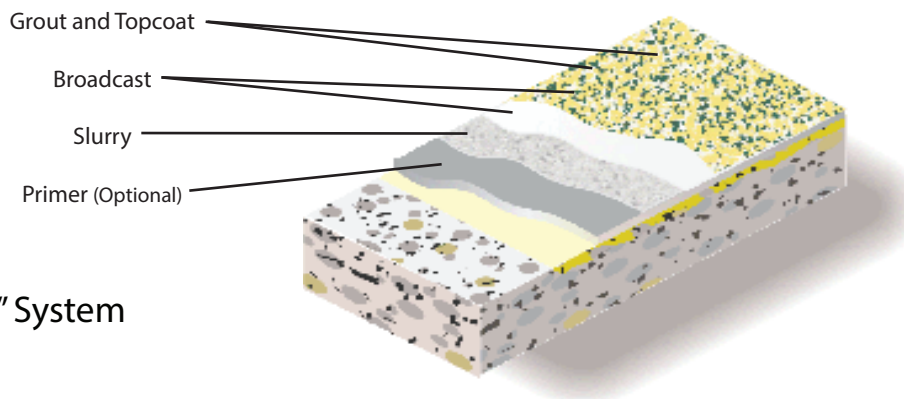




Bio-Flake[®] Decorative Flooring System

Sherwin-Williams Bio-Flake Decorative Flooring System is a 3/16" - 1/4" slurry, designed to provide a functional yet aesthetic floor system for pharmaceutical, research and biotech applications or other areas where a decorative heavy duty floor is desired. The system combines a fast curing, moisture insensitive, three-component base material with a mosaic broadcast, sealed with a high gloss, UV stable, clear topcoat. 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" - 1/4" System

Advantages

- Fast turnaround time
- Moisture insensitive
- High temperature resistance
- Attractive yet functional
- Wide selection of colored chip blends
- No moisture testing required
- 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

Typical Physical Properties

Color	Refer to color pack color card	
Cure Time	Recoat	3-5 hours
	Foot Traffic	7-8 hours
	Full Service	12 hours
Abrasion Resistance ASTM D4060		51 mgs lost
Hardness, Shore D ASTM D 2240		83
Tensile Strength ASTM C 307		944 psi
Compressive Strength ASTM C 579		6,926 psi
Flexural Strength ASTM C 580		1,909 psi
Adhesion ASTM 7234		523 psi concrete failure
Impact Resistance		IR4
Reaction to Fire		Bfl - s1
Thermal Expansion Coefficient ASTM D 2047		<38 PPM
Slip Resistance ASTM E303		0.7 DCOF
Service Temperature at 3/16"		-50°F - 266°F
Shrinkage	Karsten Test (impermeable) - Nil	
Water Absorption	Karsten Test (impermeable) - Nil	

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

Sherwin-Williams 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 Sherwin-Williams system filler. For recommendations, consult the Technical Service Department.

Temperature

Throughout the application process, substrate temperature should be 50°F. Substrate temperature must be at least 5°F 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"-1/4"

VOC MIXED		MATERIAL	MIX RATIO	THEORETICAL COVERAGE PER COAT CONCRETE	PACKAGING
<50 g/L	Cove Base	FasTop Multi	2.0 kg mix (A+B)	15-20 lin. ft. @ 6" cove 1" radius	2.0 kgs. Sold in units only.
0		Cove Base aggregate	22 lbs.	22 lbs.	22 lbs.
<75 g/L	Primer optional for outgassing	3477	2:1	250 sq. ft. / gal	3 or 15 gals
<50 g/L	Slurry	FasTop Multi	5.0 kg mix (A+B)	32-34 sq. ft. / unit @ 1/4" 22-24 sq. ft. / unit @ 3/8"	5.0 kgs
0		SL45 aggregate	37 lbs.		37 lbs.
0	Broadcast	6750/6755 Mosaic	Broadcast for seeding	100 lbs. / 1,000 sq. ft.	25-50 lbs.
<100 g/L	Grout Coat	3746	2:1	200-300 sq. ft. / gal	3 or 15 gals
<50 g/L	Seal Coat	4686 (1 coat)	1:1	250-400 sq. ft. / gal	2 or 10 gals

Under certain conditions, an exudate can form on the surface of cured 4686. If an additional coat of 4686 is required, the surface should be sanded with a fine grit medium, (80-120 grit or finer), and then solvent wiped prior to recoating.

For additional topcoat options, contact your Sherwin-Williams Representative.

Cove Base

Mixing and Application

Cove base should be installed prior to the floor. Tape out cove with duct tape or a good quality masking tape. Terrazzo strips will also work.

Mixing: **Do not mix partial units**, the fine aggregate and pigment can and will separate. A drill and a paddle work the best, but a KOL mixer works well also. Mix 1.0 kg of Part A with 1 color pack until uniform. Add 1.0 kg B and mix. Slowly add aggregate and mix until thoroughly wet out. Immediately pour mixed material out of bucket, in a bead, next to the wall. Rough apply cove mortar using a trowel. Do not worry about trowel marks at this time; just get all the mixed material applied to the wall. Material will need to be finished within approximately 20 minutes depending on temperature. Placing a halogen light next to cove base will cast shadows and assist on finishing the cove base with minimal waves and/or trowel marks. Use a minimum of a 3/4" radius cove trowel and finish cove base. Any smaller may result in a loss of the radius once the floor is tied in. Lightly misting cove trowel with water, as a trowel lube, works well - Do not use isopropyl alcohol. Carefully remove tape and finish rough edges. Install floor once cove is hard to the touch, about 2 ½ to 3 hours.

Required Tools: Drill, proper mixing paddle, 3" x 8" trowel works best to apply, margin trowel, and a radius cove trowel – Minimum of 3/4" but 1" is preferred.

Primer: Optional

Mixing and Application

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 250 sq. ft. per gallon.
3. DO NOT ALLOW TO PUDDLE. Any uneven or textured surfaces will require more material than an even surface.
4. Proceed when tack free, 1-4 hours on shot blasted concrete.

Slurry

Mixing and Application

1. Add 2.5 kg Part A (resin) with 1 color pack. Mix until uniform. Add 2.5 kg Part B and mix with low speed drill and Jiffy mixer until uniform.
2. Pour 44 lbs. aggregate and 1 pre-measured unit into container and mix until no lumps remain. Immediately pour mixed material onto the substrate and pull out using a pin rake, screed rake or flat trowel. Place all material within 15 minutes. Back roll with a spike roller to assist leveling. Allow material to self-level (2-5 minutes).

NOTE: At substrate temperature less than 40°F/4.5°C, the application will be adversely affected.

3. Broadcast flakes into wet slurry.
4. Allow to cure 3-5 hours, must be hard enough to stand or walk on without leaving marks.

NOTE: The broadcast distribution is critical to the success of the application. The floor's finished appearance depends on the manner in which the aggregate has been applied. In grass seed like fashion, allow the aggregate 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 3746A (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 3746A (resin) to 1 part 3746B (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 spread 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 3746 grout to remove surface gloss.

Seal Coat

Mixing and Application

DO NOT PREMIX PART B

1. Premix 4686 (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 4686A (resin) to 1 part 4686B (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. Apply 4686 using a 1/4" nap roller at a spread rate of 250-400 square feet per gallon, evenly, with no puddles making sure of uniform coverage. Take care not to puddle materials and insure ven coverage. If a second coat is required, the surface must be abraded with 80-120 grit paper or screen and tack wiped prior to second application.
4. Allow to cure 24 hours minimum before opening to traffic. In cool and/or high humidity conditions, a surface film may form which can be washed with soap and water.

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 Precautions

Refer to the SDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

Material Storage

Store materials in a temperature controlled environment (40°F/4.5°C – 90°F/32°C) 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.

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 offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

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.



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