

Ultra Surface Color Flake System

DESCRIPTION: The Ultra Surface Color Flake System is a decorative flooring application designed to provide an imitation granite or terrazzo look to residential, commercial and industrial floors. It is available in a variety of color combinations to match any decor, adding beauty and elegance as well as providing a low maintenance, slip resistant surface with excellent resistance to staining, impact and abrasion. The high performance products used in the Ultra Surface Color Flake System offer the latest advances in technology to provide a fast drying, durable system that will last indefinitely if properly maintained.

TYPICAL USES: The Ultra Surface Color Flake System is most commonly used on residential garage floors, laundry rooms, patios, bathrooms and recreation room floors. For commercial applications, it is popular for automotive showrooms, bathrooms, office floors, retail stores, restaurants, hospitals, animal care clinics, cafeterias, parking garages, laboratories and many other applications.

PRODUCTS AND TOOLS NEEDED FOR APPLICATION

Description of Application	Product Name	Coverage Rate/Gallon	Tools For Application
Prime Coat	Epoxy 200	300 sq. ft.	Metal Squeegee and Paint Roller
Base Coat for Color Flakes	WB Epoxy, SB or HP Urethane-Color	300 sq. ft.	3/8" Nap Paint Roller.
Color Flake Broadcast	Color Flakes	Heavy - sq. ft. X .08 = lbs. Needed Medium - sq. ft. x .04 =lbs. Needed	Broadcast By Hand
First Coat of Clear Sealer	SB or HP Urethane - Clear (Epoxy 600 - For indoor Jobs only)	SB or HP Urethane = 300 sq. ft. (Epoxy 600 = 100 sq. Ft.)	1/4" Nap Paint Roller
2nd Coat of Sealer (Optional for medium broadcast)	SB or HP Urethane - Clear	300 sq. ft.	1/4" Nap Paint Roller
Note: Other products, tools and equipment will be needed for surface preparation, crack repair, patching and resurfacing if required. Read the Steps below for more information.			

HOW TO APPLY A SMOOTH, LOW ODOR SYSTEM FOR INDOOR JOB APPLICATIONS

For indoor jobs where a smoother finish is desired, Epoxy 600 can be used over the color flake broadcast in place of the SB or HP Urethane. Be sure to scrape and blow off any loose flakes before applying the Epoxy 600. For an indoor, low odor color flake system (for jobs such as hospitals, stores and restaurants) use Epoxy 200 or WB Epoxy clear as the prime coat, WB Epoxy color to broadcast the flakes into, Epoxy 600 over the flakes, and Ultra Surface Floor Finish for continued maintenance over the Epoxy 600 as needed. For indoor jobs with vehicle or fork lift traffic (such as parking garages or warehouse floors) it is best to apply a topcoat of SB or HP Urethane over the Epoxy 600 in stead of the Floor Finish. Do not use the Epoxy 600 or Floor Finish in areas exposed to sunlight (such as garage floors) or yellowing will occur. See the Epoxy 600 Technical Data Sheet for mixing and application instructions.

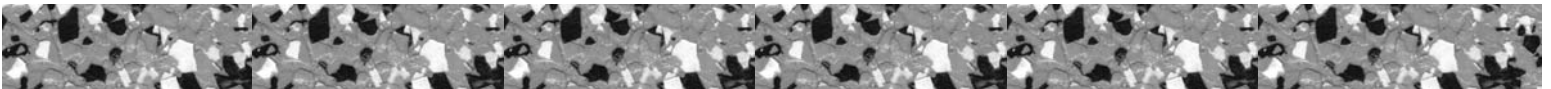
COLOR FLAKE SYSTEM MIXING AND APPLICATION INSTRUCTIONS

STEP ONE: SURFACE PREPARATION

Outdoor Jobs - Clean the existing concrete surface to be coated by power scrubbing with detergent, acid washing, neutralizing and pressure washing at 3000 psi or more using a 15 degree or spinner tip. The surface must be clean of dirt, oil and any other contaminants that may interfere with bonding. Grinding or shot-blasting are other popular methods.

Indoor Jobs - Shot-blasting is recommended to prepare the surface for most indoor jobs. If shot-blasting is unavailable scrub with detergent, acid wash, neutralize, rinse and wet/dry vacuum. [See the Ultra Surface Products Manual under Surface Preparation for more detailed instructions.]

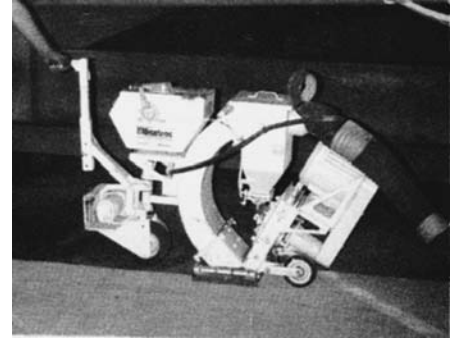
Moisture Vapor Testing - All Concrete floors are subject to possible moisture vapor transmission problems which can cause coatings to blister or delaminate. Prior to coating over a concrete surface, moisture vapor emission testing is recommended using the calcium chloride test method. Contact a moisture testing company in your area who can perform the test and give the proper recommendations. The Epoxy 200 is the best primer to use to help prevent moisture related problems.



Detergent scrub, acid wash, neutralize



Pressure wash surface to clean and rinse



For commercial jobs, shotblast the surface

STEPTWO: CRACK AND JOINT REPAIR

After the surface preparation is completed, a wet dry vacuum can be used to remove any excess water from cracks and/or joints prior to repairing them. When dry to touch, fill the cracks with Ultra Surface Epoxy 500 Epoxy mixed with one to two parts #60 or 90 silica sand using a stiff putty knife. If desired, joints can be filled with Ultra Surface Epoxy 800 (Flexible) mixed with #60 or 90 silica sand to provide a seamless floor or the joints can be left open.

After filling the cracks and/or joints, scrape the excess epoxy off the surface. For fine cracks 1/16 - 1/8", scraping the excess epoxy off the surface should be sufficient to complete the repair. For larger cracks over 1/8" wide, it is best to fill the cracks with the Epoxy 500 and sand mix and the joints with the Epoxy 800 sand mix (if desired), then to scrape all the excess epoxy off the surface except for directly above the crack and/or joint. Leave a thin layer of the epoxy directly above the crack and/or joint and allow it to dry at least 4-6 hours. When the epoxy has dried sufficiently, use a right angle grinder and a flat 7" carborendum grinding wheel or sanding attachment to grind the Epoxy 500 and/or 800 flush with the surrounding surface. This will be the best way to prevent the crack or joint repairs from showing through the completed color flake application. See pictures below.



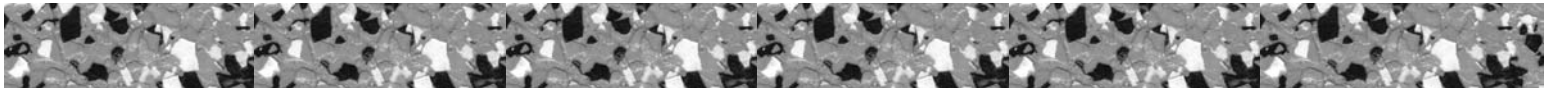
Fill cracks w/ Sealcoat 500 epoxy & sand



Scrape excess epoxy, leave little above crack



Grind epoxy over crack, smooth w/ surface



STEP THREE: PATCHING / RESURFACING

Before applying the Ultra Surface Color Flake System, the surface should be smooth to achieve the best possible finish. If needed, patch any holes, spalls or deteriorated areas of the surface using the Sealcoat 500 Epoxy and sand mix used for the cracks or an Ultra Surface Polymer Concrete Patching Mix.

If necessary, sand or grind patches when dry, to smooth them flush with the surface. Refer to the patching mix formulas given on the Polymer Concrete Mixing and Coverage Chart to make the proper mix according to the depth of the repairs. If no repairs are needed, skip to step four.

If the whole surface is damaged and needs to be resurfaced, a Squeegee/Bond Coat of Ultra Surface Polymer Concrete or a coat of the Resurfacer Bag Mix can be applied. See the Polymer Concrete Mixing and Coverage Charts under Squeegee/Bond Coat for mixing and application instructions.



Patch holes or areas needing repair



Apply a Squeegee bond coat if needed

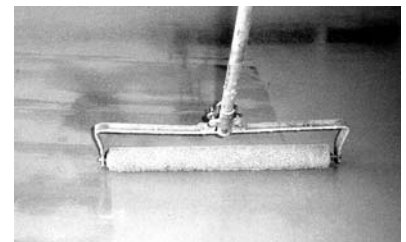
STEP FOUR: APPLY EPOXY 200 PRIME COAT

Once any repairs have been made, mix the Ultra Surface Epoxy 200 clear by measuring two parts A to one part B and mix for 3-5 minutes. Mix thoroughly using a drill motor and mixing paddle. Be sure to scrape the sides and bottom of the bucket with the mixing paddle. Mix only the amount of material that can be used within 20-30 minutes (approx. 1 ½ gallon).

Once the Epoxy 200 is mixed, pour all of it out of the bucket in a thin row next to the starting edge. Do not leave it in the bucket for more than 10 minutes after mixing or it may set up and become hard. Spread it thin using the metal edge squeegee and then back-roll using a 1/4" nap paint roller to remove any squeegee marks. The person back-rolling should wear spiked shoes to be able to walk on the Epoxy 200 if needed. The coverage rate for the Epoxy 200 should be around 300 sq. ft. per gallon. After applying the Epoxy 200, allow it to dry for 12-24 or until dry to touch before proceeding with step five. Do not allow to dry for more than 24 hours or it will have to be sanded with 100 grit sandpaper before applying step five. For more information read the Epoxy 200 Technical Data Sheet.



Apply Epoxy 200 with metal squeegee



Use roller to smooth out squeegee marks

STEP FIVE: APPLY COLOR FLAKES

When the Epoxy 200 is dry enough to walk on [usually within 12-24 hours], the next step is to apply a coat of WB Epoxy color, SB or HP Urethane color. The WB Epoxy color is best for indoor jobs where very little odor can be tolerated. The SB and HP Urethane color are best for garage floors, warehouses, airport hangars, parking garages and outdoor job applications. They stay tacky longer than the WB Epoxy allowing for more time to broadcast the color flakes. They also have the best ultra violet resistance and will not yellow in the sun.

When applying the WB Epoxy color it will be necessary to broadcast the flakes within a few minutes since WB Epoxy begins to dry within 10 minutes after rolling. Try to keep a wet edge with out stopping and begin broadcasting after the first 100 sq. ft. has been spread. The person broadcasting should be wearing spiked shoes to be able to walk out onto the WB Epoxy and should be careful not to broadcast closer than a couple of feet from the wet edge where the other person is rolling.

When applying the SB or HP Urethane color a larger area can be rolled before needing to broadcast the flakes since the SB and HP Urethane remain tacky for up to 1 hour or more after spreading. Whether using the WB Epoxy, SB or HP Urethane, they should be applied in a similar color to the color flakes being used. For the Granite, Gray and Blue blends the base color should be light or medium gray. For the Tan blend the base color is Mojave Sand. For the Brown and Terrazzo blends the base color is Adobe Tan. For the Red blend the base color is Baja Red and for the Green blend the base color is Greenstone. Read the technical data sheet for each product for mixing and application instructions before applying.

Color Flake Application Instructions

Have the color flakes ready in a two gallon bucket. Starting in one corner of the floor, apply the colored WB Epoxy or SB or HP Urethane to the edges using a paint brush. After edging approximately 10 feet, pour a thin row of WB Epoxy or SB or HP Urethane color a few feet from the starting edge and begin spreading it over the floor in a thin, even coat approximately 300 sq. ft. Per gallon, using a 1/4" - 3/8" nap paint roller.



Apply WB Epoxy or SB or HP Urethane to edges



Pour epoxy or urethane next to starting edge



Spread thin w/ 3/8" nap paint roller

When using the WB Epoxy color, a person wearing spiked shoes should walk out onto the floor and begin broadcasting the flakes immediately behind the person rolling. A two gallon bucket works the best for holding the flakes. If using SB or HP Urethane color, you can roll a larger area up to 400 sq. Ft. before needing to broadcast any flakes.



Method1: Throw flakes up in the air by hand

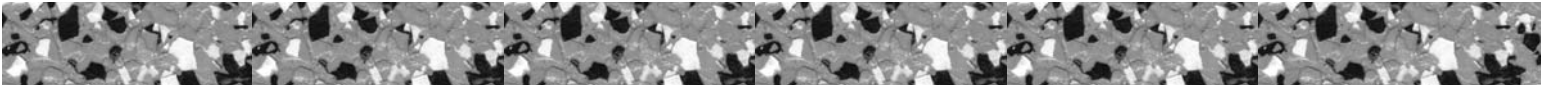


Cover epoxy or urethane completely w/ flakes



Sprinkle flakes in thin areas or next to edges

Method 1 - Heavy Broadcast Instructions: For a heavy broadcast, the quickest method is to hold a two gallon bucket of flakes against your waist with one hand while using your other hand to quickly throw handfuls of color flakes up into the air. Throw them high into the air, as far and as evenly as possible over the wet WB Epoxy or SB or HP Urethane while walking backwards towards the person rolling. Next to edges, walls and joints or in thin areas, lightly sprinkle the color flakes by hand to avoid throwing too many flakes in one area. It is okay to walk over the flakes with spiked shoes while broadcasting and sprinkling to achieve a more even distribution and to get to hard to reach areas. The person broadcasting flakes should be careful to keep them at least 1-2 feet away from the wet, leading edge of the WB Epoxy or SB or HP Urethane where the other person is rolling. Continue rolling and broadcasting until the entire surface is covered. When using SB or HP Urethane, one person is all that is needed to do the rolling and broadcasting if desired.



Heavy Broadcast Instructions Continued:

Continue broadcasting the flakes and sprinkling until the whole floor is covered and all that can be seen are dry flakes. Be careful not to broadcast more flakes than necessary to avoid running out before the job is completed. If it looks like you may run out, stop next to a joint to avoid having a seam line or, if there are no joints, be sure to get at least partial coverage over the entire area with the remaining flakes.

When the first coat of SB or HP Urethane clear sealer are applied over the surface, more flakes can be broadcast at that time if necessary to even out the appearance. If more flakes are broadcast, immediately back- roll over them with the sealer, or if a second coat of sealer will be applied they can be covered at that time.

Another method to use if you run out of flakes near the end of a job, is to use a blower while wearing spiked shoes to carefully blow excess loose flakes from the completed areas to the unfinished areas where more flakes are needed.

Note: While broadcasting, do not use the flakes from the bottom 1/2" of the bucket as they can sometimes become smaller and create an irregular appearance in the floor. However, it is okay to blend these flakes into the next full bucket of flakes.

Method 2 - Medium Broadcast Instructions:

A medium broadcast is done similar to the heavy broadcast except less flakes are sprinkled to allow some of the WB Epoxy or SB or HP Urethane color to show through. This method is more economical to apply but requires practice to achieve an even distribution of flakes, especially over large areas.

The best way to apply a medium broadcast is to hold a smaller amount of flakes in your hand as you throw them high into the air. Practice different methods of broadcasting on a dry surface before broadcasting over the wet WB Epoxy or SB or HP Urethane.

Broadcasting Flakes on Vertical Surfaces:

For vertical surfaces throw the flakes at close range against the coated vertical area until completely covered. If a medium broadcast is desired, throw smaller finger fulls of flakes against the vertical surface to achieve the desired look. It is easier to do the vertical areas first allowing them to dry to touch approximately one hour before doing the horizontal surfaces.

STEPSIX: REMOVING THE LOOSE FLAKES AND SEAL COATING

Once the color flake broadcasting is completed and the WB Epoxy or SB or HP Urethane color coat application has dried (approximately 8 hours) or until completely dry, the next step is to blow and sweep up any loose flakes remaining on the surface. Blow the loose flakes against a wall into a pile, then scoop them up into a bucket. These flakes can be re-used later on another job.

After sweeping and blowing, scrape over the surface of the remaining flakes using the metal edge squeegee (available from Concrete Solutions) and blow off the surface again before applying the Ultra Surface SB or HP Urethane clear topcoat. The loose flakes gathered after scraping should be thrown away.

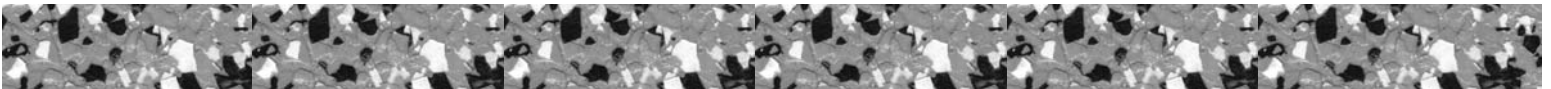
The Ultra Surface SB or HP Urethane will provide a durable, stain resistant finish to protect the color flake application and help to keep it looking like new. Two coats of the SB or HP Urethane are best, especially over a full broadcast of flakes. For indoor jobs where a high build, low odor, smoother finish is desired, use Ultra Surface Epoxy 600 instead of the SB or HP Urethane. Epoxy 600 is a self-leveling, clear epoxy. Use Ultra Surface Floor Finish as a maintenance coat over the Epoxy 600. Do not use either Epoxy 600 or Floor Finish in garages or areas exposed to direct sunlight.



Blow loose flakes to thin areas only if needed



Sprinkle by hand for light to medium coverage



STEP SEVEN: APPLYING THE CLEAR FINISH COAT

To apply the Ultra Surface SB or HP Urethane clear, mix 2 parts A to 1 part B. Apply the SB or HP Urethane over the scraped color flakes using a 1/4" nap paint roller at a coverage rate of approx. 300 sq. ft. per gallon. While applying the first coat of SB or HP Urethane clear, look for any uneven or thin areas. While wearing spiked shoes, walk around and lightly sprinkle more flakes into the wet SB or HP Urethane where needed to achieve a uniform appearance. Once the first coat of SB or HP Urethane is completed and dry, usually within 8-10 hours (unless the SB or HP Accelerator is used) a second coat can be applied. Two coats are recommended to achieve the best finish. Before applying a second coat, carefully scrape and blow off the surface. To achieve a smoother finish, the first coat of SB or HP Urethane can be sanded using an orbital sander with 100 grit sand paper. Remove the dust from sanding using vacuum or a damp mop. Apply the second coat of SB or HP Urethane the same as the first and allow to dry for 24 hours before allowing light foot traffic and 72 hours for vehicle traffic.



Apply first coat of SB Urethane over flakes

WARNING: Ultra Surface SB and HP Urethane are flammable. Be sure to turn off all pilot lights and do not use near open flames. Wear the proper breathing mask in areas with poor ventilation. Read technical data and material safety data prior to use.



Sprinkle flakes into urethane if needed to even look



Scrape surface and blow to remove loose flakes



Apply second coat of SB Urethane

Slip Resistance: The Ultra Surface Color Flake System can become slippery when wet. For extra slip resistance #80 white aluminum oxide granules can be lightly broadcast into the first coat of SB or HP Urethane to achieve the amount of slip resistance desired. This is especially recommended on all exterior applications. The proper degree of slip resistance is the responsibility of applicator.

