

1. CONCEPT OF MULTI-COLOR COATING

Most multi-color coatings utilize a unique blend of foreground and background colors suspended in a solution to produce contemporary designs in a wide variety of color and texture combinations. Multi-colors offer architects and designers many new options in color design and coating performance.

Hawk's *STONE-FLECKS* multi-color coating allows you to achieve a dynamic finish with full depth and richness of color not found in other multi-colors. *STONE-FLECKS*, with a proven track record of performance and durability, is used extensively in many commercial applications worldwide, such as an imitation stone finish for countertops and as a seamless decorative finish on porcelain, ceramic, cinder block, drywall, and concrete surfaces.

The spraying of multi-color coatings is not like spraying conventional solid color coatings. The goal is to create a uniform pattern of flecking colors with an even overall texture as the finished product by using the correct balance of spray gun fan patterns and material control settings. It is important to follow these procedures in order to produce a successful application.

2. APPLICATION CONCEPTS AND TECHNIQUES USING AN HVLP SPRAY SYSTEM

Typical multi-color coatings available on the market consist of a selection of different flecking colors with each flecking color having a given percentage of the formula. This percentage varies from color to color and dictates the density of each color in the overall finished look of the multi-color.

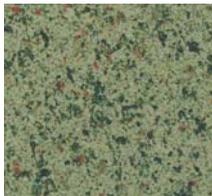
The color palate of 24 colors displayed in the *STONE-FLECK* Media Kit were produced using the most common spray application system in the refinishing industry, the High Volume/Low Pressure Turbine or HVLP Spray System. While *STONE-FLECKS* may be applied with an airless system on large projects such as hallways and foyers, the use of an HVLP system was chosen due to the existing popularity of HVLP's in the refinishing industry, their lower purchase cost, and the paint savings associated with these spray systems.

As you apply each coat of *STONE-FLECKS*, the color flecks in the coating begin to build the foreground color while other colors in the formula create the background color. It is the proper balance of foreground and background colors applied during the film build that produce the final multi-color look. Proper spray gun control settings and the role they play in broadcasting the flecking material is essential to a successful application.

With an HVLP spray system, the size of the spray gun fan pattern and the volume of material flowing out of the gun controls the balance of the color. Too little material flow combined with a smaller fan pattern forces the flecks to atomize into smaller particles. This knocks down the fleck size and can change the *STONE-FLECK* color by covering up the background color. The opposite happens when the material and fan pattern become too large, causing the foreground colors to appear bigger and less frequent thus allowing the background color to begin to dominate the multi-color finish.

DEMONSTRATION PANELS

Loose Pattern



Tight Pattern



Correct Pattern



The panels on page 2 demonstrate the difference between the foreground and background colors and how they are influenced by the fan pattern and the volume of material flow of a HVLP system. Panel 1 displays foreground colors that are larger and more concentrated together than desired, causing the background color to take on more of a dominant role which may change the overall finished look of the color. This "loose pattern" is caused by an over sized fan pattern with the material adjustment screw set for too much volume of material flow.

Panel 2 is just the opposite. Because the fan pattern is too small and the material adjustment screw is set too tightly, the atomization rate on the foreground color flecking has increased to a point where the flecking is broken into thousands of minute particles. In this case the result is a blocking out of the background color by these much smaller particles which may result in a different color than intended.

Panel 3 demonstrates the correct way to balance both the foreground and background colors to allow the true multi-color to emerge and also to recreate the color chips in the *STONE-FLECKS* Media Kit. It is important to note that the applicator can deviate from the color chart, if so desired, to create a different multi-color look.

Note: It takes several passes to build enough film build to "see" the multi-color develop.

Helpful Hint: Always record your correct gun settings to use as guidelines to produce consistent results.

3. MATERIAL PREPARATION

STONE-FLECKS should not be mechanically stirred, agitated, or shaken. The product should be "boxed mixed" by pouring the material from one clean container into another 5-6 times. When mixed properly, the material should flow smoothly and easily from the container and be free of any unmixed clumps that may form due to normal product settling. It is normal for the multi-color to settle. If you are pouring off a small amount from a larger amount, make sure you box mix the total amount before pouring off the material.

Each color has different flecking and background colorations, which produce minor variations in viscosity. If necessary, *STONE-FLECKS* may be reduced with tap water. Generally no more than 5-10% is needed. However, when using smaller fan patterns and less paint volume to reduce film build (see One Day Application System) or to save on material usage, additional reduction may be needed.

Note: For any extended shutdowns in the spraying process of 30 minutes or more, the multi-color should be box mixed again.

Visual Guide: After the material is properly box mixed, you can use the color flecking accents you see on the walls of the boxed material bucket as a guide. The surface color accents on the finished surface should look basically the same.

4. SURFACE PREPARATION

The surface should be clean and dry. To eliminate as many surface defects as possible, prepare the surface using fillers or a surface patch, sand smooth, clean and prime with the proper multi-color primer (pre-colored if desired).

5. PRIMER SELECTION

For areas of heavy usage or where exposure to moisture exists (such as countertops and shower areas), the use of Hawk's Ultra-Grip 4000 Epoxy Primer System is recommended. *STONE-FLECKS* may be applied directly over the white primer or you may use Ultra-Grip 4000 in the color-coordinated version to save on time and material usage. Pre-colored primer colors are available for all *STONE-FLECK* colors.

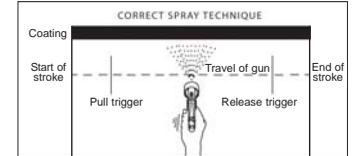
Porous surfaces such as unpainted drywall, cinder block, or concrete should be coated with a sealing type primer first.

6. SPRAYING TECHNIQUES

With an HVLP system, the air valve (if your system employs one) should be in the fully open position for maximum air flow. Lower air pressure leads to more surface texture of the multi-color and an elevated fleck profile on the dried film. Also, remove the gun strainer from your spray gun fluid tube to avoid restricting material flow.

When spraying, overlap each pass by 50%. Always release the trigger at the end of each stroke.

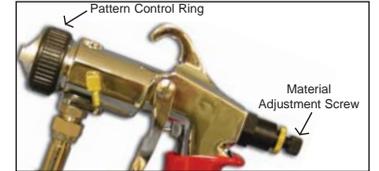
Only spray at right angles to the surface being multi-colored to ensure an even pattern of flecking. For best results use a "cross hatch" technique. First apply patterns horizontally, then vertically. This ensures proper coverage, an even film build, and a three-dimensional aesthetic appearance.



Note: For best results, try to avoid application in humid conditions, temperatures above 100° F., or below 60° F. For temperatures below 60° F. it is recommended to warm the multi-color up to 80° F. by immersing the container in hot water.

SETTINGS FOR THE HAWK HOT AIR TURBINE AIR SYSTEM (HVLP)

The 993 HVLP comes with a standard 1.4 needle, nozzle, and air cap assembly. We recommend the purchase of a 1.8 or 2.0 fluid assembly to allow more flexibility to expand the individual fleck sizes during spraying.



Average fan pattern size: 8-10 inches. Average distance from surface: 12-18 inches. Pattern Control Ring setting: 1.5-2.5 turns from closed position. Material Adjustment Knob setting: 2-3 turns from closed position for tighter patterns, 4-5 turns to broadcast.

7. SPRAYING TECHNIQUES ON COUNTERTOPS

A. Two Day System or "Wet on Dry"

On day one, the primer & multi-color are applied. The following day, the topcoat is applied. The advantage of this method is that it allows you to apply more of the multi-color while allowing more time (overnight) for the multi-color to air dry thoroughly air dry before applying the final topcoat. This also gives the applicator an opportunity to review the multi-color application and make any final color or texture changes, like sanding, before the final stage of the topcoat.

Instead of using a smaller fan pattern and less material flow settings on your gun, open the gun controls up and broadcast the multi-color in thicker and wider coats from the beginning. This technique is the most commonly used and is recommended during a training period.

Note: With the Two Day System you do not have to use a tinted primer; you may use the standard white resin, but you will have to apply more coats of multi-color ensure sufficient hiding power and also that the white color of the primer has not altered the *STONE-FLECK* color.

Helpful Hint: Order additional multi-color material when using untinted primer.

B. One Day System or "Wet on Wet"

This system is recommended when the priming, multi-coloring, and top coating are to be completed in one day. This technique requires more experience and skill than the Two Day System because you must apply thinner multi-color coats with greater consistency to achieve coverage. Thinner multi-color coats are necessary to allow for faster dry times so that the application of the topcoat can take place on the same day. The use of the one-day system also requires an even film build of the multi-color. Areas that receive more multi-color will take longer to air dry than areas that have less film build.

Multi-color dry times are affected by the particular color, the amount of reduction, the relative humidity, and the amount of coats applied. The applicator should always consider jobsite spraying conditions before deciding when to topcoat. The multi-color should be dry to tack before applying the top coat.

Dry times prior to the application of the topcoat may be accelerated with forced air techniques. The use of the Max-Air Fume Exhauster, combined with a box fan blowing across the multi-colored surface, will greatly increase moisture evaporation and reduce wait times by removing moisture from the area prior to the application of the topcoat.

With the One Day System, it is recommended to use the pre-colored Ultra-Grip 4000 primer to reduce the amount of multi-color being used. This saves on top coat application time and multi-color material costs.

Note: In order to provide better consistency with regards to gloss and texture; we recommend that areas that contain an abundance of multi-color film build or moisture be allowed to dry overnight before the application of the top coat.

Note: Causes of excessive material and moisture include over application of multi-color onto specific areas, uneven areas of film build, over reduction with water, excessively high humidity or cold temperatures or a combination of the two.

8. APPLICATION ON WALLS

Use the same recommended multi-color spray techniques as detailed in Section 6. However, in commercial applications, the multi-color can be applied on a larger scale. Gun settings, such as the fan pattern and material adjustment screw, can be increased to allow more area to be sprayed at a faster rate.

The size of the project and the height of the walls will determine your spraying patterns. Most projects involve spraying a section of wall directly in front of you and then moving to the next section. Overlap sections like you would overlap patterns to blend both sections together. Make sure you have achieved uniformity of the flecking before moving to the next area. Be sure to blend in each area with the preceding one.

Make sure you maintain a 90° angle to the surface at the top and bottom of the walls to prevent elongated flecks. Watch out for over application caused by blowback in the corners where walls meet. End your pass right before the wall ends.

Note: If you are doing large hallways, always check each section as you connect them to make sure you are producing the right blend of foreground and background colors.

Helpful Hint: you can always add more multi-color! Over application in one area can result in the moisture in the material running down the vertical wall. If this occurs, do nothing as the multi-color will dry and shrink 50%. Examine the area the following day and lightly sand and re-spray if needed.

9. RECOMMENDED REDUCTION RATES

STONE-FLECKS is not pre-reduced or watered down like other multi-colors. Each unique color requires reduction with water when using an HVLP. This reduction is based on the blend of colors and flecks in that particular color. Below are recommended reductions.

5% Reduction
CLAY, ALMOND CRUST, RIVER ROCK, GRANITE, GLACIER WHITE, CHARCOAL, MARBLE, HEATHERSTONE, GOLDMINE, EARTHSTONE, SANDSTONE, FIELDSTONE, JADESTONE, SILVER STONE, DESERT BONE, MINT BLUE, CAYNON

10% Reduction
AUTUMN SKY, WHITE VEIN

15% Reduction
STONEWASHED, RAIN FOREST, LIMESTONE

20% Reduction
FOSSIL, MIDNIGHT SKY

Note: Increased reduction typically delays dry times to topcoat. Humidity and cold temperatures also delays dry times. Make sure the multi-color is uniformly dry to touch (or tack if desired) before applying the topcoat.

10. TROUBLE SHOOTING GUIDE

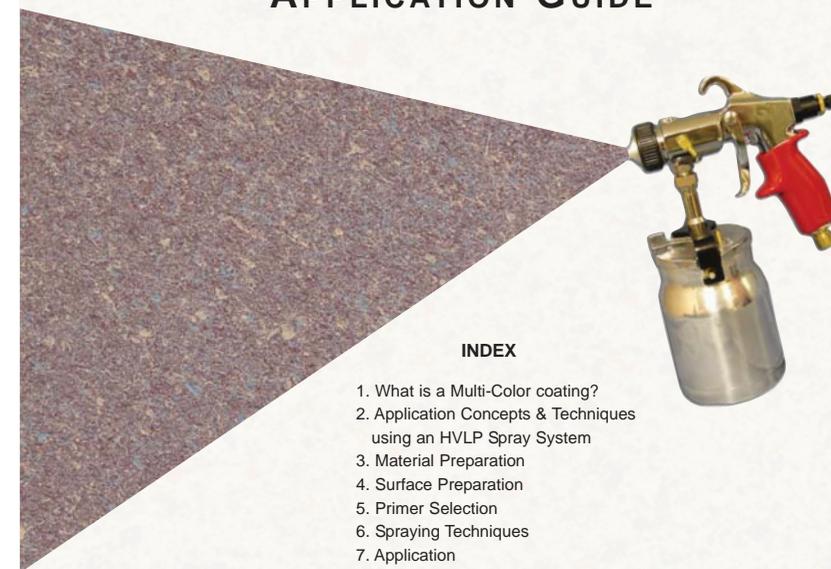
TROUBLE	POSSIBLE CAUSE	SUGGESTED SOLUTION
Flecks too small.	1. Tight gun settings.	1. Increase material flow, open up fan control ring.
Flecks too large.	1. Loose gun settings.	1. Decrease material flow, tighten fan control ring.
Spray gun clogging.	1. Material too thick for gun's needle assembly.	1. Reduce material (See reduction guide). 2. Use a larger needle assembly. 3. Remove gun's stem screen.
Spider webbing or stringy.	1. Material too cold.	1. Immerse material container in hot water to 80° F.
Colors drifting while spraying.	1. Air pressure change. 2. Not box mixed properly. 3. Different batch numbers.	1. Check for continuous airflow. 2. Rebox material. 3. Box batches together when a batch change occurs.
Flecks are elongated.	1. Spray technique.	1. Make sure gun is 90° perpendicular to the surface.
Overall color off from color chart.	1. Improper balance of foreground and background colors.	1. Check fleck particle size for too big/too small particles, re-adjust gun settings.
Primer showing through.	1. Not enough film build.	1. Apply more material. 2. Use tighter gun settings in beginning coats to build film thickness. 3. Use pre-colored primer.
Uneven look to overall finish.	1. Spray technique.	1. Overlap passes 50%. 2. Spray cross hatch patterns. 3. Loosen gun settings, spray further away from surface.
Gelled particles or globs in material.	1. Paint has been subjected to freezing temperatures exceeding 32° F.	1. Material is probably not usable.
Water streaks on vertical surfaces.	1. Excessive film build without sufficient dry times. 2. Over reduction of material.	1. Allow more time between coats, or dry to tack. 2. Allow for material to dry completely. Streaks may disappear with evaporation.
Material spraying different from batch to batch.	1. Insufficient boxing of material. 2. Settling occurring in gun.	1. Box material 5-6 times from batch to batch before each use. 2. Gently agitate material in cup when not pulling the trigger.
Final finish appears rough after application.	1. Over application of multi-color. 2. Loose gun settings. 3. Normal reaction.	1. Wait until multi-color appears uniformly dry to touch before applying the topcoat. 2. Multi-Color Film will shrink 50% when dry.

Topcoat has cured, but multi-color 1. Improper multi-color dry times. 1. Wait until multi-color appears uniformly dry to touch before applying the topcoat.
2. Always check corner areas which take longer to dry.

STONE-FLECKS™

Imitation Stone Finishes

APPLICATION GUIDE



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