



**HAWK RESEARCH LABORATORIES, LLC.**  
High Performance Coating Systems

## StoneFlecks™ Ultra Instructions for Achieving Original StoneFlecks Look

### Overview

StoneFlecks™ Ultra has been designed with the following improvements over the original StoneFlecks Green Line:

- It sprays much easier, at a wider average temperature range.
- It stays mixed for longer periods of time.
- It dries notably faster.
- When dry, the coating film is much smoother than the original formula, allowing for clearcoating with much less surface conditioning.

Out of the can, the particle pattern of StoneFlecks Ultra appears visually tighter than the particle pattern of StoneFlecks Green Line. In addition to the regular application instructions, this bulletin will instruct the applicator how to achieve a larger particle and more randomized, natural pattern, which is the hallmark of the original StoneFlecks Green Line, the most natural and beautiful stone effect countertop coating available in the world.

### Product Mixing & Reduction

Before opening any product container, read and understand the SDS/Safety Data Sheets AND product labels of all products to be used. Mixtures of different products can contain the hazards of the all of the products therein. Hawk Laboratories refinishing products are for industrial use only, by professionals who possess the proper spray, safety, and ventilation equipment. If you are uncertain of the inherent hazards of any product to be used, **DO NOT OPEN THE CONTAINER, AND CONTACT HAWK RESEARCH LABORATORIES AT 800-321-4295.**

The proper way to prepare the StoneFlecks Ultra is to mix either by boxing, or by *gently* shaking the material in it's original container. StoneFlecks Ultra is a thixotropic material, which means that upon being mixed or shaken, it will become more liquid and easier to pour. It will slowly return to a more gel-like state when left to stand. Turning the *securely closed* container on it's side and rocking it back and forth with a gentle motion is usually enough to mix the material and prepare it for pouring into your gun cup.

Normally, for the spray equipment mentioned in this technical bulletin, and using 3 to 5 stage turbines, no reduction of StoneFlecks Ultra is necessary. For situations requiring some thinning of the material; clean, cool tap water, or Hawk Dynamic Fleck Enhancer (DFE, Stock #GL97-0004) may be used. It is recommended that for normal spraying, reduction of any kind should be limited to 10%. This is because the material will take longer to dry in between coats when additional water is present in the coating.

### Spray Gun Settings

This technical bulletin assumes that the applicator has a trade-level working knowledge of spray guns and hot air turbine equipment. Generally, due to the water based nature of Stone-Flecks Ultra, a bleeder type spray gun is ideal, because the larger amount of air moving across the surface being sprayed will aid in water evaporation, and times to recoat will be diminished. However, either bleeder or non-bleeder spray guns will work fine.

The ideal needle assembly is 1.8 to 2.0 millimeters, with the appropriate air cap designed by the manufacturer for that fluid assembly:

Gun Type	Model	Fluid Assembly	Other
American Turbine	Sicmo	1.8 Assembly	HVCLP Attachment Used
CJ Spray	966	1.8 Assembly	HVCLP Attachment Used
Wagner-Titan	Maxum II	#4 Fluid Set	
Lemmer/Graco	710	1.8 Assembly	HVCLP Attachment Used
Fujispray	T-Series	1.8 Assembly	

## Understanding the HVLP Attachment

For the American Turbine/Sicmo and other full bleeder guns, an HVCLP attachment allows full turbine pressure to be used in the paint cup, while limiting other gun pressures at the same time using the spray gun's normal air regulator valve. This will allow the user to dial the air pressure down at the air cap, while maintaining full fluid pressure, ensuring that the right amount of coating is being sent through the pickup tube. It should be noted that gravity feed systems, and systems utilizing a 3M PPS System will not require a HVCLP attachment. Attachment of the HVCLP on the Sicmo spray gun is as follows:



Illustration #1: The HVCLP is connected inline to the hose attachment of the spray gun, between the gun body and the turbine air hose, using the supplied quick disconnect fitting.



Illustration #2: The original air tube is removed from the spray gun, and the air pressure elbow on the gun body is plugged, using a simple plug made from a 1" piece of air tubing and a sheet metal screw. The tube from the HVCLP is then connected to the air tube fitting on the cup lid cover of the spray gun. This configuration allows for easy attachment and removal of the HVCLP Assembly.



Illustration #3: The spray gun is properly configured with the HVCLP and turbine hose. The lower valve on the turbine hose will regulate the fluid pressure, and then the upper valve on the HVCLP will further regulate the air pressure at the tip. This will allow for higher material flow at lower atomization, resulting in larger particle variation, for a more natural stone look on countertops.

## Needle and Airflow Adjustments

As stated earlier, Hawk StoneFlecks™ Ultra is a thixotropic material, meaning that it has the flow characteristics of a gel while sitting in the can. However, upon stirring, boxing, or other agitation, the viscosity rapidly changes, permitting the material to flow out. In spite of its viscosity in its original container, this product is designed to work properly with all of the spray guns listed in this bulletin without any reduction, provided that the material is at least 60 degrees F., and provided that the applicator is using a three-stage turbine minimum, with a properly cleaned and adjusted spray gun, with the stem screen removed.

## Spray Gun Settings

To test for proper spray gun settings, the applicator must have sufficient test surface available on each jobsite. An extra minute or two spent testing spray gun settings will ensure that costly mistakes do not occur while spraying the actual surface. Multicolor finishes can take on dramatically different looks depending on material flow, air pressure, air cap adjustment, and thinning of material. A good starting point for StoneFlecks Ultra using all the spray guns mentioned is as follows: Fluid flow should be set half way between fully closed and fully open. This is achieved by adjusting the needle adjustment screw. The air cap should be adjusted so that the pattern side will be approx. 10" when the gun is 8" to 10" from the surface to be sprayed. Air adjustment at the gun should start at full pressure, and then should be adjusted back incrementally until all of the color particles are represented in the proper ratios to equal the desired effect. StoneFlecks Ultra has the unique ability to be sprayed in a broad range of patterns, from ultra-fine flecks, to extra-large flecks by adding the Dynamic Fleck Enhancer. Air and fluid pressures, as well as pattern size, will all contribute to this effect.

## Dry Time Between Coats:

The water phase technology of StoneFlecks Ultra will result in a bluish hue to the coating when sprayed. This bluish hue will disappear as the water evaporates, leaving the true multicolor finish on the surface. This is an excellent indicator for monitoring flash times in between coats. Generally, waiting for this bluish hue to disappear will mean that the material is sufficiently dry for recoat. The time that it takes for the material to dry between coats may be reduced by using turbine air, or other mechanical air moving equipment. Avoiding any reduction of the material for the initial coats will greatly reduce the dry time between coats, and allow for faster overall applications of product.

## Number of Coats to be Applied:

When using StoneFlecks Ultra over a surface that has been properly primed using UltraGrip™ 4000, The following guideline can be used for application:

First Coat:	Light coat covering primer evenly	Wait 10 minutes after spraying
Second Coat:	Medium build coat	Wait 10 minutes after spraying
Third Coat:	Medium build coat	Wait 10 minutes after spraying
Final Coat:	Light coat using DFE	Wait 20 minutes before clear-coating

## Using Dynamic Fleck Enhancer for the Final Coat:

Dynamic Fleck Enhancer is a water based reducer that allows for faster and better expansion of the individual color particles. This product works better than straight water, because the different color particles absorb water at different rates. This means that certain colors will be larger than others, resulting in an uneven color effect. DFE corrects this by expanding all of the colors evenly. It also contains a dryer that will help the water to evaporate faster, thus allowing for faster clear-coating.

For best results, it is recommended that DFE be added only to the final coat of the process. Overlaying a larger particle on top of smaller particles will give a superior overall look. Adding the DFE to only the final coat will also ensure that the initial coats will dry quicker, thus reducing the overall time needed to complete your refinishing job.

DFE should be added before the final coat, at a ratio of 1:1 with the material in your cup. Generally, not much material is needed for the final DFE coat, because it is only sprayed for effect, allowing the smaller particles to show through. After adding DFE, stir the product thoroughly using a paint stick (do not shake), then allow the material to sit for 10 minutes. Re-Stir the material, then prepare to spray the final coat.

Before applying the DFE coat, it should be remembered that there is material in the pickup tube of the spray gun that has not been modified with DFE. This material needs to be purged from the spray gun. Set up a test surface, and open both the air and material to full. Trigger the spray gun until the modified material begins to flow from the spray gun. It will be immediately apparent when the modified material flows from the tip, as the particles will be much larger. Then, turn the fluid pressure to approximately half, and the air pressure to approximately one third. This will be your starting point for ensuring that the sprayed particles are a large, even size.

Adjustments will be necessary to ensure that all of the different colors are properly represented in the spray pattern. Generally, the white and black particles are the most difficult to produce. When all of the color particles are visible, lightly spray the surface with one coat. Keep the spray gun moving quickly, and ensure that the spray gun is as perpendicular to the surface as possible. This ensure that the particles are a nice round shape, and will prevent an elongated particle, unless that look is desired. Allow sufficient dry times before touching up or continuing with additional coats. Often, it will take several minutes for the blue hue to evaporate away, allowing you to see the smaller particles in the background.

## Final Inspection and Clear Coating

Addition of the Dynamic Fleck Enhancer will allow the surface to dry quicker than with water alone. All dry times can be accelerated using fans, heat guns, infrared lights, or hot turbine air. StoneFlecks™ Ultra will generally not require any sanding before clear-coating. When using Hawk StoneGard™ or CounterCote™ 9500, the multicolor coating does not need to be completely dry. Other clear coat systems will need to be tested to ensure compatibility and sufficient dry times. Although StoneFlecks Ultra will dry very smooth, it is advisable to check for high spots, lint, or other spray defects which may show when the clear coat is applied. A metal scraper lightly dragged over the dry coating surface, followed by a tack rag, will usually remove any defects prior to clear-coating.