



## Gunning for Quality: Spray Application of Exterior Stains

One of the most common questions we are asked is, “Can you really achieve a quality exterior stain application with spray equipment?” Our answer is yes; but the contractor or the do-it-yourself consumer must make sure they do the job right.

There is a great variety of spray equipment on the market today, from expensive commercial equipment to the popular “buzz gun” or cup gun. With airless spraying, the most popular spray method, the key to success is understanding the limits of the equipment and the coating to be sprayed. With correct tip sizes and pressure levels, virtually any coating in any viscosity range can be spray applied successfully.

### Spray Tips

According to major equipment manufacturers, the quality of a job is most effected when worn spray tips are not replaced. Tip wear causes problems because:

- When a tip wears, its orifice increases (e.g., from a 0.017” orifice to a 0.023” orifice), thereby dramatically increasing coating consumption – which nearly doubles.
- More of the coating is being sprayed with each pass and there is a dramatic increase in the wet mil film build. To avoid too much film build, the person applying must then speed-up each pass. This quickly becomes impossible to do, even for the most experienced contractor.
- The resulting doubling of film build can cause many potential problems, including: possible coating adhesion failure; retarding of the solvent evaporation; fisheyes; solvent popping and loss of compatibility between the substrate and coating.

Tip wear can occur after 40-150 gallons of product have passed through the gun’s tip. (Of course, this is dependent on the product being sprayed. Higher viscosity latex products, with their abrasive fillers, will wear out a tip faster than a lower viscosity penetrating stain.)

For high volume contractors, tip wear can result rather quickly. Knowing the telltale signs of wear is important. One such sign, known as “tailing,” is a sure indicator that the tip needs to be replaced. Normally, the spray fan pattern of a coating will be even with fine particles. With tailing, a heavier coating pattern occurs at the extreme outer edges of the normal fine spray pattern. This happens because as the tip wears, and its orifice increases, there is a pressure drop and the pump can no longer keep up with the tip size. Many times the person spraying will increase the gun pressure. This not only puts more wear on the pump, but also creates over spray as the person moves further away from the substrate. Changing tips is by far the easiest and most economical way to secure a quality job.

### Application

To ensure maximum durability, each Cabot product is meticulously formulated for application either as a penetrating product or at a definite wet mil thickness. When spraying, products must not be thinned or adulterated in any way, and the required film thickness or penetration specified for each Cabot product must be achieved. (Please reference

*(Continued on back)*

## Spray Application *(Continued from front)*

Cabot's Technical Data Sheets for individual product specifications, recommended tip sizes, pressure levels and fan sizes.)

It is also very important to backbrush all Cabot products after spraying, to ensure proper penetration, uniformity of coverage and elimination of runs and sags. The following application tips may also be helpful:

- Test the spray pattern on scrap lumber or cardboard sheets. Achieve uniform atomized particles – avoid large droplets that will splatter as they hit the surface and may cause orange-peel. Avoid very fine droplets that may result in dry spray and over spray.
- Testing the spray pattern will assist in choosing the correct pressure for the tip. Increase the pressure gradually to fine tune the pattern and eliminate "tails" (heavy or thick edges) at the extremes of the pattern.
- Control the rate of coverage with the spray tip size. Do not increase the coverage by increasing the fluid pressure of the airless sprayer – change the tip to a larger orifice. Use the lowest pressure necessary to achieve the results you want.
- Hold the spray gun perpendicular to the surface being sprayed – 10-14 inches away. Start the stroke off the surface and pull the trigger as the gun is moving. Move the gun parallel to the surface at a steady rate.
- While the gun is moving, release the trigger as you approach the other edge. This will avoid a heavy buildup at each end of the stroke.
- Moving the spray gun at the correct speed will apply a full, wet coat without runs or sags.
- Lap each stroke by approximately 50% over the previous pass for uniform paint or stain thickness.
- Spray left to right, then right to left. Spray from the ground toward the roof being sure to spray the drip edges of shingles, shakes and lap siding (clapboards).
- When spraying into an inside corner, aim the spray gun at the center of the corner to ensure that both sides are sprayed evenly.

### **CABOT SPRAY APPLICATION GUIDELINES\***

Cabot Product	Tip Sizes	Pressure	Fan Width
The Finish House & Trim Paint Solid Color Decking Stains with 100% Acrylic Resin	0.021"-0.023"	2000-3000 PSI	5-8"
O.V.T. Solid Color Acrylic PRO.V.T. Solid Color Acrylic O.V.T. Solid Color Oil Stain Problem-Solver Primers	0.017"-0.021"	1600-2000 PSI	5-8"
Semi-Solid Stains Semi-Transparent Stains Cabot Clear Solution Decking Stain	0.013"-0.015"	1000-1500 PSI	8-10"
Bleaching Oil/Stain	0.013"-0.017"	1000-1500 PSI	5-8"

*\*This information is for one gun. See spray equipment Owners Manual for proper tip sizes and pressures when using multiple spray guns. (Recommended tip sizes, pressures and fan widths for individual Cabot products are included in Technical Bulletin #5 "Spray Application of Exterior Stains.")*



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