

Applying Nano Coatings Using The **Microbicide**® Electrostatic Sprayer

Note: When using unfamiliar equipment or coatings, always test on a small area before treating the entire surface.

Application Technique

As in spray painting, the goal is to achieve even coverage over the surface. The **Microbicide**® electrostatic sprayer is designed to help you do just that – by controlling the rate of flow of coating liquid and by propelling the coating solution with a gentle air flow - you can stay well away from the target surface and let the electrostatic attraction do the rest of the work.

Please note: *The nano coating droplets are very, very fine - about 40 microns each. If you are used to working with a conventional applicator, you may make the mistake of thinking the target is not wet enough because you do not see large beads of liquid. In fact, after a pass with the spraygun, the surface of the target should just barely glisten with moisture. The fine droplets will evaporate quickly.*

Here are some tips to achieve the best possible coverage with the **Microbicide**® electrostatic sprayer.

1. Unpack all the parts and charge up the batteries in the Spray Wand, it normally takes a few hours.
2. Before spraying expensive materials, first train yourself to use the electrostatic sprayer, using water as a spray material.
3. Set the flow rate between 80 and 120 on the flow control valve. Check the setting from time to time as the flow rate changes with the operating temperature of the sprayer, as well as the temperature and humidity of the areas in which you are spraying. If there is a buildup of bubbles in the flow control gauge, open the control valve up fully and flush the bubbles through.
4. Train yourself inside a building or shop before trying to spray outside. You should notice a plume created by the spray wand. The objective is to run this plume along the surface you are trying to coat. Let the electrostatics pull the plume onto the surface. You do not really spray the coating onto the target, the electrostatics does the work.
5. Note: A simple indication the electrostatic charge is not being applied to the plume is the nozzle will be dry. You will need to recharge or possibly replace the batteries.
6. Note also the plume size will change depending on materials you are spraying. Before each job, ensure that the **Microbicide**® electrostatic sprayer is in good working order (see the pre-applicator checklist in this manual).
7. The optimal spraying distance from the target surface is about 1m (39 inches); a spraying distance from the target surface of 0.9m to 1.2m (36 to 48 inches) provides the most even coating. This gives the charged mist space to develop into a chaotic cloud that will be attracted to the target surface.
8. Hold the spray wand at right angles to the target surface. Starting at the highest point and using zig-zag horizontal strokes about 1 meter (3 ft.) wide, apply the nano coating down to the lowest point. Try to have each stroke overlap the previous stroke by about 50%.



9. You can use vertical strokes if it suits the area better. Just make sure to work in a methodical pattern and let your strokes overlap.
10. When moving to the next section, allow it to overlap the previous section by a few centimeters. Do not leave a gap.
11. The target surface should just barely glisten with the nano coating. Do not over-saturate the surface; if you see runs or puddles it means you are wasting coating. Check to make sure the newly-coated surface is very slightly damp.
12. Be careful to keep the spray wand barrel as level as possible. If you allow the nozzle to point down too much, it may drip occasionally.
13. Unlike spray painting, you don't have to stop the application on every return stroke. Just engage the trigger lock and concentrate on the regular pattern of coating. Periodically check to make sure the red light is illuminated on the spray wand.