

Electrostatic painting

BY VIC HEIN



Electrostatic refinishing is a quick, neat and cost-effective way to rejuvenate any metal surface that looks worn, faded or color-dated. This brand-new-look technology will restore your facilities or equipment without the expense of actually replacing them. It can be used in commercial or residential settings on items such as:

- aluminum handrails
- lanai and balcony screen enclosures
- sliding doors
- elevators
- wrought iron railings
- security gates
- chain link fences
- patio furniture
- office furniture
- shelving
- partitions
- lockers
- light poles
- flag poles
- entrance doors
- plate glass window frames

Here's how it works. The paint is applied with an electrostatic paint gun, which uses the basic laws of electricity. The paint is negatively charged as it travels across a rotating bell on the spray gun. The fluid is atomized into a fine mist which, under the influence of the electrostatic field, is attracted to and deposited on the target object that is positively grounded. Since opposites attract, the item being sprayed actually pulls the paint towards it, just like

a magnet. This application is perfect for metal railings, such as those on a balcony, because the magnetic process actually allows the paint to wrap around both sides of the railing. This wrapping process, when used with a quality-coat-



ing product and top-of-the-line equipment ensures a durable, beautiful and even finish.

The process is very portable. The electrostatic paint gun is lightweight and is generally used with a cart equipped with a paint pressure pot, air compressor and power supply. Given this mobility, the paint applicator can coat lanai screen frames at ground level or even on high-rise buildings using swing stage equipment.

The electrostatic spray process has other advantages. There is far less overspray than with a conventional spray gun. The work can be done on site, rather than moving the object into

a shop or spray booth. Metal railings and fixtures can be restored with little inconvenience. Suppose you wanted to change the color scheme in your facilities and you had metal furniture or fixtures. Instead of buying replacement

Preparation of light poles at Kensington Golf & Country Club in Naples, Florida

items, you could pick a new color to achieve a different look. Condo railings, sliding glass doorframes, lockers, table bases, desks and



Palm sanding surface of light poles to smooth out defects

more could be painted in place with no worry about drips or overspray.

To achieve the best results on your project, a painter properly trained in the electrostatic process should perform the application. Extensive preparation is critical to achieve an automotive mirror-like (baked on) finish. This is probably the most time-consuming part of the process. The surface to be painted needs to be thoroughly checked. Does it need sanding or patching? Are there



Electrostatic application of finish coat to base of light pole

Glass light fixture is masked off and white primer is applied



repairs to be made of any sort? All loose material should be removed. In some exterior applications, pressure cleaning or chemical stripping is necessary. You should tape and mask off areas around the surface to be painted. The surface should be machine and/or hand sanded to feather out all nicks and chips and to remove oxidation and other defects. This should be followed by thoroughly wiping the area clean with denatured alcohol or a proper solvent to remove any foreign residue before priming. A good bonding primer may be applied to inhibit rust, provide better adhesion and an even surface. In some cases only

spot priming is required, but if extensive paint was removed in the cleaning process, the complete object should be primed. A light sanding should be performed, followed by a solvent wipe. The object should dry for a few minutes before grounding. The current traveling through the target object is similar to static electricity.

A finish coat is applied in a circular motion with numerous passes to achieve

an even finish. Each light coating bonds with the next to obtain a more durable finish. Do not remove the tape and masking until the finish is dry. You can touch the surface within one hour and use the facilities in 12 hours, while a total cure takes approximately seven days. There are several finish products on the market that will give the appearance of anything from a flat finish to a high gloss. Quality products applied correctly offer the highest characteristics of abrasion resistance, moisture protection, good chemical resistance and high color retention when thoroughly cured. Top this off with a clear coat, similar to a car coat, to increase durability and you have a finish that is superior to the original factory finish.

Conventional applications may be faster than the electrostatic process, but the longer life and more durable finish far exceed the initial time investment. Electrostatic paint products outlast other finishes. The accomplished results are rejuvenation and increased life expectancy of your facilities and/or equipment at a fraction of the cost of replacement.

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