

PEACOCK LABORATORIES, INC.

SPRAY INSTRUCTIONS FOR METALIZING HOLOGRAMS FOR ELECTROFORMING

Many surfaces may be silvered. We will deal with vinyl acetates (phonograph record) surfaces in this text. The basic shop requirements include: (1). Clean, filtered, dry, compressed air supplying approx. 5 cfm at 40-60 psi. This is used for the spraying of silvering chemicals. (2). A spray area with adequate ventilation and a powerful exhaust fan to draw spray fumes away from the operator. (3). Deionized, demineralized, or distilled water is essential to form a bright mirror like finish. The minimum acceptable limit of dissolved solids is 10 ppm.

PREPARATION OF SOLUTIONS

L-14 Silver Solution	A. add 150 ml of L-14 B. add deionized/distilled water to make one US gallon (about 3800 ml).
N-28 Reducer Solution	A. add 300ml of N-28 to a different container and dilute to one US gallon with deionized/distilled water.
#93 Sensitizer Solution	A. add 150 ml of #93 sensitizer to a third new container and add enough de-ionized water in it to make one US gallon.
C-22 Wetting agent	A. add 150 ml of C-22 to a fourth new container and add enough de-ionized water in it to make one US gallon
#77 Degreaser Solution	A. add 150 ml of #77 cleaner to a fifth new container and add enough de-ionized water in it to make one US gallon.

SILVERING

1. Clean part to be sprayed with #77 cleaner
2. Rinse with distilled/deionized water
3. Clean part to be sprayed with C-22 cleaner
4. Rinse with distilled/deionized water
5. Spray diluted sensitizer solution using Peacock sensitizer Gun
6. Rinse with distilled/deionized water (no water breaks).

[On some hard to wet surfaces, such as acrylics, to make the surface hydrophilic, repeat steps 3 thru 6 three times. How do we know if the surface is hydrophilic? If the water beads up, the surface is hard to wet and not hydrophilic. Before you proceed to Step 7 the surface must not bead up!]

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7. Spray silver through Peacock double nozzle Silver Spray gun. Make sure you equal distribution of reducer and silver.
 8. Rinse with distilled/deionized water.
 9. Now you are ready to electroform.