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## SPRAY INSTRUCTIONS FOR METALISING 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-400 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!]*

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