Peacock
LABORATORIES, INC.
Reflecting the Future of Silvering Technologies

PEACOCK LABORATORIES, INC. • 1901 S 54th St. • Philadelphia, PA 19143
Telephone: 215·729·4400 • www.peacocklabs.com

SILVER COATING
By
Pouring
(Flat Glass, Gazing globes, lighting fixtures, etc.)

Shop Requirements:

1. Water: Deionized, demineralized or distilled water is: essential in the production of a long-lasting blemish-free mirror. The minimum acceptable limit of dissolved solids is 10 ppm. Dissolved solids adversely affect the deposition of the silver, especially chlorides and sulfates. A simple purity check of your water is to add 2 drops of concentrated silver solution "A" to a fluid ounce of water and heat for twenty minutes. A cloudy or white precipitate indicates water impurities.

2. Reclaiming Barrel: The “spent” silvering chemicals should not go into the sewer or septic system. They contain the heavy metal silver which should be kept out of our water supply. After your globes have enough silver deposited on the inside, pour the spent chemicals into a barrel or drum and add rock salt (NaCl). The chlorine in the salt joins with the silver in the solution to form silver chloride which is insoluble and will settle to the bottom as a brown-black sludge. The sludge can be sent to a refinery to reclaim the silver.

3. Safety Clothing: The chemicals you will be using are hazardous and should be handled with care. Safety goggles, glasses or face shield should be worn at all times when handling these chemicals. Rubber gloves should also be used to prevent the skin from contacting the chemicals. See material safety data sheets for other precautions.

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Preparation of Solutions:

The Peacock Labs method of silvering allows you to get the maximum use out of the silvering chemicals. When diluted in separate bottles, the silver, activator and reducer have a shelf life of over thirty days. Silvering can be done whenever you wish. Keep stoppered and refrigerated.

I (a). HE-400 silver solution: 2 fluid ounces of concentrate per gallon of deionized water.
I (b). HE-400 reducer solution: 2 fluid ounces of concentrated solution per one gallon of deionized water.
II. #93 sensitizer: mix 2-4 ounces in one gallon of deionized water.
III. #77 cleaner: mix approximately 4 ounces in a gallon of tap water.
IV. Protective Coating: 4 parts Copper-Tite Vehicle #3 mixed with 1 part #281 thinner.

Steps to silver coat :

1. Rinse out surface with #77 cleaner and water for dust or other contaminants.
2. Rinse thoroughly with deionized water.
3. Add approximately one fluid ounce of sensitizing solution to the inside of the globe and swirl the solution around to ensure a uniform coverage.
4 Rinse thoroughly with deionized water.
5. Add one ounce of diluted silver solution
6. Add one ounce of diluted reducer solution.
7. Swirl solution for approximately 1-2 minutes to achieve uniform coverage of silver film.
8. Pour spent chemicals into reclaiming barrel.
9. Rinse excess silver chemicals from inside the globe with deionized water.
10. Before coating the silver to protect it from spoiling, the inside of the globe must be

thoroughly dry!

11. Dry by using:

a. Heat to 150°F or

b. Force air with compressed air 30-40 psi or

c. Air dry or drip dry.

12. A protective coating is important to ensure the long life of the product. Pour a suitable amount of clear Copper-Tite Vehicle #3 into the dry globe and swirl around to totally coat the inside. Pour out excess which can be used in the next globe.

14. Curing the coating increases the quality of the protection. If possible heat to 180°F for 40 minutes to ensure the solvent has evaporated and the coating has bonded completely. Air drying is also acceptable. If air drying, allow 24 hours before handling and cleaning outside of the globe.

The clear copper-tite vehicle can be mixed with copper powder for a copper protected coating. We also offer a black paint if a solid opaque color is required.

Notes:

Volumes of chemicals will vary depending on the size of the object to be silvered. Concentrations can be increased to speed the deposition of the silver.

DISCLAIMER

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