

METALIZING FLOW CHART

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BASIC RULES OF METALIZING

- A. Adherence to the specified varnish curing times will greatly reduce chances of a disastrous tape lift-off
- B. Keep a log. It will provide continuously needed information on both the step involved and the elapsed curing time
- C. Use only oil-based, clear gloss varnish
- D. Varnish is thinned 60/40 with mineral spirits.
- E. Use a test piece, along with the model, for deciding exactly when to start step 2.
- F. For safety's sake minimize taping, maximize decaling.
- G. After each sealer coat, lightly wet sand with 6000 Micromesh pad. Wipe dry to eliminate water spots.

THE SEVEN BASIC STEPS

1. Apply the **FIRST** coat of varnish. The first coat acts as a primer, nothing else. Let cure 48 hours.
2. Apply a **SECOND** coat of varnish. Allow approximately 2 hours of curing time. Then, when a finger is pulled along the surface of the test piece and a very, repeat very, slight drag is felt, lightly buff the entire model with aluminum powder using a wool rag. Buff with light pressure. If the buffing was commenced at the right moment the surface will look slightly shiny. Buff too soon and the surface will look too dull, like a aluminum cooking pot; buff too late and the surface will look too shiny, like chromium. It's a choice! Let cure 48 hours.
3. Apply a **THIRD** coat of varnish as a first sealer coat. Let cure 48 hours.
4. Apply a **FORTH** coat of varnish as a second sealer coat. Let cure 48 hours.

5. Apply a **FIFTH** coat of varnish as a third sealer coat. This last, of these sealer coats, should be allowed to cure a minimum of 5 hours but not more than 8 hours because it now becomes the basis for "differential buffing" in producing chrome-like panels.

(A) To chromatize selected panels, they must be masked off with tape. To minimize tape lift-off in this step observe the specified curing times and use the absolute lowest tack tape available, never, ever use masking tape 3M-811 tape seems to meet this requirement best. It is recommended that even its tackiness be reduced by the old "forehead" trick. Bob Dively's, liquid masking film, can also be used effectively to mask off panels without fear of lift-off, provided, of course, that specified varnish curing times have been observed. After masking, buff with aluminum powder and a wool rag. Buff a little more vigorously and faster than in the basic metalizing process. Remember, the more one buffs the more chrome-like the panel will become. Soon, the panel finish will turn darker, more reflective and chrome-like. Buff with graphite or even copy toner for gun ports and jet cans. Mixtures of graphite and aluminum powder can also be used for different, intermediate shades. If the panels get so complex and in the way that further handling and masking might disturb them, let the 48 hour curing process complete itself. Then seal with varnish and, 5 to 8 hours later, complete another cycle of "differential" panel buffing. After each masking and "differential" buffing session, and it may take several sessions, remove mask. Clean up loose and random specks of aluminum powder with the air brush and, cautiously, use a Q-tip moistened with soap and water. Use care not to drag the wet Q-tip over a new "differentially" buffed panel as it will remove some of the aluminum powder from the incompletely cured, unsealed, hence unprotected, panel and the whole process will have to be repeated - - clean-up, spraying, panel masking and buffing.

- (B) Now is the time to replicate rivet lines if you want to do so. After the last "differential" panel buffing has cured 48 hours, spray on a sealer coat. Let cure not less than 5 hours but no more than 8 hours. Using a subtle touch and a Strum-U-Dent with a bit of aluminum powder on its knife-like edge, never its tip, rub gently alongside the straight-edge or vacuum cleaner belt across a panel. For softer wider lines, use an artist's blending stump. To space these lines uniformly, place marked tape on one side of the panel.
- (C) To simulate large panels with have been riveted together, having much the same metallic color but witch do not open for access, differentiate them by delineating their edges directly on the fuselage or with using a straight-edge plus a drafting pen minimally filled with thickened one-shot silver paint drawing as narrow a line as possible. If the one-shot paint is too thin it will flow out too fast and make a blot, so let it thicken. Make a test on something else first.
- (D) When panels have much the same metallic color but open up for access, they can be differentiated by filling the groove with a neutral gray india ink in a rapidograph pen. If no groove is present, such as between a canopy and fuselage, a thin black decal line can be applied. Thin black decal lines can be made straight or with curves using a drafting pen or compass pen filled with black, square-bottles testors paint which has thickened so it won't run out and make a blot.
- (E) After "differential" paneling and panel lines are completed let cure 48 hours.
- (F) Then seal with a **SIXTH** coat of varnish and let cure for another 48 hours.

6. For additional paneling and rivet lines proceed as follows;
 - (A) Mask and spray large-area, preselected panels with various shades of Testor Metalizer paints. Mask the entire plane to guard against overspray.
 - (B) To make small panels apply pieces of clear decal film, previously air-brushed with Testors Metalizer sealant.
 - (C) Note: Steps (A) and (B) will take on the high gloss of all other panels after the final varnish sealing coat of step 7, the next coat.

 - (D) Replicate individual rivets with a Rapidograph or Staedtler pen with a 4X0 or a 3X0 point using gray waterproof ink. An .01 pointed Pigma pen will do this job very nicely too but only in black which may be too dark for realism and some esthetic tastes.

7. Apply a **SEVENTH** coat of varnish to seal all preceding steps.
 - (A) Repeat Step 6(a) now for a matt finish panel.
 - (B) Repeat Step 6(b) now for a matt finish panel.
 - (C) Optional: Outline panels or seams with One-Shot silver paint in a draftsman ruling pen. This works best if the paint is thickened moderately.

References

1. Fine Scale Modeler, July 1995, B-25, vol. 13, no 6, p 82
2. Sundt, Les. Seamless Canopies, FSM September 1995, vol. 17 no.7, p 32.
3. Fine Scale Modeler, February 1996, B-58, vol. 14, no2, p 86
4. Sundt, Les. Finishing Natural-Metal Aircraft, FSM, March 1996, vol. 14, no. 3, p 36