

COVERING WITH BALSALOC AND A HOT IRON

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The Eternal Question for builders of small model airplanes: How to attach that darn flimsy covering stuff without wrinkles and a lot of mess and fuss? Even though short on experience, I didn't do too badly attaching with dope while the dope was still wet on the frame, but the process was so untidy! Even the dope-and-thinner technique left my fingers with crummy layers of dope.

Then, along came Balsaloc and the electric sealing and trim iron with the little, flat shoe. They worked well for me on models with typical construction of 3/32-inch square balsa longerons and greatly simplified the whole process: attachment, removal and re-positioning, and clean-up.

Here's how I do it. The Balsaloc is diluted 50-50 with plain water and applied liberally, preferably with a short-bristled brush (not a stiff-bristled brush, please!) to the framework and allowed to dry.

The procedure is to tack the tissue with very light touches of the iron on opposite sides or ends of a structure, then to pull the tissue to remove any major excess, touch lightly to release and stretch more if needed, then to gently pull the tissue with one hand while tacking all around. A final, more firm, pressing all around with the iron fastens the tissue securely--until you want to remove it, if you do want to remove it for repairs, for example.

Touching and pressing are the recommended application techniques, but sliding, in some cases, can remove any excess tissue within a framework perimeter that results in wrinkles. The iron works very well for forming the neat edges around perimeters of flying surfaces, along a hinge line, and along stringers, that are so important to a craftsmanlike job.

This technique works well with kitchen-type transparent plastic films, too--if you have the persistence needed to spread the stuff out on the framework.

Would this work on lighter construction? Yes, after experience with several indoor Bostonians and a couple of dime scale types with curvy fuselages using off-the-shelf tissue from Sig, I completed the same process on Peck-Polymer's peanut Ganagobie, which has longeron and tail framework cross sections of less than 1/16"square. Yes, in such a case, a light touch is especially important, but I'm no neurosurgeon, and I learned how to do it. However, these light framework wings and tails need to be supported by a firm, flat surface, such as the edge of a workbench.

Since there apparently are no reliable, scientifically derived data regarding the properties of the various tissue papers model builders use, we cannot arrive at a technique for covering that will consistently produce the results desired. However, it does seem apparent that tissue will expand and contract according to ambient conditions of heat and moisture, even when the tissue has been lightly sealed with thinned dope. So my theory is that shrinking and sealing are best done under conditions as close as possible to those under which the model will be shown and flown. All else is a matter of serendipity.

A fuselage need not be pinned down during the drying process, of course, but flying surfaces are another matter. I pin them down first, then wet them thoroughly with plain water, and let them have all the time they want to dry in a room of "typical" temperature and humidity. When they are dry, if they have wrinkles, I wet them repeatedly until all the wrinkles are gone, then I pin them down (properly supported so there are no built-in warps) in the same room and apply two coats of Sig low-shrink butyrate thinned 50-50. (I haven't tried the clear Krylon treatment, but hope to soon.) Some of my models are now at least ten years old and, while there is some sag in the tissue inside large, unheated spaces, the original smoothness returns when the model goes back into the conditions under which the tissue was applied. Try it. You may like it.