

# TISSUE FINISHING — CONVERSATIONS WITH THE WING NUT

By George White

In a recent issue of the Crosswinds Newsletter (Russ Brown, editor) there was an article on tissue finishing by Rich Weber (a.k.a. Wing Nut) which really grabbed my attention. I realize that almost all you “older boys” have your own method of finishing tissue thank you, so you may want to skip this article. However, being one of the relatively new kids on the block, I have yet to find “the” method which is an answer to every maiden’s prayer — hence this article!!

Rich and some friends in the Cleveland Free Flight Society got together one day and did some tests on non-dope, rattle-can finishing materials. They cut white Esaki tissue into strips and sprayed them with five different “rattle can” sprays, determined the weight each added and, once the spray had dried, how much more the tissue would shrink if the tissue strip was subsequently soaked in alcohol. Below are the results; although less than scientific, but revealing:

	Wt. Added	Shrink Remaining	Comment
Krylon Acrylic Matt — medium coat	0.6gr	20%	Highest Smell
Krylon Low Odor Gloss — medium coat	1.1gr	60%	Glossy, Slow Dry
Blair Marker Fix — heavy coat	1.2gr	10%	Glossy
Krylon Preserve It — heavy coat	0.9gr	10%	Made Tissue Translucent
Design Master Floral Spray (red) — light coat	0.9gr	40%	Good Color Cover
Design Master Floral Spray (red) — heavy coat	1.3gr	10%	Needs no overcoat

I have used Floral Spray for a couple of years, and must admit it is certainly easy to use and appears to be more dye and exotic alcohol than solids, hence once dried, adds minimal weight. However, until I had the exchange with Rich, I had always first sprayed a coat of 25% non-shrink nitrate or a light coat of Krylon on the tissue before adding the Floral Spray. I found that by doing that, repairs were messy because any use of alcohol seemed to dissolve the floral spray (I attach tissue with UHU glue).

In an exchange of emails with Rich, he expressed the opinion that Floral Spray, instead of sitting on the surface of the tissue, soaks in. Not only does that make it more resistant to alcohol, but interferes with the shrinking capacity of the tissue. He commented that he likes Floral Spray for allowing him to control shrinkage, making the tissue as water resistant as anything else he’s tried and giving him color to boot.

During this email exchange, I was fixin’ to cover a Fokker D7 and decided to give his ideas a try. I sprayed glossy white Floral Spray onto white Esaki attached to a stretcher frame. I didn’t pre-shrink the tissue, but instead, sprayed the Floral Spray directly onto the tissue on the frame. A moderately heavy coat shrank the tissue, but probably not as much as water would have. I didn’t have the presence of mind to note the resultant weight change! I put this tissue on the tailplanes with UHU glue and stretched it as best I could (interpretation — it still had wrinkles). I then sprayed a pretty heavy amount of water on the attached tissue. I was very surprised at the degree to which the water beaded up on the surface. However, enough moisture got through the Floral Spray to allow the added 10% shrink that Rich describes in the table above. The rest of the model was covered with unshrunk Esaki, then shrunk with water and then sprayed with the gloss white Floral Spray. No overspray beyond that was added.

A few days later, I arrived at the flying field early in the morning (this is the Gulf Coast, so the grass was soaking wet, of course) and started trimming. I also had with me another model I had finished with Model Master Enamel mixed in non-taughtening nitrate and thinner. The Floral Spray on the Fokker seemed to be more water repellent than the enamel/dope mixture. This leaves me believing that overspraying Floral Spray painted tissue with Krylon or anything else for the purpose of water resistance is just adding weight.

Another discovery which Rich talked about is the use of Workable Fixative. I found the stuff at Hobby Lobby under the brand name Blair Workable Fixative. Since Rich uses “chalk” for coloring tissue. It really isn’t chalk, which is made from rock, but is actually a paper pastel which only looks like chalk. They consist of a pigment bound into an inert carrier and formed into sticks. Rich believes it adds a negligible amount of weight. There’s a good article on our website ([www.pensacolaflight.org](http://www.pensacolaflight.org)) the subject of chalking tissue based upon Chris Parent’s work. Instead of overspraying the chalked tissue with dope or Krylon, he uses Workable Fixative, which is really designed for preventing pastels from smearing, and has found that when sprayed on chalked tissue, it not only made water bead up on it, but also seemed to weigh less than an equivalent amount of Krylon. He also cautions that once the Fixative has been sprayed on tissue, it seems to pretty much lock the tissue and it won’t shrink once it’s been sprayed. This might be the exception to the comment in the paragraph above about not adding anything to Floral Spray. Sprayed with Workable Fixative would seem to really lock tissue coated with Floral Spray.

Another comment by Rich concerned the use of the metallic Floral Spray colors. He’s found them to be much heavier than the others. I confirmed this when I sprayed a 9”X9” square of Esaki with Gold FS. It added .4gm. Rich’s solution for dealing with the weight of the metallic colors is to avoid using them as the sole finish. Instead he starts with a coat of chalk to get the foundation laid with a color in the range of what he’s going for — i.e. gray for silver, orange for copper, etc., then he mists just enough metallic on to convince himself he’s got the color he wants. An overcoat of Workable Fixative locks it all in.