

# STARLINE

## POLYSPAN

Excerpts from Larry Davidson's article for Sam Speaks

### "I can tell you that this is a great covering material..."

After seeing several ads for Polyspan, I decided to order a roll and try it out. I also ordered some of the analine dye that Sal Fruciano (owner of Starline) sells. So far, I only used the Polyspan on a 1/2a Country Boy free flight and the results are as follows:

The first thing to know is that this is a polyester material and impervious to water so don't try to shrink it with water. The Nitrate dope will shrink if fine and any wrinkles left can be taken out with a MonoKote iron.

I started on the stab first and proceeded to follow the brief instructions which came with the product. He recommends pre-doping the frame outlines in the usual method used for Japanese tissue or silkspan which is two coats of Nitrate Dope. I then cut out the Polyspan 1" larger than the outline of the stab and doped it with Nitrate Dope thinned 50% through the material. So far everything went well and the material went on easier than Japanese tissue. Naturally you try to put it on by getting it reasonably wrinkle-free. Then I cut the material flush with the framework with a NEW double edge razor blade. So far so good. I then applied the Polyspan on the top in the same manner and trimmed it leaving the usual 1/8" for overlapping. Then came the problem. The material does not want to be rolled over the edges in the usual doping down method. It kept trying to straighten out the overlap and no matter how hard I tried, it would not roll over.

I called Sal Fruciano and asked him for a remedy to the problem and he said that using a Monokote iron to crease the material should help. Well, he was right and the following was the method which worked great for me.

Before putting the dope on the edges to be rolled over, I used the Monokote iron and creased the edge as Sal suggested. Then I put the Nitrate Dope under the overlap and rolled it over with my fingers in the usual fashion. It will still try to come up and by running my fingers around the edges until the dope is almost dry to the touch, I then took the MonoKote iron set at about 325 degrees and rolled over the edges to stutter when I use the "M" word. That is because as many know I am a religious silk and dope man.

The next step was to brush some of the analine dyed Nitrate Dope on the bottom of the stab. It was difficult for me to believe that you could get the wrinkles out and make the covering tight with just putting the dope on. Well I can tell you that it tightened up great but I did not like the way the color came out on the bottom or the top. It was streaky and I did use a foam brush. Then I noticed that the top looked like the Chia-Pet that is advertised on television as it seemed to sprout fuzz and hair on the top. I wondered why this did not happen on the bottom and finally realized: IMPORTANT: There is an inside and outside to the covering. There is one side to the covering that is more glossy than the other and you MUST put the glossy side on the outside. On the roll that I used, the glossy side was on the inside of the roll and when placing a cut piece on the bench it would try to curl the edges up with the glossy side facing up.

I removed the top covering from the stab and put another piece on with the glossy side up. As I said before, I was not satisfied with the orange tinted dope finish which I had brushed in my usual fashion with a foam brush as it looked streaky and mottled. The answer was to spray the dyed dope on. This would not be necessary if you left the material white, which is the only way it is available. Don Reid, after seeing my Country Boy at the GGG decided to try Polyspan and then called me to say he had recovered his house including his wife, Cynthia. Obviously he was impressed with the Polyspan.

One of the members of our SAM 75 chapter, John Sullivan asked me for a piece of the Polyspan so he could experiment with the dying process and at our next meeting, he had produced the following results:

He felt the best way to dye the material was to use a powdered analine dye. You also may buy the liquid dye 10 parts of nitrate dope to 1 part of dye, however I found that with the orange dye, a 20 to 1 ratio worked great.

John says to mix a 2 oz jar of the powdered dye with one quart of methyl alcohol (methanol) and spray it on the material before covering the model, otherwise the dye will also color the rest of the wood of the frame work. You can also use the dye, both powder and liquid in nitrate thinner and spray this on Polyspan before covering the plane. If you use the powdered dye, be sure to use cheese cloth to filter the dyed thinner after mixing it thoroughly.

Because this plane had to be fuel proof as I use 40% nitro fuel in my Cox TD .049/.051, I continued with my customary finishing technique of spraying K&B Super Poxo over the two coats of nitrate dope. The fuselage came out fine, but the wing was a disaster. The Super Poxo would not fill the pores of the Polyspan on the bottom. I decided to spray one coat of butyrate dope on the top of the wing to fuel proof it. I assume that if I applied several more coats of the nitrate dope to really seal the Polyspan, the Super Poxo would have worked well.

I can tell you that this is a great covering material and I expect that on the next plane I use it on will work well with the techniques I learned on this plane. It really gives tremendous strength to the framework, probably as much as silk does and it surely is a great improvement in strength and puncture resistance over Japanese tissue and silkspan even though it is a little heavier.

[In the December '94 issue of Flying Models, Don Typond, who is a museum quality modeler did an article on Polyspan and has additional information on it's use.](#)

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