

TISSUE OVER MYLAR; COVERING TECHNIQUES

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This is a compilation of what Graham Knight and Thayer Syme do plus experience. You cannot go wrong following this. Oh, yeah! Tissue over Mylar has many advantages over just straight tissue but still retains that great Japanese tissue look. Others more empirical than me have done weight tests and tissue over Mylar is generally lighter or about the same as just doped tissue due to the fact you do not need much dope. This is not only a lot tougher than just tissue but also as light or lighter because you only need one or two coats of dope. Dope is heavy. Cheers, Captain Cornell Crawford, Neighborhood Hero (AKA Karl Gies)

Subject: TISSUE OVER MYLAR (YOU GET THE GREAT JAPANESE TISSUE LOOK!) This is what I learned from using Mylar covered with tissue and it is a great way to go. I did not use the self stick stuff on the advice of others. I made some test panels and I highly recommend this before trying it on a model.

DO MAKE SOME TEST PANELS FIRST, IT WILL SAVE YOU A LOT OF GRIEF!

I just used scrap balsa, stout stuff like 1/4" square to make some squares. I tried balsaloc but once you hit this stuff with the heat iron or others like it, say Sig Stickit, you cannot reposition the Mylar. I used thinned down contact cement and it gets globs in it, hard to thin, you have to avoid getting the globs on the balsa wood. Oh, give the balsa area to be stuck to a couple of coats of thinned down dope first.

I have used the Velcro cement thinned with dope thinner it works great. Another refinement to covering with Mylar, get the backing from Monocote, nothing sticks to it. I got some from a local RC modeler, and before you put the Mylar on, let the Velcro cement get pretty dry and put the Mylar backing over whatever you are going to put the Mylar on and keep this Monocote backing between the Mylar and framework because the Mylar grabs on to everything it touches. I pull back the Monocote backing on say a fuselage side and put the Mylar on and then work along pulling the Monocote backing out of the way. This will save you a lot of aggravation. Brush the contact/Velcro adhesive onto the balsa. Then when it is pretty dry place the Monocote backing in place. Plug in your iron, on medium. I use a Monocote trim iron. Let the adhesive pretty much dry, just a slight bit tacky and lay the Mylar over it. Pull and tug until you have it fairly even and tight w/out too many wrinkles. Then go over the top of the Mylar with the iron and it will adhere. After a few minutes go over the Mylar, not touching it, until it shrinks and it will shrink. Mylar will not work on lightweight stabs and fins, it will twist them. You can use it, just don't shrink it on the tailfeathers.

Now for the tricky part, putting the Jap tissue on. I was told that on the longerons you had to leave part of them bare to get the tissue to stick. Well this will not work very well with 1/16" square longerons; it's too tricky. On my test panel, I went around the edges of the balsa square with a bead of full strength nitrate dope (do not use butyrate, because it will really shrink the heck out of everything). Let the dope dry (or use a bead of purple glue stick which dries clear, this works really great).

Cut out a larger square of tissue, lay it on a towel and lightly spray it with water. If you get it too wet, leave it on the towel and lightly blot it with another towel. Pick this up and lay it over the test panel covered with Mylar. Pull and tug until it looks pretty good and then brush thinned (50/50) NON SHRINK nitrate dope over the area avoiding the edges. Then brush straight thinner on the edges.

This got everything stuck down for me and I let it dry, came out good. I then tried a test panel rubbing the edges with a purple UHU glue stick instead of the straight dope. Went through the above process again, brushing thinner through the tissue on the edges to adhere to the glue stick. As a precaution I lightly went over the edges with the trim iron. This worked very well also.

When I covered the Scientific "Major", I covered the entire fuselage sides, cabin area included, with Mylar. This made it easier. After I put the tissue over the Mylar including the cabin window area I let it dry and then with a sharp blade (I use double edge razor blades to cut the Mylar with) I cut out the tissue and Mylar where the windows would be.

I made a pattern where the windows are, laid it over a piece of Mylar and cut it out to fit except for the fuselage edges. Let this be oversize to have something to pull on. Then very carefully went around the window edges with the purple glue stick, let it get real tacky, positioned the Mylar correctly, rubbed with my finger and then again touched the edges with the iron on medium. I used the iron to shrink the window area and ended up with windows that were perfect and light, much lighter than celluloid. I could see the colour of the tissue underneath the Mylar. To cure this, I cut out thin strips of tissue, put some glue stick on the uprights and window edges, and lay the cut out strips down. I use a pattern to cut curved strips if there is a curved area. After rubbing the strips down, lightly touch the tissue with the trim iron on medium. This turned out to be the best window job I have ever done.

The combination of Mylar and tissue is tough, probably 50 times tougher than just tissue. I did not do anymore doping but you could if it does not look good. It is not necessary except from an aesthetic standpoint. For models just coloured with Mylar and no tissue over it make a test panel of Mylar and after shrinking it spray it with Design Master Floral paint with the colour you intend to use on a model to see how it looks. I laid the test panel on a newspaper and gave it several light coats of Design Master. It will never be opaque, and the end result looks like clear monocote. It will definitely not have a vintage look!

I just built another AMA Maxi Jr. a simple solid stick fuselage model (like the standard ROG but with no landing gear). This model has a wing with ribs. I did not worry about the vintage look, not a vintage model, just wanted it light and of course not invisible with clear Mylar. I sprayed it with the Design Master and it came out very light, somewhat lighter than the Japanese tissue covered one that I lost last summer. I covered the tailfeathers with Mylar but only hand tightened it. The iron would pretzel these parts and of course sprayed them w/Design Master. The end result is a very light, good looking highly visible model.

When you dope the tissue onto the Mylar use non-shrink nitrate if possible. Heating the Mylar will give it all the shrink you need. NEW technique on spraying design master floral spray over mylar place a piece of mylar on a frame, stuck to the edge of the frame and do not heat shrink it, just pull it tight. Spray it with design master floral spray, several light coats and when dry cut the mylar off the frame. When using this to cover, place it so that the colored surface is on the inside. I did this on a wing and it works well. This way the colored surface is on the inside so that the paint cannot be rubbed off. Design Master Floral spray paint can be obtained at a Michael's Craft store (nationwide chain) and comes in a lot of colours. It is mostly propellant and is light stuff. You can spray some Krylon clear over it as a fixative *without* adding any appreciable weight. I can't think of anything else. If you have questions just ask. Cheers, Karl {Gies}

Final Note on Above: I have used a similar technique with silk over Mylar. Works out about the same and eliminates the problem of dope leaching through the silk and running on the back side. I have yet to try the toilet tissue technique of applying dope to silk. This involves wetting a sheet of toilet tissue with dope and dragging it over the silk instead of brushing it on. The toilet tissue is attached to a stick to keep it straight and is rewetted with a brush as needed. The thin coat of dope applied doesn't leach through, but seals the weave of the silk. It may take two coats with this method before brushing on the finish coats. Jim C.
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