

TISSUE OVER MYLAR - ALL YOU NEED TO KNOW

by *Karl Gies*

On small models I use 1/4 mil (.00025")Mylar but if I were going to use this method on a larger model I would use 1/2 mil Mylar.

In addition to the instructions below put the tissue on the Mylar fairly wet (I spray it with rubbing alcohol). If the tissue is thoroughly wet when you brush the thinned down dope over it (50/50) it will really smooth out. I use nitrate dope only to adhere it and have never tried butyrate. I think butyrate would shrink it too much. The Mylar shrinks quite a bit.

On smaller models like rubber jobs I use 1/4 mil Mylar. Graham Knight uses this method on his big gas jobs but he uses a heavier mylar for this. You can get the 1/4 mil mylar from FAI, Mike Woodhouse or Model Research Labs.

Here is the url for MRL:

<http://www.modelresearchlabs.com/>

FAI url: <http://www.faimodelsupply.com>

P.S. you can get the Velcro cement at any sewing shop, it comes in small tubes. It is just a finer grade of contact cement but does not clump up much. I use nitrate dope thinner to thin it down, about 50/50. If you have any questions let me know. I hope your back is ok.

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.

Cheers, Captain Cornell Crawford, Neighborhood Hero

This is not only a lot tougher than just tissue but as light or lighter because you only need one or two coats of dope. Dope is heavy.

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 w/the heat iron or others like it say Sig Stixit

you cannot reposition the Mylar. I used thinned down contact cement - 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 velco 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 modeller, and before you put the mylar on let the velcro cement get pretty dry and (new instructions, just let the velcro cement get real dry and you won't have to putz around with the monocote backing and just touch it with a trim iron on medium to adhere it) 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 agravation. 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 w/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 tail feathers. Now for the tricky part, putting the Jap tissue on it. 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 w/say 1/16" square longerons, too tricky. On my test panel I went around the edges of the balsa square w/a bead of full strength nitrate dope. (Do not use butyrate, because it will really shrinks the heck out everything) Let the dope dry (or use a bead of purple glue stick which dries clear, this works really great).

I then cut out a larger square of tissue, laid it on a towel and lightly sprayed it w/water, got it too wet and leaving it on the towel lightly blotted it w/another towel. Pick this up and lay it over the test panel covered w/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 w/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 w/ 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 w/a sharp blade (I use double edge razor blades to cut the Mylar with) I cut out the tissue/Mylar where the windows would be. I then 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. I then very carefully went around the window edges w/ the purple glue stick, let it get real tacky, then positioned the Mylar correctly, rubbed w/my finger and then again touched the edges w/ the iron on medium. I then used the iron to shrink the window area and ended up w/windows that were perfect and light, much lighter than celluloid. I could see the colour of the tissue underneath the mylar but then cut out thin strips of tissue, put some glue stick on the uprights and window edges, and laid the cut out strips down. I use a pattern to cut curved strips if there is a curved area. After rubbing the strips down I again lightly touched the tissue w/the trim iron on medium.

This turned out to be the best window job I have ever done. The combination of Mylar/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 w/Design Master Floral paint w/the colour you intend to use on a model to see how it looks. I just 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 w/no landing gear). This model has a wing w/ribs. I did not worry about the vintage look, not a vintage model, just wanted it light and of course not invisible w/clear Mylar. I sprayed it w/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 w/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.

I can't think of anything else - if you have questions just ask.

Cheers, Karl Gies

P.S. 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 w/out adding any appreciable weight.