**Some interesting information on our Mylar film and earlier (though still available) microfilm by Leo Pilochowsky (USA).**

I have weighed samples of all the light films used for F1D class models. The list below gives two area densities for Y2K because I have found that there are generally two kinds of Y2K film based on when it was sold. I label the newer, heavier Y2K film as Y2K-4K (the markings on the inside sticker my rolls are dated 4/04 and I have seen rolls with later dates). My Y2K2 film is yellow (almost gold) in color with some blue. My older lighter Y2K film has a great deal of blue color and and some red, but little or no yellow. My newer Y2K is mostly green with some red. My current Os Film is mostly green with some bands of lighter red. John Kagan has said the that Y2K films are fragile compared to OS film. I have found that certainly true for Y2K2 and the older Y2K although the older Y2K is less fragile than Y2K2. My newer Y2K and OS films are much more robust and easier to handle. I think that my newer Y2K handles better and is a bit less fragile than my current roll of OS film. Here are my measured weights. Please remember that these thin Mylar (polyester) films are specially made so that the thickness varies not only between different large master rolls but also between individual retail rolls and even within a single retail roll itself.   
  
Y2K2: 540mg/sq. meter 35mg/100si  
Y2K: 660mg/sq.meter 42mg/100si  
Y2K-4K: 740mg/sq.meter 48mg/100si  
OS Film: 780mg/sq.meter 50mg/100si (can be heavier/lighter as this is just my current roll)  
  
  
Just to give an idea of how these films compare for an as built plane, we can consider a current 55cm F1D. The combined film area (including the prop) of such a plane is generally about 280 si or 0.181 sq.meter (or even less for the elliptical wing/stab, smaller prop designs). The weight difference between using Y2K2 and OS film (using the above area densities) is about 43mg. For an EZB with 75 si (0.05 sq.meter) of film area, the weight difference is 12mg. For the much larger F1 open and HLS planes, the weight difference can approach 100mg  
  
  
As an aside, I have never poured and made any microfilm covering so I have not been able to weigh any. From the interference patterns (plus the gold or silver color), the microfilm is often much thinner than even Y2K2 and should have even less area density. Maybe someone who used or uses microfilm can add some information about the area densities (which also vary depending on the original liquid and pouring technique).  
  
  
LeoP

Jake Palmer – microfilm update

Jan 18 4:34 PM

If anyone is interested in learning more about microfilm, you should look at the November 1963 INAV.  It includes an article about measuring thickness that was developed by Bill Bigge.  It includes a chart relating the color to the thickness.  Bill also weighed some MicroDyne microfilm and you can use that weight along with the chart to estimate how much a given color of film should weigh.  His weight puts red violet film, which is slightly thicker than straw brown, at approximately 17mg/100si.  Silver film should weigh 10-12mg/100si, or about a third the weight of the lightest Y2K2.