Glass cloth covering

Pro's	**Con's**
Stronger.	Takes longer to apply than film.
Longer lasting.	Maybe heavier if not applied well.
If applied well gives a better finish.	More expensive.
Can be painted to a high standard.	Needs more tools to apply well.

Glass cloth covering if carried out well gives a very tough and superior finish, the glass add's strength to fragile trailing edges and tip sections.

The application of glass cloth and epoxy resin definitely takes longer than a heat shrink film covering, the cost is higher as well.

The glass once applied and cured can be painted to a high standard, at least to the standard of a new car finish.

Glass cloth and epoxy can be applied to many surfaces but is particularly suitable for wings covered in veneer or any balsa structure that is a closed surface.

Applying glass cloth and epoxy with out vacuum and mylar sheets is a multi stage process.

Application

Surfaces should be sanded smooth and all joints need to have a flush finish, a final sanding with 240 wet and dry paper used dry seems to be a good compromise between finishing speed and surface smoothness.

Excess dust should be removed from the surface by vacuum cleaner, air line or brush.

Cut glass cloth at about 30mm over size of the wing being covered and about 20mm for tail feathers. Don't try and cover the whole underside of a wing in piece of material, rather split the material at the wing centre section and allow an overlap possibly on the centre section bandage.

For ease of covering only attempt to cover one side of the wing at a time, best to start with the underside first.

Mix epoxy according to the manufacturers instructions, for the Bob Smith and Zap products this a 1:1 mix ratio, I only use a brush, some advise has suggested using a credit card to spread out the epoxy into a thin film, my worry with this is that the balsa skins and tips can easily be bruised with the hard edge of the card.

Spread out the mixed epoxy to make a surface that is only just tacky, too little epoxy is better than too much at this stage, now take the pre cut glass cloth and allowing it to drape vertically lay it onto the tacky surface, start the drop from the centre section and work towards the tip. Immediately the cloth will start to soak up resin, it will also have very loose wrinkles, tease the wrinkles out from the edge, don't try and force the wrinkles down with a brush or card at this stage.

Any areas that are dry can now have extra resin applied, the cloth goes transluciant when the correct amount of resin is present, equally any areas that look glossy wet should have the excess resin removed, with with a dryish brush or in bad cases with a kitchen towel dabbed onto the wet surface.

Allow the epoxy to cure, this will usually be over night at room temperature. Now carefully trim the excess glass off around the leading edge, tips and trailing edge. Initially a scalpel is good for this followed by gentle use of 240 grit paper on a small hard block.

Now repeat the process for the other side of the wing (most likely the top).

Now the wing or tailplane has been covered on both sides with glass cloth, we need to sand the surface with 240 grit wet and dry paper used dry, again a small hard block is useful for holding the paper on, the paper might clog up easily, this usually a sign that the resin is under cured.

Once the surface is sanded and de-nibbed then a second coat of resin is applied, again really spread the resin out and work it into the texture of the glass cloth, the surface will take on quite a shiny appearance on this second application of resin.

Allow the second resin application to cure, a decent temperature really helps at this stage. If everything has gone well you should be presented with a pretty decent surface which can be flatted back through successive finer grades of wet and dry paper used dry and then polished polished, or alternatively go on to priming and paint stages.

Materials required and where to get them.

Zap epoxy finishing resin – most model shops and online.
BSI finishing resin – Zen Racing and some model shops.
25 and 49 gram glass cloth – East Coast Fibreglass Supplies
1/2” resin brushes – Easy composites
Acetone – Many Ebay suppliers
240 wet and dry paper – Hardware shops
Kitchen towel
Mixing sticks and small pill cups – Many Ebay suppliers.
Scales 0-100 grams - Ebay