

Wing Bags

Dave Jones

Hangar rash is no fun. The odd gash from landing in a tree, or the repaired leading edge after a mid air collision can be borne like duelling scars, and at least you were having fun when the damage happened. But the crushed tip block caused by the stupidity of the builder in putting a wall where one should not be, or the evil draught that whips through the house and traps your wing in a door cannot be tolerated.

The answer is to bag up your models for transport and the common material used is "Bubble Wrap". This is good stuff but not without its problems.

The first problem is that only one side is flat. So if you make a bag up with the bubbles on the inside the wing can snag on the bubbles.

The second problem is that to make the bag up you usually tape up the seams. Now having tried most things from packing tape to carpet tape I can confirm that it ain't the best answer.

I was pondering this one day after a wingtip had gone crashing through the bottom of a bag onto a concrete slab when the recollection of an article in a German mag came to mind. The trick was to use a special bit on a soldering iron or a commercial bag sealing tool. This made a neat melted joint that did not seem to come apart.

Well some hours and a pile of scrap bubble wrap later I discovered that the soldering iron being used must have been temperature controlled and that the bit used had to be Teflon coated. So I went back to the tape.

Some time later the idea was still rattling around and another article appeared that used a heat gun, this was the key, so the following is not original but it works every time and requires no special tools.

The Trick

The key element here is to leave a 30 mm free edge around whatever it is that you are bagging up. A solid edge is then laid along the line of the joint, this can be a steel rule, a length of timber or a special tool (more on that later). Now simply take the hot air gun and play the air along the surface of the table so that it flicks up the exposed edge of the bubble wrap. This is important, if you just play the gun onto the top of the wrap it melts the top surface first, what we want is to melt both pieces at once.

What happens next is predictable the two surfaces shrivel and melt and fuse together. The result looks lumpy and rough but it is stronger than the surrounding

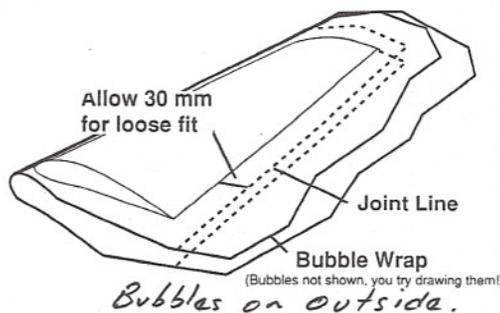
material. Try the method out on a bit of scrap to get the hang of it.

Methods and Refinement

The first problem that you have is to make the bag the right size. Too tight and the wing is a pain to get in, too loose and the bag takes up too much space. The sequence is;

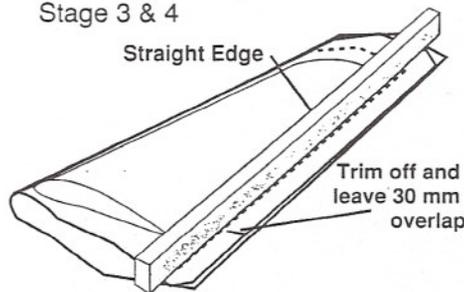
1. Lay the wing on the bubble wrap.
2. Fold over the wrap and allow about 75 to 100 mm for a loose fit.

Stage 1 & 2



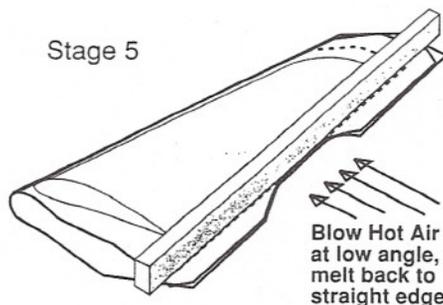
3. Lay the wooden rail (ruler etc.) along the joint line.
4. Cut off any excess wrap leaving about 30mm free.

Stage 3 & 4



5. Play the hot air gun under the excess and melt it back.

Stage 5



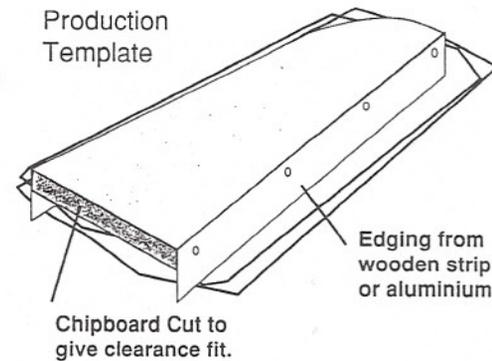
6. Put the rail across the end of the bag and seal off the end.

Double Bubble

A single layer bag has the problem of the exposed bubbles being snagged. So a further experiment was tried with two layers of wrap. This works great, smooth outer surfaces and an extra "pocket" between the layers for the tailplane. The only problem is that the bag is bulkier, but the protection factor is higher.

Production

If you are making a lot of bags for the same model you can productionise the bags. The trick is to make a hardboard template to the size of the panel and edge it with a strip of aluminium. This is then pushed down over the bubble wrap and the edges cut and sealed.



Sealing The Bag

Closing the bag off is another problem area with polythene bubble wrap. It is not really strong enough for Velcro and double sided tape, and a strip of tape can damage it too. The answer is to leave a flap hanging loose at the open end and stuff this down inside the bag to retain the wing.

Alternatives

The method is far from being prescriptive and I am sure that you will quickly come up with variations on the theme and entirely new movements. To be honest this type of bag is not the entire answer, the commercially produced ones are the best in terms of durability.

Stress Relief

Just a little thought to fill up a column inch, if things are starting to get you down you can always make use of the offcuts. Popping the bubbles with your fingers is great, try also your toes and other parts of your anatomy. If you can pop them with your nose you might consider a career in Politics or Banking.

Bunnings do B'Wrap

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