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GUIDE TO SURFACE FINISHING

A METHOD FOR WING FINISHING USING A ROLLER APPLICATOR OR CREDIT CARD.

This guide outlines an alternative method for covering surfaces which require a hard, lightweight durable finish and uses the specially formulated EPOXY RESIN which is applied using a ROLLER applicator or old credit card. Other methods for application are possible using vacuum bagging techniques or latex sheeting methods but the following method yields excellent results. The roller method can be more acceptable than using the credit card technique, for example it can be cleaner and quicker and a uniform coating can be easily achieved.

ITEMS REQUIRED

Component to be covered (for example a wing) Foam rollers 2" or 4" wide and handle
Optional 50mm (2") wide varnish brush Optional super lightweight fairing compound
Bucks-Composites SURFACE FINISHING KIT Absorbent paper

WING FINISHING

Health and safety Note-Operate in well ventilated flame free area and use protective gloves whilst handling epoxy resins. Also operate in a dust free environment to ensure a quality finish.

- (1). Fill any imperfections in the wing with fairing compound mixed with activated EPOXY RESIN following the instructions on the containers.
- (2). Thoroughly smooth the wing using 400 grade paper.
- (3). Ensure that after smoothing, all traces of wood dust are removed.
- (4). **Optional** In order to minimise absorption of EPOXY RESIN AND HARDENER into the wood use a coat of activated EPOXY RESIN AND HARDENER thinned with epoxy thinners to lower the viscosity. Now brush or roll the thinned mix onto the bare wood and wiped off with absorbent paper then allowed to dry and then lightly sanded. Failure to seal the surface may lead to unwanted draining of the EPOXY RESIN AND HARDENER later in the process resulting in 'pin holing' which can be difficult to eliminate. Assemble the foam roller onto the roller handle.

THE WING IS NOW READY FOR GLASS CLOTH TO BE APPLIED.

- (5). Support the wing with underside uppermost such that the edges of the wing are unobstructed. (The wing could be supported on old margarine containers or similar). Turn the wing over so the underside is on top. Work on the underside first.
- (6). Cut the GLASS CLOTH with sufficient to allow an overhang of about 25mm (1") all round. If the wingspan 2 metres or less then the entire underside could be covered in one piece of cloth. Otherwise cut individual wing panels.
- (7). Lay GLASS CLOTH onto the wing and smooth out any wrinkles with hand. A tip here is to clip clothes pegs about 75mm (3") apart onto the edge of the glass cloth and the weight of the pegs drape the glass cloth halfway around the leading and trailing edge of the wing.

ROLLER TECHNIQUE

- (8a). Best results are achieved by mixing small batches of EPOXY RESIN AND HARDENER between 45ml to 105ml and make sure the RESIN AND HARDENER is well mixed and pour this into a roller tray or used margarine tub. Soak up this activated EPOXY RESIN AND HARDENER into the roller and roll it onto the GLASS CLOTH working from one end

of the wing to the other end, Roll any pools of unwanted EPOXY RESIN AND HARDENER onto dry areas of the GLASS CLOTH. Working your way down the wing until the entire batch of EPOXY RESIN AND HARDENER is used up. Keep rolling the resin until full saturation of the surface has been achieved. Any unwanted activated resin can be easily soaked up with absorbent paper, lay the absorbent paper on top of the activated resin on glass cloth on the wing and with a clean roller, roll on top of the absorbent paper then remove the absorbent paper or roll a toilet roll down the wing and disregarding the wet paper as you roll. Work down the wing until all the unwanted resin is removed. Remember only use enough activated resin to stick the cloth to the wing to keep weight down to a minimum. The tray can be washed out with Epoxy Thinners and the foam roller cannot be easily cleaned. Leave to cure in a warm dust free area for 24 hours.

We recommend to use a roller instead of the old credit card for best results.

OLD CREDIT CARD TECHNIQUE

- (8b). Using an old credit card spread the EPOXY RESIN AND HARDENER from the middle of the wing outwards, allowing time for the EPOXY RESIN AND HARDENER to 'wet' the GLASS CLOTH. It is advisable to work on a small area at a time.
- (8c). When the total area has been saturated use a credit card to 'squeegee' the epoxy resin from the middle of the wing to the edges. Mop up the excess epoxy resin as it is forced to the edges with ABSORBENT PAPER. The wing tips may need a separate section of GLASS CLOTH to enable the compound curves to be covered neatly. To avoid the addition of unnecessary weight it is important that the amount of EPOXY RESIN AND HARDENER used is kept to the absolute minimum. Just enough to saturate the weave whilst avoiding 'pooling'. Leave the covering to cure in a warm dust free area for 24-36 hours.
- (9). Ensure that the EPOXY RESIN AND HARDENER on the surface has completely cured.
- (10). Sand back the edges of the overhanging cloth. Ensure that a smooth gentle chamfer is achieved without sanding into the wood.
- (11). Turn the wing over and repeat the process on the upper side. If a gap should appear between the two edges of the GLASS CLOTH then fill with a small quantity of activated EPOXY RESIN AND HARDENER using a brush.
- (12). Gently rub down the surfaces, starting with 400 grade wet/dry paper used wet. Add a few drops of washing up liquid to the water and rinse the paper frequently.
- (13). Dry the wing with ABSORBENT PAPER.
- (14). The wing is ready for painting with a high build filler primer to fill the weave of the cloth, this method saves weight and is easily rubbed down or follow on to section (15).
- (15). For a clear finish without painting or to fill the weave of the cloth prior to painting then support the wing on a level surface and work on the underside of the wing first. Mix a further quantity of Epoxy resin and hardener stir well and using a 50mm (2") varnish brush starting from one end of the wing, apply an even coat of the activated resin to the wing. Allow 24 hours before repeating the process on the other side. If painted finish is required then sand the wing with 400 grade wet/dry paper used wet as before prior to painting..

Notes:-

Superior results will be achieved if the work area is heated (winter time) and temperature above 15⁰C maintained. Failure to do this will prevent the resin from curing properly. Work area should be free from dust and have low humidity

Winter time: The resin in the container can form crystals. With a hair dryer warm the resin in the container until all the crystals have all gone. Now the resin is safe to use.

Summer time: The activated EPOXY RESIN AND HARDENER can be dispersed into a roller tray to prevent heat build up and this will also give you a longer pot life.

Storage: The epoxy resin RESIN AND HARDENER will last more than 12 months if stored in the dark and above 15⁰c