

## Finish for F2B Model Airplanes

*translated by DeepL*

*Divide Grams by 28.35 to get oz*

*Multiply sqdm by 15.5 to get sq.in.*

A finish of a 1.52 m (60 in) model in Polyspan & Silkspan, automotive base coat and 2-component clear coat, without primer weighs in at approx. 2 grams per sqdm or approx. 200 grams.



### Preparation

For impregnation against moisture (risk of warping), it makes sense to paint the inside of the aircraft once completely with 80% thinned nitrate dope. The increase in weight is negligible and a few drops of base coat in the dope facilitate the one-time application.

Remove all markings, stains etc. on the outside. Repair dents with Moltofill Repair Filler for interior use. Spray moisten with water all external surfaces sparingly and allow to dry. Then sand with 240.. Slightly round sharp edges, e.g. along the cap strips. Hold the flaps and elevator separately and mount them only after the final clear coat has been applied.

### Priming

On the outside, apply one coat of 10% thinned nitrate dope, lightly sanded with 240. This primer weighs in at approx. 0.1 gram/ sqdm.

### Undercovering Polyspan

The tough and very light polyester fleece prevents holes and cracks when applied underneath the Silkspan as an undercover on all open bays. It can be glued on dry with thinned nitrate dope and stretched with hot air alone (do not paint). Polyspan is unsuitable for covering 3-D curved surfaces such as wing tips and the material is very difficult to sand. Polyspan weighs 0.24 grams / sqdm and is available from:

Karl Bucher, Seebnerstrasse 7 8185 Winkel, Switzerland. Phone: 041 44 862 00 14

<https://www.faimodelsupply.com/product/polyspan-tissue-white-20-x-12-roll/>

### Silkspan Covering

Use "Silkspan light" (Brodak No. BH-916) for to cover the entire model, Well spray-moistened with water, it can easily be applied wrinkle-free over the Polyspan. Silkspan does not require much nitrate dope and provides added torsional strength. With 4 coats of 50% thinned nitrate dope (dry sanded with 240 after each 2 coats) the covering is ready to paint. Incl. four coats of nitrate dope Silkspan light weighs 0.4 gram/ sqdm.

<http://brodak.com/catalogsearch/result/?q=BH-916&x=6&y=9>

## **Fillets**

After covering, use Moltotill repair filler for interior use (white), for fillets. Shape with a suitable radius tool. Paint with nitrate dope and sand.

## **Basecoat**

The water-based paints used in industry require suitable equipment and processes. I have no experience with those materials and I therefore use solvent-based (automotive) basecoats which need to be protected by a clear coat.

Basecoats cannot be applied with a brush, they have to be sprayed. With a nozzle size of 0.5 to 0.8 mm, an air pressure of approx. 3.0 bar is sufficient. The paint is diluted with the appropriate thinner exactly according to the manufacturer's instructions. The drying time of the basecoats is approx. 4 hours at 20°. The surface remains matt, soft and sensitive. Fingerprints must be avoided as they prevent the adhesion of subsequent colours and/or ink lines.

## **Decorative paint**

When applying decorative basecoat elements, shoot the light colours including red first, then the dark tones and finally the metal effect paints. Using a ruler and curve templates, the contours on the matt base colour are finely marked with a soft, pointed pencil. The colour separation is then masked off with fineline masking tape and/or solvent resistant masking film so that the pencil line remains visible at 1-2 mm from the separating edge. Masking tape corners are first overlapped and then the overlapping tape is carefully trimmed with a sharp scalpel so that the two remaining parts fit together seamlessly and lie flat. The joint is covered with a small piece of tape. Open areas within the contours are covered with conventional crepe masking tape and glossy paper pages from magazines (not from newspapers, these are not always completely tight). The crepe masking tape overlaps the line marking tapes. The now still visible pencil marks are removed with a soft, clean eraser. Immediately before spraying, the surface is wiped with a silicone remover

First all paint edges are sprayed. The gun is directed vertically from above onto the separating edge and quickly guided along. The surfaces then follow in a cross-coat, keeping the coating as thin as possible. After 4 hours the masking tapes can be removed. The tapes are folded flat and pulled off slowly and carefully at 45° from the edge. After 12 hours, the colour edges protruding upwards can be carefully "planed smooth" with the cutting edge of a freshly cut credit card. Guide the card so that the removed color particles do not fall on the light base color. All of the base and decorative colors weigh approx. 0.3 grams/ sqdm.

[http://www.sti-design.com/index.php?page=shop.browse&category\\_id=6&option=com\\_virtuemart&Itemid=1](http://www.sti-design.com/index.php?page=shop.browse&category_id=6&option=com_virtuemart&Itemid=1)

## **2-Component Clear**

For the final clear coat, approx. 300 ccm of diluted top coat ready for spraying is required. First the paint and hardener are mixed according to the instructions and then the thinner is added. The recommended amount of thinner should be increased by approx. 30%. This results in the clear coat running well and flat and producing high gloss with low thickness. Be careful as over-thinning comes with a tendency to form runs.

Shake the mixture very well and let it stand for a quarter of an hour. In the meantime, wipe the aircraft with a wet cleaner or silicone remover. While doing so be especially careful around ink lines and markings.

The spraying of loose parts is a good finger exercise to apply the clear coat correctly. First all edges, fillets are sprayed once and then all surfaces are pre-painted with a first thin layer, which just remains a little matt. Then we let the loose parts air off for about 20 minutes.

During this time, the edges, openings to the inside and fillets are pre-sprayed with the aircraft on a tripod. Also the markings and decals are pre-painted with a fine, matt first layer. All color separations and the markings/decals are coated with a first layer, too

After the loose parts have been flashed off, they are final-sprayed in a crosscoat way. The thickness of the layer is constantly checked by candeling the parts against a light source. As soon as a rich high-gloss finish is achieved, the parts can be put away for drying or curing.

The final painting of the airplane begins with the application of a first layer applied in a crosscoat way all around. The thickness of the layer should be such that the gloss just does not start to build up, not more. Then all edges and the markings are sprayed over again on the upper side and both the canopy and the fuselage nose are pre-painted once more. After a flash-off time of approx. 20 minutes, the

upper surfaces are ready to be finished. With somewhat slower guidance of the gun, with slightly turned up crossflow supply air, just so much lacquer is applied that high gloss is achieved. The airplane is turned on the tripod constantly in all directions into the light in order to control the layer thickness and to avoid runs. If in doubt, apply too little and repaint after a few minutes if the gloss is not yet there.

The first curing time is approx. 24 hours. The clear coat is completely hardened and fuel resistant after 2 - 3 days at room temperature. A 2-component clear coat weighs 0.9 grams per sqdm.

[http://www.sti-design.com/index.php?page=shop.browse&category\\_id=7&option=com\\_virtuemart&Itemid=1](http://www.sti-design.com/index.php?page=shop.browse&category_id=7&option=com_virtuemart&Itemid=1)

### **Repairs**

Damage to the still wet clear coat, including mosquitoes landing in the wrong place at the last moment, can be easily repaired after curing. This is done by flat sanding the clear, first with 600 and then with 1'200 wet sanding paper. If the area is matt throughout, it can be polished to a high gloss with polishing paste and a polishing foam sponge. A little tedious by hand or, efficiently but not without risk, with a slow-running polishing machine. For larger problems, first sand down to the base coat and then renew the entire build-up. When the clear coat is finally applied, first only the narrower repair area is painted with undiluted clear and a high layer thickness. After flash-off, a slightly wider layer with 70% thinned varnish is applied and finally an even wider layer with pure thinner completes the spraying of repair clear. This greatly reduces the spray mist and the repair area can, after approx. 24 hours, be finely wet sanded with 1,200 and polished again.

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