Aerofilm – Stevens Aeromodel

Thank you for choosing Aerofilm, a Stevens Aero product, to cover your model aircraft. Aerofilm is an incredibly lightweight (.6 oz per square yard), yet durable, iron-on plastic film covering. It is an excellent covering solution for your small electric model aircraft.

Preparation

For best adhesion and appearance, it is critical to adequately sand all small imperfections on the part you intend to cover. The surface should be free of cracks, dents, and rough edges. When sanding balsa, use 220 grit sandpaper for the best finish. The pads of your fingers are good indicators of smoothness, if you feel ridges or bumps between adjoining parts, they will be visible from under the covering. It is not necessary to apply other adhesives to balsa structures prior to applying Aerofilm (although it is acceptable if so desired). When covering over plywood or other hardwoods, you may need to apply a heat activated glue or dope for best adhesion.

Iron Temperature

Aerofilm is a low temperature iron-on plastic film. The temperature of your sealing tool is critical to a professional look and durable application on your model aircraft. Small variations in temperature will have a large impact on the quality of your covering job. A modeler's thermometer or an infrared temperature gauge is an important tool to use. The temperatures are as follows:

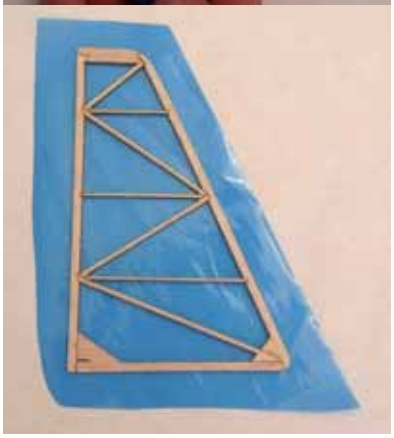
LOW: 175f – 195f	Use low temperature for sealing edges of covering to framework. Also used for covering sheet balsa.
HIGH: 230f – 250f	Use high temperature for shrinking open areas and attaching to compound curves.

Heat Gun

It is acceptable to use a heat gun to shrink covering after all edges have been sealed. Temperature ranges of heat guns very greatly, so it is advisable to test your particular heat gun and its different settings on scrap before covering your model.

Layout and Cutting

Cut Aerofilm with a new blade. Ensure you have at least 1-2 inches of overlap over the edges of the structure. For a good cut, replace blades often. As soon as your hobby knife blade starts tearing the covering, replace the blade with a new one.



Aerofilm has a clear plastic protective film on the adhesive side of the covering. Once removed, the covering has a shiny side and a dull side. The dull side is the adhesive side. To remove the plastic backing, we find that applying a small piece of tape to both the covering side and the protective film side and slowly pulling the two apart works well.

Application

Overlay the part to be covered with the cut piece of Aerofilm with the adhesive side facing the part. With your sealing iron on low temperature, gently tack the covering to the part along one side. Pulling the covering slightly taught with your free hand, tack the covering on the opposite side of the part. Slowly work your way around the piece until all sides are tacked down. Make a concerted effort to avoid wrinkles as you seal the edges to the framework. Before shrinking the covering, ensure that all edges are adequately sealed. Failing to do so will result in the covering detaching from the edges of the piece as the covering is tightened in the next steps.

Trimming

We recommend wrapping the covering in such a way that you have at least ¼" of overlap on the part you are covering to ensure adequate surface adhesion. On some parts, this requires you to wrap the covering around the edge of the piece being covered slightly. Using a new hobby blade, trim the excess covering from the sealed edge. Pulling the covering tight with your free hand during the trim enables a clean, straight cut. Final seal all cut edges after trimming.

Shrinking

Use a sealing iron or heat gun to shrink the covering. If shrinking with an iron, use high heat. Start near the center of the piece and work outward. Keep the iron moving on the covering surface. Holding the iron stationary will quickly melt the covering. Apply only light pressure to the part, letting the heat do the work.

If shrinking with a heat gun, use a test piece to determine the correct distance to hold the heat gun from the part being tightened. Keep the heat gun moving over the surface. Holding the heat gun stationary will quickly melt the covering.

Covering Compound Curves

Use high heat on your sealing iron for applying Aerofilm over compound curves. Gently tack the covering at the center of the part where the curve begins. Pull the covering taught around the curve, being careful to avoid bunching of the covering. Keeping the covering tight, gently tack the covering to the part as it conforms to the curve. Let the heat do the work. Most importantly, work slowly and deliberately for the best finish.

Overlapping Colors

When using multiple color covering schemes, we find it is easiest to overlap colors on existing structural elements (rather than over open areas in the model). It is possible to overlap colors in open areas, but the two pieces of Aerofilm must be joined together before being applied to the model. A flat piece of glass works well as a surface to join the two pieces of covering together. Be sure to overlap the two pieces of covering by at least ¼ inch. Use care when shrinking to avoid detachment of the seam.

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