



DYNAMIC RC HOW-TO:

EASY POLISHED METAL FINISH

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This easy process uses Oracal 351 polyester vinyl film, which is a 1 mill self-adhesive material that is intended for use in the sign making business. As you will see, it also works very well to recreate the look of the natural metal skin on many aircraft. It is offered in both gloss and matte chrome, though I have found that the gloss chrome gives a much better look; even if you want to achieve a dull finish on your plane.

The chrome material can be applied over any surface that is prepared for a painted finish. It cannot be used to cover open bays. It adheres best to a surface that has been glassed, primed, and sanded smooth. However, the Oracal film will work over any hard smooth surface. It is strongly recommended that you do not apply the film directly to the wood structure as it will adhere to the dust on the wood and you will not achieve a strong permanent bond with the structure. The picture to the right shows my A-36 fuselage prepped for chrome application. This plane is of typical balsa and ply construction, sheeted with balsa. The finish is $\frac{3}{4}$ oz. fiberglass cloth attached with clear brushing lacquer, then primed with an automotive primer. Note that the canopy has been masked off then sprayed green. This way the inside of the canopy frames will be the correct color. Leave the masks on; they will come in handy later.



Applying the Oracal material is very simple. Once a piece is cut to shape, remove the backing paper and carefully line up the piece. Starting at a corner, press the film down onto the model's surface. Using a squeegee, work away from that corner. As you squeegee the air out, you will also be pressing the material down. If you see a wrinkle or crease forming, STOP. Carefully pull up the material, work the wrinkle out with the squeegee, and then continue. A little heat might help to remove wrinkles as well. If you use a heat gun, be very careful. The chrome finish will become cloudy if you apply too much heat. An iron set to 150-200°F can also be a helpful tool. An iron helps work the material around tight curves, such as wingtips and fillets. Lightly heat the material then stretch it around the curved surface. Work slowly and do small sections at a time. The chrome must be applied in pieces to achieve a smooth, wrinkle/crease-free finish. Doing this also allows you to create panel lines at the same time.



The first step will be to layout your panel lines. Using a three-view drawing as reference, panel lines have been drawn onto the A-36's fuse using a permanent marker.

Now that you have the panel lines drawn on your airframe, you can start planning where you're going to break your pieces. There are two basic ways to apply the Oracal film, with the best technique utilizing both. The first is to use a large piece covering multiple panels, then scribe the hidden panel lines onto the finished surface of the chrome film. The second is to cut pieces of the chrome film to fit each individual panel on the plane. This second technique is

required around curvy areas, especially if working around compound curves. With either technique, pieces should be applied in a specific order. On the fuselage I recommend starting at the bottom aft end and working your way up and forward. On wings, start at the trailing edge at the tips working inward and forward. Doing this will allow oil and airflow to flow over the seams instead of being forced into them. Fillets and tips are usually left for last.



Here you can see a P-47 wing that I finished using the first technique described. I covered each wing panel in one large piece with a small piece at the leading edge and wingtip. Additional panel lines were then scribed onto the surface using a dull #11 knife.



The fuselage of my A-36 was finished using the second technique, individual pieces for each panel. Cut the material to fit the desired panel or panels you are trying to cover. Cut the material about 1/16" bigger where it is adjacent to another piece. This will produce a 1/16" overlap when the pieces are applied. This overlap will help seal the surface and also create a more pronounced panel line on the surface.



There will likely be some odd shaped panels that will require some special attention during application. Things like wing fillets, scoops, and access panels are a few common examples. For these I like to use the following process to cut the chrome film to the correct odd shapes. Apply electrical tape or pin-stripe material to the model along the seam you're trying to create. One edge of the tape should be along the line, while the tape itself should be over the adjacent panel. Precut any straight side of the piece as normal then apply it to the model with the excess over the top of the tape. Once rubbed down, you will be able to see the edge of the tape through the material. Carefully run a knife along this edge, then move on to the next panel if multiple panels hit this line. When finished, carefully pull up the tape. The excess chrome material will come off with it. You can then apply the odd panel pieces using the first layer of Oracal film as your cutting guide.

This same technique can be used to apply the chrome film to the canopy. If you left the canopy masks on the canopy, you can use the edges of those to guide your knife.

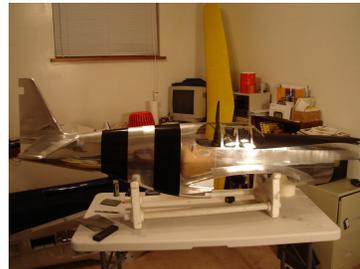
Now that your airframe is covered, the raw chrome surface will most likely be too bright and reflective to look scale. You can dull the surface down by scuffing it with a number of things. Here are a few to try:

- Scrubbing/Scouring Pads
- Fine grit sandpaper (200 grit or finer)
- Steel wool
- Foam sanding pads

You can easily create accent panels in a few ways. One way is to mask off the adjacent panels, then continue to scuff the material on the accent panel. The panel on the P-47 wing shown above was accomplished this way.



Another option is to again mask off the adjacent panels, and then spray the accent panel with a flat or semi-gloss clear coat. Finally, if you know ahead of time what panels you want to be different, you can use some aluminum foil tape in place of the Oracal film. This tape can be found in the HVAC department of most hardware stores. The panels around the exhaust shrouds on my A-36, shown above, were accomplished using the foil tape.



The Oracal 351 material can be painted once it has been scuffed. Mask off the chrome film the same way you would mask off a painted surface. If you have left the material raw or lightly scuffed, then scuff the area well to be painted. Fine sandpaper works great for this. The chrome film will accept any type of paint from latex to lacquers.

The final step is to apply any other accent graphics or trim. Then sit back and admire your work!

