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## ACING ACRYLICS NATURAL-METAL FINISH MADE EASY

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# Metal from ACRYLICS

Can water-based paints provide realistic natural-metal?

BY AARON SKINNER



**F**or years, lacquers have dominated natural-metal finishes for models. Thin and airbrush-ready out of the bottle, brands such as Testors Model Master Metalizer and Alclad II shined many an airplane. Some were fragile and easily rubbed off during handling. All are flammable and the fumes are harmful, necessitating precautions when using them.

Acrylic paints have been a preeminent source for many modeling applications, but natural-metal finishes weren't something at which they excelled — until now, that is. AK Interactive and Acrylicos Vallejo have launched metallic finishes in the last few years to good reviews.

I decided to give Vallejo's Metal Color a whirl. These water-based paints are available in 17 colors and are airbrush-ready in the bottle.

The perfect canvas for this project was Eduard's 1/48 scale F-86F (No. 1163). Based on Hasegawa plastic, the kit includes photo-etch (PE) details and a resin ejection seat. I built the basic airframe, including the detailed cockpit, straight from the box.

## Surface preparation

With the assembled airframe on the bench before me, I really wanted to start painting. But any metallic finish demands a perfectly smooth surface. The thin, shiny paint will reveal the smallest blemish, even scratches left by fine sandpaper. Take time now and you'll avoid heartache later.

I made seams the first order of business, smoothing each with progressively finer sanding sticks to eliminate steps. Super glue filled any gaps, **1**. A mismatch meant the end of the Sabre's tail wasn't square; a few

passes with Goodman Models super sanding blocks fixed the problem.

After rescribing panel lines lost during seam repair, I lightly rubbed the airframe with 1200-grit sandpaper to eliminate burrs and ridges left by the scribe.

Before hitting the spray booth, I tacked the canopy in place with small dots of Deluxe Materials Glue 'n' Glaze and covered it with the kit masks. The previously painted wheel wells and speed-brake bays were also masked, **2**. Don't forget to prep parts not yet attached to the airframe, such as landing-gear doors; treat them the same as the rest of the model, **3**.

I wiped the model with isopropyl alcohol to remove oils which could hamper acrylic paint adhesion.

To match the canopy frame's interior with the cockpit, I lightly airbrushed the



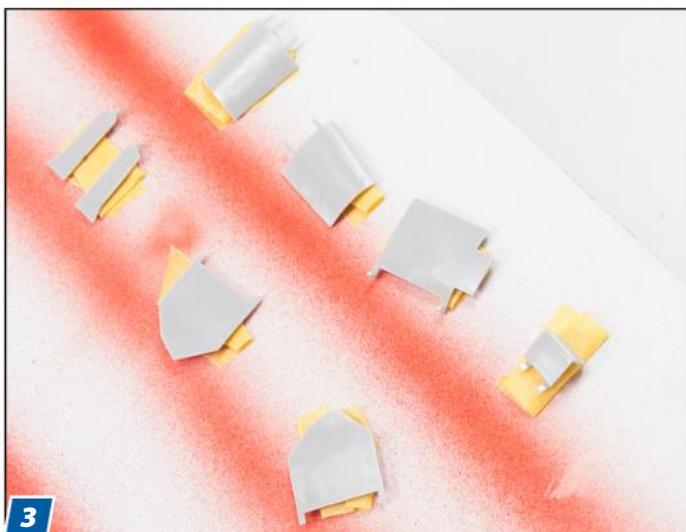
1

A small insert behind the cockpit fit poorly, so I filled the area with super glue. After speeding the adhesive's drying with kicker, I sanded the part flush.



2

I filled the previously painted wheel and speed brake bays with Silly Putty, using a toothpick to push it into corners and ensure tight seals at the edges.



3

After cleaning the gear doors and speed brakes, I taped them to a piece of scrap styrene for painting.



4

Keep the primer coats light and gradually build up the density to avoid obscuring detail such as the PE filler cap on the Sabre's drop tanks.

clear parts with Vallejo's acrylic-polyurethane black surface primer (73.602).

### Prime time

Vallejo recommends using a primer under Metal Color if you plan to mask. But a coat of light gray also will reveal underlying surface problems and unfinished seams. I sprayed the model with light coats of Vallejo gray primer (73.601) mixed with a few drops of Vallejo thinner (71.161), paying special attention to the joints, **4**. Leading and trailing edges are easily overlooked during initial cleanup, but under paint any gap there will stand out like a zit on your nose as you head out for a date.

I spent considerable time filling and fixing gaps and seams with super glue and accelerator, then sprayed those areas with another light layer of gray primer to check my work.

Airbrushed paint often dries a little on the way to the surface and produces a slightly rough finish. So, the next day, I gently rubbed the model with 1200-grit sandpaper to smooth it.

### Back in black

Like Alclad II lacquers, Vallejo Metal Color's shine gains depth when applied over gloss black. I sprayed the model with Vallejo's specified primer (77.660), **5**. After hitting corners and recesses, I broadened the spray pattern to paint the rest.

Don't spray a finish coat in one pass. Instead, the first pass should be light and leave the surface looking sprinkled. The next passes will even out the density and gradually build the shine, **6**.

A day later and the Sabre looked nice and jet black (see what I did there?), but a texture disfigured the finish. I knew it

would ruin the metallic sheen, so I set about polishing the surface.

First, I lightly went over the surface with 600-grit sandpaper, going in circles, **7**. Be patient; pressing too hard will deeply scratch the paint, exposing the gray primer or plastic. In that event, lightly spray more black over affected areas.

Once I was satisfied with the results of this critical first step, I repeated the process with 1200- and 1500-grit sandpaper. The idea is to smooth scratches left by the coarser sandpapers.

To return the paint to its glossy glory, I turned to a micro finishing set from Alpha Abrasives (No. 3000) that consists of sanding cloths in six grits — 3200, 3600, 4000, 6000, 8000, and 12000 — and a foam block. For best results, use them in order, from coarsest to finest, and don't skip a grit. They can be used wet or dry, but I recom-



**5** To ensure even coverage, I first sprayed black primer into the corners, such as wing roots, and around details, like the wing fences.



**6** After several light passes, the doors and speed brakes look all shiny and black. But look closely and you will see an orange-peel texture.



**7** The first passes with 600-grit sandpaper should even out the surface. You'll know you're done when the black looks uniformly flat without glossy spots.



**8** I dipped my finger in water and dabbed it onto the model for sanding. Don't flood the surface, because that will prevent the abrasive from reaching the paint.



**9** I didn't use the foam block, preferring to be able to feel the surface through my fingertip.



**10** Looking like quicksilver, Vallejo Metal Color aluminum is airbrush-ready straight from the bottle. A few drops of thinner will aid flow.



The thin first layer of aluminum puts a shine on the black. A piece of styrene H column inserted in the jet pipe serves as a handle.



More passes and the model looked like it was made of metal — and the paint dried in minutes.



I polished the Sabre with a 12000-grit sanding cloth to eliminate minor grain from the surface.



To mask an odd shape, I gently cut through the tape with the tip of a new No. 11 blade run along the panel line.

mend wet to prevent debris from clogging the abrasive, **8** and **9**.

When I reached the end of the process, the black paint was smooth. But it wasn't as glossy as the primer looked out of the bottle, a function of all the sanding. Adding a little flow enhancer and/or retarder to the black primer may have produced a smooth finish out of the brush and prevented the need for polishing.

### Shoot to thrill

With days of preparation under my belt, the moment of truth had arrived — time to spray some metallic acrylic paint. I started the Sabre with a base coat of Metal Color aluminum (77.701). Shake the paint well — it's ready when only bubbles are visible through the bottom when you flip the bottle — then squeeze a little paint straight into the airbrush reservoir, **10**.

I set the pressure at 15 psi and misted the first layer of metal over the model, **11**. A couple of passes later and the Sabre was smooth, shiny, and ready for more color, **12**. I quickly cleaned the brush with water, then lacquer thinner. The first coat was dry to the touch by the time I was done, but I waited until the next day to begin masking to vary the surfaces with different shades.

Passing a finger over the paint revealed a slight texture I eliminated with fine sandpaper, **13**. In addition to smoothing the surface, this improved tape adhesion.

I masked with Tamiya tape, starting with the center panels on the wings and horizontal and vertical stabilizers, **14** and **15**. Then I sprayed the panels with semi-matte aluminum (77.716).

Removing the tape a few minutes later, after I cleaned the airbrush, revealed nicely delineated center panels, **16**.

More masking followed, **17**. I painted the gun muzzle panels dark aluminum (77.703) and the large panels aft of the gun access panels on either side duralumin (77.702). Mixing different amounts of aluminum and duralumin produced subtle variations between panels and access hatches on the fuselage and wings.

The rearmost section of the fuselage, around the exhaust, is a mix of 2 parts dark aluminum and 1 part gloss black primer. With the paint dry enough to tape over in just minutes, I did all of this shading in one session. There is no limit to this process other than how much masking you want to apply.

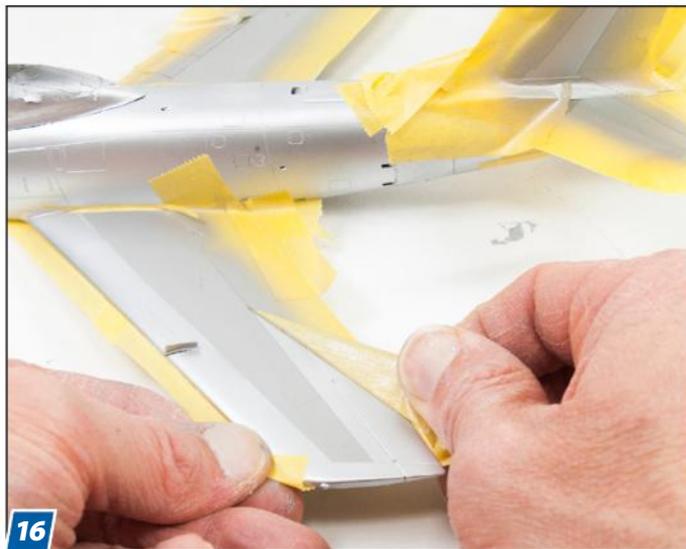
Concerned that the contrast of the panels was too great, **18**, I misted straight aluminum over the model, **19**.

Finally, I airbrushed the landing-gear legs, wheels, and speed brake actuators dark



15

Gingerly placing the tip of the knife under the edge of the tape, I lifted it from the surface.



16

I pulled the tape off the surface gently and it left the surface undamaged. This is tough paint!



17

To speed the process, I masked a bunch of panels. After spraying some with one mix of aluminum and duralumin, I added a little aluminum to the paint cup on the brush and sprayed other panels.



18

The differently toned panels stand out pretty well after all the work — too well, in fact ...



19

... but a light coat of aluminum, the base color, unified the finish and softened the contrasts.



20

Between the contours of the nose and the tapered sections on either side, masking the nose requires a lot of curves. I used Tamiya tape for curves to edge the section before spraying Tamiya blue (X-4).



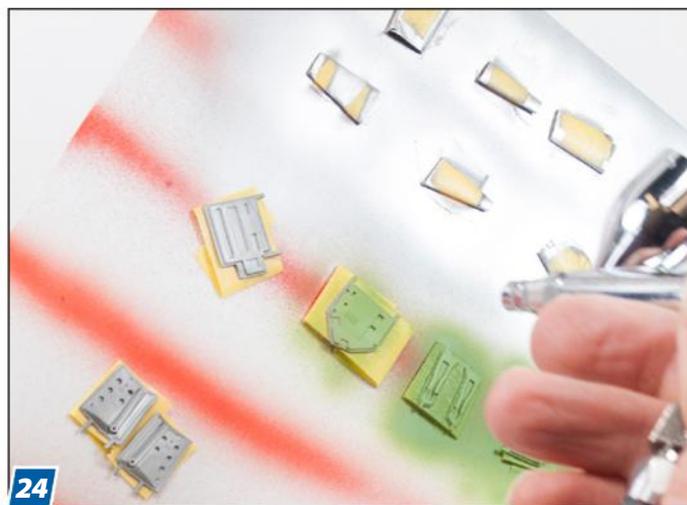
**21** The tail was easier, because a large decal would cover the lower edge. All I had to mask was a natural-metal section at the front. Italeri acrylic light gray (No.4765) provided the color.



**22** If you've ever played with Shrinky Dinks, then the effect of heat on a decal will come as no surprise.



**23** Carefully airbrushing Vallejo matte varnish (70.520) at 12 psi allowed me to control the spray pattern and restrict it to just the markings, dulling the shiny decals for realism.



**24** It proved better to paint the doors' and brakes' outer surfaces first because those smooth surfaces were easier to mask for the interior color, rather than the other way around.

aluminum. The kit's mask covered the hubs, and I sprayed the tires with Tamiya German gray (XF-63).

Before removing the Silly Putty masks from the wheel and brake wells, I ran a sharp blade along the edges. The acrylic paint forms a skin, and it's easy to damage the surfaces around the masks without this precaution.

### Decals and weathering

Eduard provides decals for most of the markings on Lt. Ken Ewing's Korean War Sabre, but I had to paint the nose, **20**, and tip of the vertical stabilizer, **21**.

I chose not to protect the metallic paint with clear (see sidebar), and I was concerned about using decal-setting solutions; some can affect acrylic paints. Instead, I applied each marking and blotted excess water by rolling a cotton swab across the

marking. A hairdryer on high settled the decals into panel lines, **22**. The kit's decals are beautifully printed, but looked too shiny on the wartime fighter, **23**.

Before applying decals to the speed brakes, I taped them and the gear doors facedown (off the model) and airbrushed Testors Model Master Acryl green zinc chromate (No. 4852) on the inside surfaces, **24**.

The thin paint and differently toned panels expose the recessed panel lines quite well, minimizing the need for washes. But I wanted to set control-surface boundaries and certain panels apart, so I applied artist's oil pinwashes to those spots, **25**. Concerns about the effect of the Turpenoid used for the washes further restrained their application. I wiped excess off in the direction of airflow so any residue looked like fluid streaks.

I installed the landing gear, speed brakes, ejection seat, canopy, and pitot tube to finish the build, **26**.

### Conclusion

The finish looks like slightly weathered aluminum, perfect for a well-maintained but operational frontline fighter. A glossier black base coat might have produced a brighter shine.

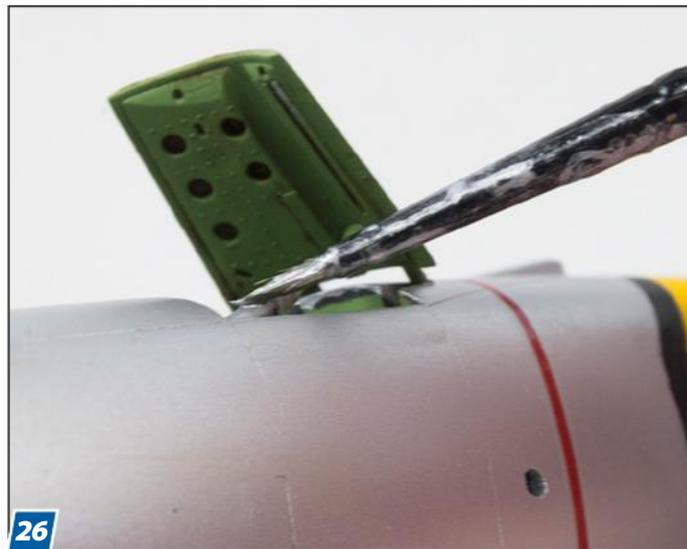
As with all natural-metal finishes, the hard work comes before you ever spray metallic paint. But I liked how easy these were to apply. They have no noticeable odor and are very tough, standing up to handling during final assembly better than any other metallic paint I've used.

I will definitely use them again and I aim to try AK Interactive's Xtreme Metal acrylics on a P-38 in the near future. Stay tuned! **FSM**



25

I mixed Winsor & Newton burnt umber with Turpenoid and let the wash flow around the edges of the ailerons, flaps, elevators, and rudder.



26

I had to touch up a couple of struts and actuators. As it turns out, Vallejo Metal Colors hand-brushed pretty nicely on small areas.

### Clear-coat conundrum

To be perfectly honest, I finished this Sabre twice: Not out of choice, mind you, but because of a bad decision — a decision I knew in my heart was bad as I was making it — that forced me to sand the first finish off and start over.

That decision? Applying a clear coat over the natural-metal finish.

Vallejo recommends it to protect the paint against weathering — a perfectly rational reason — and has a metal varnish

(77.657) specially formulated for the task.

Doing so on any metallic finish is a serious consideration. Sure, it protects the paint from weathering and decal-setting solutions as well as handling. But most clear coats dull the sheen, creating a less-natural appearance.

However, given that this was the first time I'd used the paints, there were a lot of decals, and I wanted to use artist's oil washes, it seemed a good idea.

Unfortunately, despite using flow enhancer and retarder, the varnish refused to level out on the model and the result was anything but glossy. In fact, the surface was more akin to a golf ball than a plane.

Out came the 400-grit sandpaper. By the time the surface was smooth, it was down to black and gray primer in places.

Lesson learned, I applied more black primer and polished it smooth before redoing the metallic finish.



Lt. Ewing's F-86F stands ready for a mission. I prefer subtle variations between panels on natural-metal aircraft, but Vallejo Metal Color paints offer a lot of choices for wilder finishes.