

PML GENERAL ASSEMBLY & PAINTING/FINISHING FAQ

8/11/02

General Assembly Tips

We say so in all our kit instructions, but **make sure you lightly sand any area to be bonded!** This includes fins, airframe (inside and out), motor mount, etc. This is important to get a good "bite" on the materials for the epoxy, and is especially important in high-stress applications. It takes very little extra time to do this, and the sanding dramatically improves overall strength. Don't skip the sanding!

1. After filling tube seams as described in the Airframes FAQ under *Filling Phenolic Tube Spiral Seams* (unless you're using our Quantum Tube, which has no seams), assemble according to the kit instructions. We recommend using a quality epoxy in all gluing procedures (see the Adhesives FAQ for details). Be sure to apply epoxy fillets to all critical areas, especially the fins.
2. Spray the entire rocket with a scratch filling sandable primer. Let dry, then sand with 220-grit sandpaper. Keep repeating the spraying and sanding process until all defects are gone. Some people use alternating coats of gray and white primer to help identify particularly high or low areas. Use white primer as the final coat for rockets you intend to finish in light colors—especially white and the various fluorescent colors. Gray is better for rockets you intend to finish in dark colors. It is all right to sand through the primer except on the last primer coat. Also, the last primer coat may be sanded with even finer sandpaper. Even better is using a green 3M ScotchBrite pad.
3. Now is the time to touch up any dings that may have occurred during assembly. Dab a bit of automotive spot putty on the affected area, let dry and sand smooth.

Final Finishing/Painting

- Stay with the same brand of paint throughout the process; primer, base color, accent colors, and clear coat. Paints seem to work best as a "system", so use those from the same company to ensure compatibility. We've had good luck with Krylon, and it comes in a wide variety of colors. However, the relatively new Krylon latex enamel sprays can be rather "globby". Be sure to test them first before using them on your big project!
- Some customers have noticed unpainted QT yellows slightly after long exposure to sunlight. Here's why: Prolonged exposure to UV will make any plastic brittle. This may take years, though. Modern plastics like QT may also have some UV blocking additives blended in to delay the deterioration further. The color pigments in the plastic are the first to break down, hence the yellowing. Paint stops the breakdown process.
- DO NOT skimp on the "shake the can for at least two minutes after the ball rattles" step! This is a mistake many people make. If you need to, stand in front of a clock while you shake the can. Getting all the paint in the can well mixed is a very

important step that should not be rushed! Also, as it notes on the can, shake it for a few seconds every minute or so while you're painting to help keep it well mixed.

- Four or five light coats are better than one or two heavy coats. You will reduce the risk of runs and sags in the paint dramatically, and it will dry faster as well.
- For the very first coat, apply a very light coat of your base color. You're really not trying for any color coverage at all, just getting a bit of the paint stuck to the surface of the rocket to allow the subsequent coats to bond to it. Allow this coat to dry for about 5 minutes before applying more coats. This first very light coat seems to "set the stage" for following coats so they won't run as easily.
- For the best finish, let each coat dry and sand lightly with 320 or 400 grit sandpaper; you should let each coat dry overnight before sanding. Also, wet sanding is best to sand paint because the water acts as a lubricant and a coolant, and flushes away the paint that's sanded off, keeping the sandpaper cleaner. Make sure you have sandpaper that's made for wet-sanding, and dip it in the water bucket at least every 30 seconds or so.
- Apply the last color coat as heavy as possible without running or sagging. There's no way to say how much is too much or too little; it's just something you develop with practice. This is another reason to stick with one brand of paint, because you develop a feel for how the paint sprays and adheres to other layers and can learn how much is just enough before it will run.
- Let the paint cure for at least 48 hours before handling! This is difficult to do, but will really pay off in the long run. Even though the paint feels dry, it is still quite soft underneath the top layer and will be easily damaged until it's fully cured.
- Once the paint has cured you can apply your decals or self-adhesive Monokote accent stripes (available at most hobby shops). Many hardware stores also carry various colors of vinyl tape, what most people call electrical tape. We've used red, blue, green, yellow, and white, as well as the usual black electrical tape for stripes. It's a little thicker than Monokote or paint for stripes, but is very fast and easy. If using water-type decals, wet the area where the decal goes with slightly soapy water to make positioning the decal easier. This is NOT recommended for the decals from PML; they are self-adhesive and the soapy water will make them not stick.
- PML offers both replacement decal sheets for our kits, as well as PML logo decals on the Decals Page of our webstore. Customers often order AMRAAM or Bulldog decal sheets for their scratchbuild military-look rockets, as those sheets have items that can be used to mix 'n' match a military look to your own design.
- We recommend a clear coat of some sort to help protect the decals as well as "seal" their edges to help prevent them peeling off. There are three general gloss levels of clear coat spray available (in order of decreasing gloss):
 - Crystal Clear: very shiny, glossy finish; almost a "wet" look
 - Matte (or Satin): not shiny, but not extremely flat/dull
 - Testor's Dullcote: very flat, dull finish; most "realistic" look to missiles, etc.
- When using any clear coat, put on only VERY thin, light coats, and wait at least 5 minutes between coats. The clear coat can damage your decals or paint if you put it on too heavily or don't wait long enough between coats! This is especially true for the first coat; you can go a little heavier after the first one is dry. There seems to be something about the solvent used in the clear coat that will "eat" the decals or base

paint if there's too much clear coat on at a time. Please...go easy on the clear coat! Don't let this deter you from using the clear coat; it really is a benefit to use it. Just go easy. Usually 2 coats are sufficient, though some people use three.

- Also, be sure to always test clear coating metallic paints. Often clear coats will dull the metallic look you are trying to achieve. From the Ask Krylon feature of Krylon's website:

“The only product you want to top coat the metallics with is the Krylon Living Color Latex Enamel Paint. It will darken the paint a few shades but it will keep the metallic look. If you use any of our lacquer clears the metallic look will be completely stripped out.”