

# SCALE PUBLICATIONS

PRESENTS

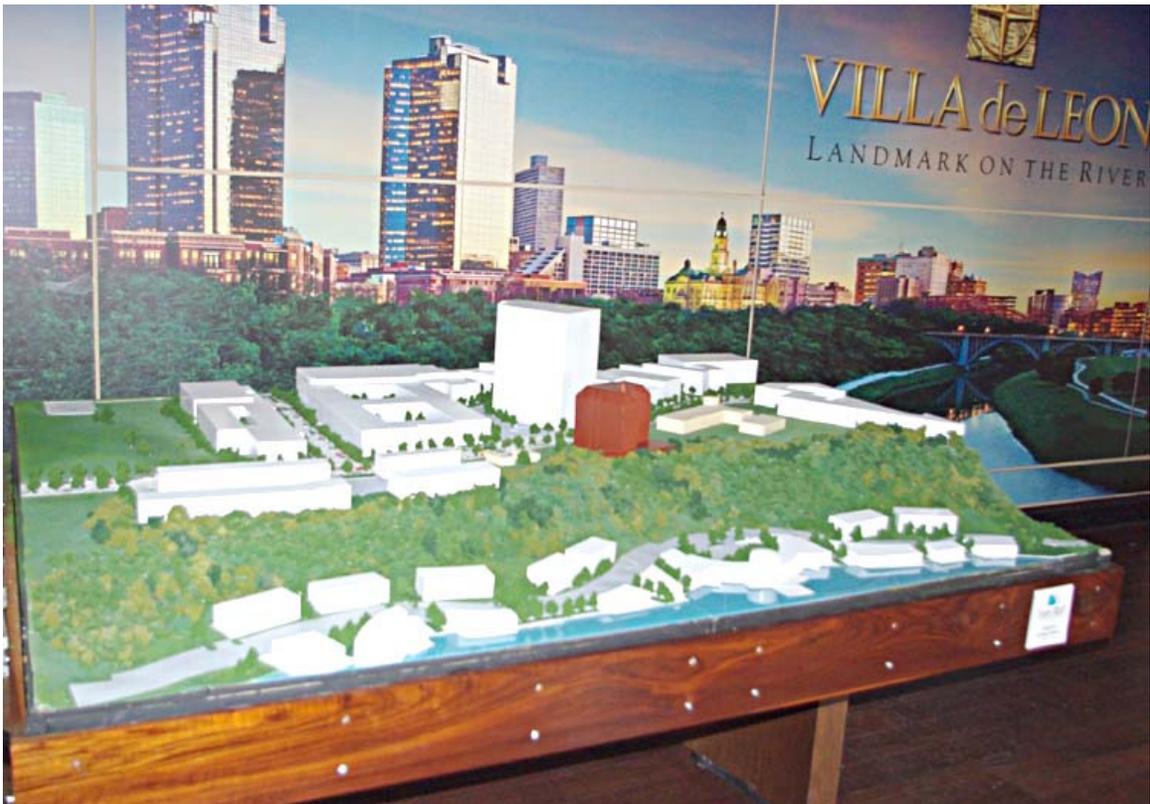
BEWARE THE CHANGES WITH  
KRYLON PAINT (OR ANY SPRAY  
PAINT FOR THAT MATTER)

by

Richard Marmo

Whether you build models, do crafts, woodworking or whatever, sooner or later you will need to do some kind of painting. Airbrush, airless sprayer, paint roller or the old-fashioned conventional paintbrush are all the best choice at one time or another. But for convenience and speed, nothing beats the old, familiar spray can. At least that used to be true. But times have changed.

Thanks to the EPA and the ongoing campaign against VOCs (volatile organic compounds), manufacturers have made some rather interesting changes in the formulas of spray paint. So you can see exactly what I'm talking about, let me tell you about a multi-week nightmare I had that involved Krylon paint. You know Krylon, don't you? The predictable, reliable acrylic lacquer paint in a white can that dried in 12 minutes? The one that you could pick up and use, knowing that it would behave exactly the way that it has for the last twenty or thirty years? Well, surprise. Things are more than a little different these days.



This photo shows the modified and finally completed Trinity Bluff development model. As you can see, Krylon Industrial (the old, original Krylon) gave me exactly the results I was looking for.

Back around 2006, I built an architectural model for a real estate developer. You know the kind. 4 ½' wide x 7' long, showing topographic details and all the proposed buildings represented by white boxes of the appropriate size and shape, but no details or exact contours. Built it using the same techniques I always had, including using mixed brands of gray primer and Krylon Semi-Gloss White for the finish coat, all paint involved being acrylic lacquer. Everything worked exactly as it always had, the finished model was delivered and I forgot about it.

Fast forward to December 2008. Most of the building designs had changed and I was asked to modify the original model to reflect the changes. I didn't expect any problems and set out to make the requested alterations. After picking up several cans of Krylon, I started a painting session. The acrylic lacquer primer left over from three years before went on without any problem and I followed that with a coat of Krylon. That's when things got interesting. In fact, more than a little interesting.

Within fifteen or twenty seconds after spraying a coat of white, it began to bubble, much like oil in a frying pan. This only happened in small areas, but then I noticed that, the longer it dried, the more things began to change. It started crinkling, wrinkling and actually lifting from the underlying surface. Having no idea what the real problem would turn out to be, I automatically assumed some kind of contamination on the surface of the model. So I waited for things to dry, sanded all the flaws down and resprayed. Same result.

This went on for two days, trying various ideas, methods and techniques I had used over the years. Sandpaper piled up. Frustration mounted. Nothing worked. I finally called Krylon at their 800 number (1-800-4KRYLON). What was I told in the initial conversation? That I needed to spray light (mist) coats and let it build up. O.K., I tried that. No improvement. More calls to Krylon. Now I'm being told that I need to wait five minutes between coats. I tried that advice. No go. At this point, desperation is beginning to set in, partly because I can't figure out just what the blazes is going on and partly because I need to finish the project to satisfy my client.

To make a long story shorter, at least a little, by the time five days and seven calls to Krylon had gone by, I knew what the problem was. And I was sorry I did.

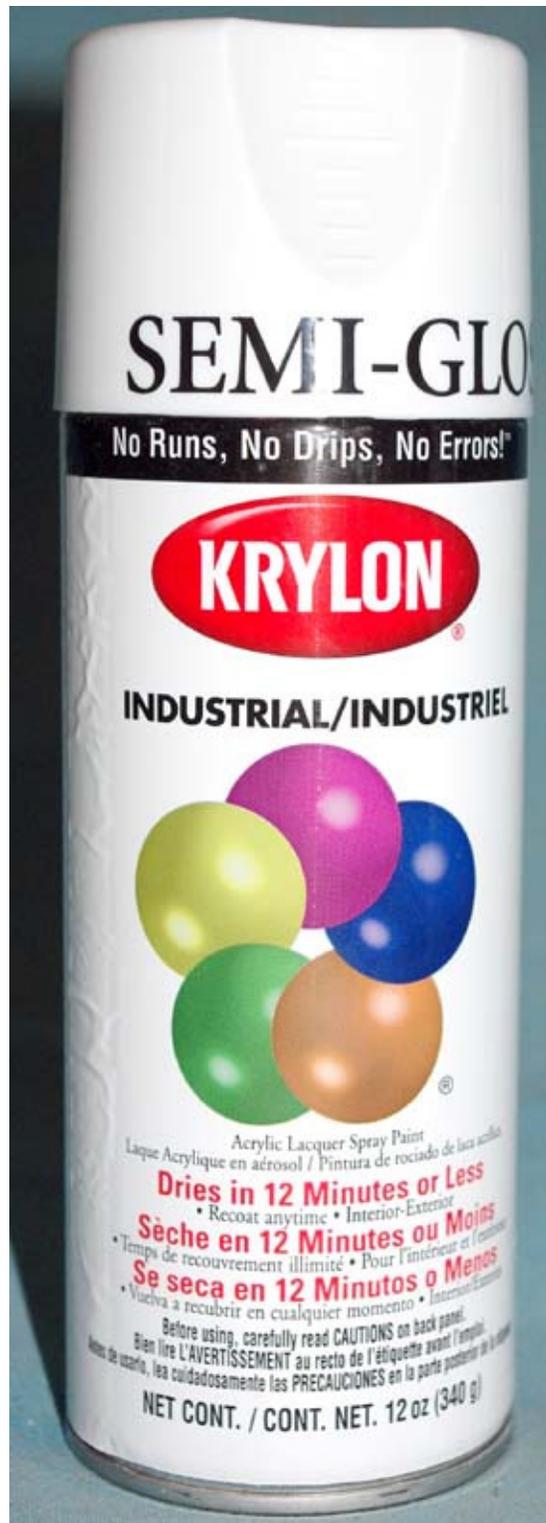
## GOODBYE TO ACRYLIC LACQUER

In a nutshell, Krylon has changed from an acrylic lacquer to an oil based enamel. Not just an ordinary enamel that dries relatively quickly and can then be recoated in a normal manner, but an oil-based enamel that has more than a few nasty little requirements. And when did this change occur? In 2008 with no mention on the can that a change had been made other than revised instructions in very small print on the back label that no one reads in the first place. Incidentally, the reason the instructions are in such small print is because of all the required warnings courtesy of...you guessed it...the EPA. Font size is now down to a level that makes your Opti-Visor an essential accessory.

Now to be fair, Krylon did change the front of the can when they changed the formula. But the changes aren't the type that the average person will pay that much attention to in the first place (every company freshens their labels and logos from time to time) and in the second place, unless you have an old can to compare it with, it won't even register on you that it's been changed.

Before I continue, let me reiterate that the mess I ran into is not Krylon's fault, any more than it is any other manufacturer of spray paint. The blame for all of this lies squarely at the feet of the EPA and their environmental regulations. But that doesn't help us when it comes to using the stuff.

To begin with, you **MUST** read the instructions on the back of the can in order to avoid disaster. So that you can understand what I'm talking about and see the differences between the two, I'm reproducing the instructions from both the old and new Krylon. For starters, let's take a look at old Krylon, which is now known as Krylon Industrial:



As you can see from the photo, their old motto that said No Runs, No Drips, No Errors still wraps around the top of the can, just beneath the cap. Below the Krylon logo you now find Krylon and the words Industrial/Industriel. All

other information on the front of the can is written in English, Spanish and French. Those statements are:

Acrylic Lacquer Spray Paint  
Dries In 12 Minutes Or Less  
Recoat Anytime \* Interior - Exterior  
Before Using, Carefully read CAUTIONS on back panel

The back panel is quite concise and to the point. While fully 75% of the back panel is devoted to the assorted obligatory warnings, the portion referring to the application/use of the paint is as follows:

**CAP INDICATES COLOR/FOR INDUSTRIAL USE ONLY**

**WARNING!** If you scrape, sand or remove old paint, you may release lead dust. **LEAD IS TOXIC.** Contact the National Lead Information Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead). Surface must be clean and dry. Shake can until ball rattles for 1 minute. Hold container upright 10-12 inches from the surface. Do not apply with a continuous spray. To avoid runs, apply several thin coats. For best results, use at room temperature 70F-90F (20C - 30C). After spraying, turn can upside down and spray until clear gas comes out.

With the exception of the lead warning, these have been the instructions on how to use a spray can of paint for the last several decades. Unfortunately, thanks to the EPA and it's obsession with protecting us from ourselves (which frequently does far more harm than good), things have changed radically. Now look at the new can of Krylon:



Looking at a photo of the new Krylon, the first thing you notice is that their old motto is gone. In its place are the words **Dries in 10 MINUTES or less** and they are in smaller letters and positioned just above the Krylon logo. Below the logo, all in English, are:

INDOOR/OUTDOOR  
METAL - WOOD - WICKER - MORE  
SEMI - GLOSS  
WHITE  
Exceptionally Smooth  
and Durable Paint.

There's also a graphic touting their new EZ TOUCH 360 DIAL that provides COMFORT & CONTROL.

Turning to the back panel, the application/use instructions are no longer concise. 50% of the available space is taken up with warnings, including the fact that the paint includes Acetone, Propane, Toulene, Aliphatic Hydrocarbons, Butane and Trimethylbenzenes. This information is provided in both English and Spanish (French has disappeared).

The remaining 50% of the back of the can deals with application/use of the product, with the information in both English and Spanish. Again, a French translation has vanished. The new application/use information says:

CAP INDICATES COLOR

EZ TOUCH 360 DIAL adjusts to spray horizontally, vertically or any angle for precise control and a perfect finish. Plus, EZ TOUCH 360 dial means no finger pain from spraying. Use on: Indoor and outdoor wood, metal, wicker, glass, ceramic, masonry, paper & fabric. Coverage: 25 sq. ft. on non-porous, primed surfaces. Painting conditions: Spray outdoors or in a well-ventilated area. Best results when air & surface temperature 50F (10C) to 90F (32C) and humidity below 85%. Preparation: WARNING! If you scrape, sand or remove old paint, you may release lead dust. LEAD IS TOXIC. Contact the National Lead Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead). Surface should be clean, dull & dry. Remove loose rust & paint with wire brush or sandpaper. Priming: Prime surface, especially bare wood & metal. Painting: Shake can 1 to 2 minutes & during use. Test spray in an inconspicuous place for compatibility. Hold can 6" - 8" from the surface, spray in sweeping motion side to side with slight overlap. Apply multiple thin coats, wait 1 minute between each coat. Dry & application times: Dries in ten minutes or less. Handle in one hour. Apply additional coats within 1 hour or after 24. After use: To prevent clogs, hold can upside down &

spray until clear gas appears. To clean paint on dial, wear eye protection, & wipe off with mineral spirits - DO NOT stick pin in dial opening. Clean overspray with mineral spirits, following solvent manufacturer's instructions. Recycle empty can & cap per local regulations. Contact us: 1-800-4KRYLON or ask@krylon.com Satisfaction guarantee: If dissatisfied, contact us with product number & batch code on bottom of can for full purchase price refund.

Now, don't get the idea that Krylon paint no longer works. It does and quite well too. But it doesn't work the same way it used to, which is the kiss of death for anyone who used Krylon for years, doesn't read the back panel because they have no reason to and is working on a time critical project. Who knew that the EPA was going to force a change in the formulation of spray can paint? If Krylon can be faulted at all, it's in not putting a prominent notice on the can that the formula has been changed. Even that is hard to do when you compare the limited amount of space on the can with all the mandatory warnings that must be included. With the EPA driving the bus, all Krylon can do is make the best of the situation, which they do by going so far as to state that changing from acrylic lacquer to oil-based enamel makes the product more consumer friendly. Uh-huh.

Incidentally, if you're going to use the new Krylon, you will definitely have to build up the color with multiple light coats. You do that with any rattlecan paint, but usually it takes no more than a couple or three coats to get the coverage you want. And normally the first coat can be heavy enough to attain a fairly uniform coat of the desired color without the paint running on a vertical surface. That approach works fine with acrylic lacquer, but try the same stunt with oil-based enamel and you'll be dealing with runs.

Krylon also tells you that surfaces need to be primed with a compatible primer, namely theirs, and that's true enough. The problem is that their primer has similar application instructions as their paint because it is also an oil-based enamel, meaning you can't spray acrylic lacquer over their primer. There is some difference in their primer formula because the instructions state that primer coats can be recoated anytime, but it still isn't an acrylic lacquer. It also comes in White, Ruddy Brown and Black, with the Ruddy Brown and Black having the ability to be wet sanded.

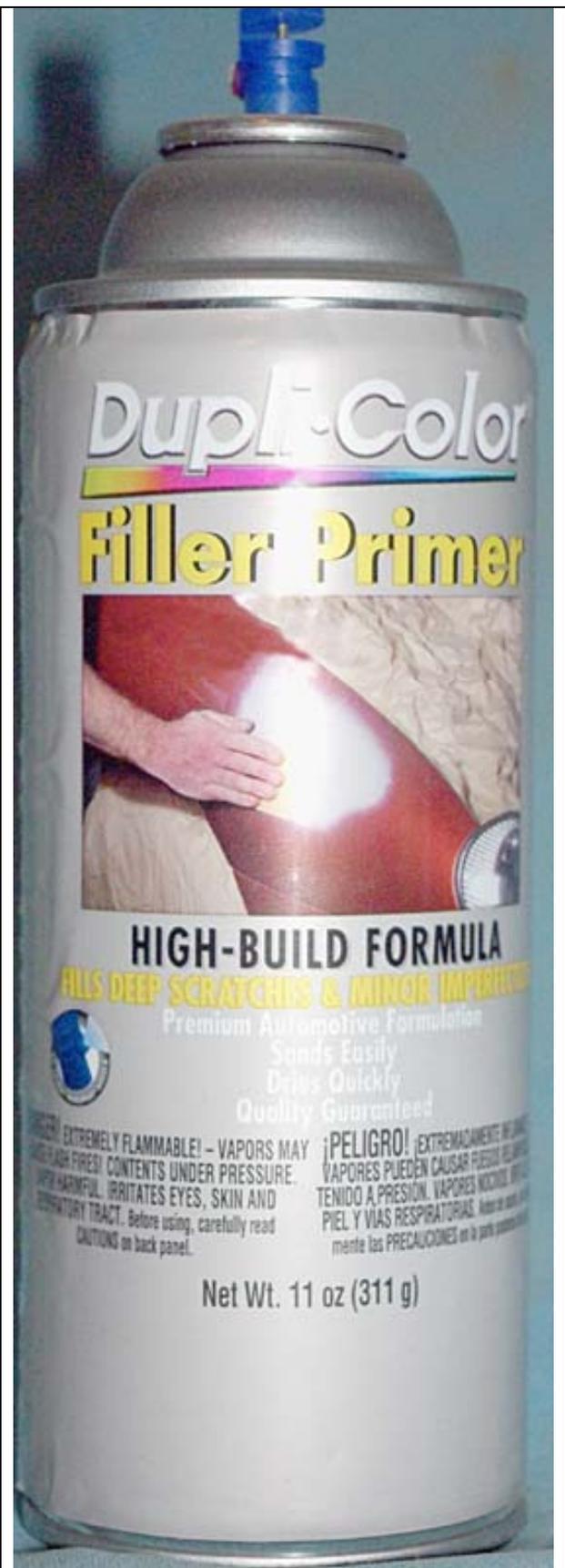
Since I had already sanded, primed, painted, re-sanded, repainted and re-sanded some more, I was already faced with having to rebuild four major structures. The reason for that was that the solvents in the oil-based enamel had permeated the plastic, making it impossible to get a smooth coat of acrylic lacquer primer. With those structures rebuilt, I had to find a source for the old Krylon, which was now an industrial paint. That proved to be a snipe hunt of it's own.

### ACRYLIC LACQUER IS A HAZARDOUS MATERIAL.

Industrial paint is only available from industrial suppliers, so I took a trip thru the yellow pages. What I learned is that most industrial suppliers don't keep it in stock but will order it for you. In case lots. Worse, because Krylon acrylic lacquer is now classified as a **hazardous material** some suppliers will not even tell you that they can get the stuff unless you already have a commercial account with the company you're speaking with. Still others won't sell it to you unless you possess a hazardous material permit! But if you persist, it is possible to find an industrial supplier who will order it and let you pick it up at the will call desk. The down side to this? It takes anywhere from three days to a week for it to come in. This is because aerosol paint cannot be shipped by air, traveling overland instead. I ordered the requisite case of Krylon Industrial White (6 cans) and got it in three days. Not bad when you consider it had to be shipped from another state. At \$5.25 a can, that case set me back a little more than \$34.00.

### OR IS IT?

But there was still the problem of primer. Krylon no longer makes their Sandable Filler and Primer at all, which just happened to be the single best rattlecan primer I've ever found, so the question was where do you find some compatible acrylic primer. As it turned out, Krylon's sister company, Dupli-Color produces a line of acrylic lacquer automotive paint that includes a Filler Primer in what is described as a High Build Formula. While being very similar to the late, lamented Krylon Sandable Filler & Primer and working like a charm, it does have one fly in the ointment. Finding an auto supply store that carries it. In my neck of the woods, Ft. Worth, Texas, the only place that stocks it (that I've been able to find) is NAPA Auto Supply.



All of the above raises a very interesting question. When is acrylic lacquer a hazardous material and when isn't it? Krylon Industrial is classified that way and is both difficult to find and difficult to buy. On the other hand, Dupli-Color acrylic lacquer is fairly readily available thru certain auto supply stores and is also listed on the Krylon website as an industrial paint. It is obviously *not* classified as a hazardous material because all you have to do is pick a can off the shelf and pay for it. I don't know the answer to that one, but I suspect that it can be found in the bowels of EPA rules and regulations.

Will other primers work under the old Krylon acrylic lacquer? I haven't done any tests, but logic and common sense (which seems to have been thrown out the door of late) says that they will...as long as they are also acrylic lacquers. All I can suggest in this case is to read the can's label to see if the contents are a true acrylic lacquer or if it's been modified in some way, shape or form.

Lest you think that I'm going out of my way to beat up on Krylon, let me disabuse you of that notion. I love Krylon paint and have used the stuff for decades. As I've already stated, they are the victims (as is any paint manufacturer doing business today) of EPA regulations. This has caused problems where all paint is concerned.

For example, walk into Wal-Mart and you will find their line of spray paint under the ColorPlace label. It's a decent paint and I've used it. But, as with Krylon, you now have to read the back label and believe what it says. Incidentally, it *is* an enamel, though the only place it tells you this is the top line of the instructions and not the front of the can. Krylon, on the other hand, doesn't tell you at all. Anyway, let's look at the instructions for their Gray Primer:



**THIS SPRAY ENAMEL IS NONTOXIC WHEN DRY. May be used for interior or exterior, on wood or metal; fade and weather resistant.**

**DIRECTIONS:**

**WARNING!** If you scrape, sand or remove old paint, you may release lead dust. **LEAD IS TOXIC.** Contact the National Lead Information Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead).

1. Make sure surface is free of dirt, grease, etc. Remove rust with wire brush.
2. Use drop cloth or newspapers to protect surrounding areas from spray mist.
3. Do not spray in humid conditions. For best results, use only when can temperature is between 65F and 90F degrees.
4. SHAKE CAN vigorously for at least one minute after mixing ball rattles to insure color uniformity and to prevent clogging. Repeat during use.
5. Point opening of spray button toward object, holding can 12 to 16 inches from surface to be painted.
6. Press spray button firmly. Fingertip should not extend over front of spray button. Use steady, even strokes while spraying.
7. Several thin coats give a better finish than one heavy coat. Recoat within 4 hours or after 1 week to avoid lifting.
8. If spray button becomes clogged, wear eye protection, wipe off the button opening with lacquer thinner - **DO NOT** stick pin in spray button opening.
9. Clean spray button immediately after use by turning can upside down and pressing spray button for 5 seconds or until no more paint comes out.
10. Dispose of in accordance with local, state or federal regulations.

Note that ColorPlace paint gives you a much longer application window... 4 hours... BUT requires you to wait an incredible ONE WEEK after that 4 hour window to recoat in order to avoid lifting. The bottom line with this paint is that if you can't get the job done in 4 hours, you darn sure better not be in a hurry!

### PROBLEMS WITH OTHER PAINT BRANDS

Just in case you have the idea that Krylon and ColorPlace are the only paints causing modelbuilders (and others) problems, guess again. They're just the most obvious due to their near-universal availability. In the process of solving my problem, I ran across a few other situations you may want to keep in mind.



I used to buy DuPont Lucite acrylic lacquer, custom mixed, in quantities as small as one pint to run through my airbrush. That was years ago. Trying to find an acrylic lacquer paint I could use, I called an automotive paint store,

only to be told that DuPont discontinued their Lucite acrylic lacquer line in 2005.

More rattlecan problems came to light as the result of an email thread that surfaced in a Yahoo modelbuilding group. This one involved Dutch Boy clear coat. Following the instructions, the modeler using the stuff had no problem with the first application. When he went to use it again, the nozzle squirted out a gummy string of clear that wound up ruining the model. This in spite of the fact that he followed the instructions to the letter. While I don't know if the stuff was lacquer or enamel, there's no way it should have misperformed as it did.



Finally, those of you who use Model Master **Metalizer** may have something to be concerned about as well. According to the current Testors website,

their Metalizer is now referred to as Metalizer enamel paint that is to be used only in an airbrush. All the Metalizer I have is their original formula, a pure lacquer designed expressly for airbrush or spray can application.

## CONCLUSION

The bottom line is this: Paint as we have known it no longer exists. Today, formulations are controlled, influenced and/or regulated by the EPA. Some paint cannot be shipped out of the U.S. and certain paints and coatings cannot be shipped into, purchased, sold or used in specific areas or states, most notably California.

If you have some old cans of original Krylon...and you'll know if their old "No Runs, No Drips, No Errors" motto wraps around the top of the can, treasure them, cherish them and use them until you've milked the last drop of paint from them.

Keep in mind that there is no way to predict if or when any paint formulation will change. At the time this article was written, the EPA had just ruled that all greenhouse gases are pollutants and are a hazard to human health as well as the environment. This includes carbon dioxide, which has frequently been used as a propellant in spray cans. How this latest ruling will affect paint manufacturers and our hobby is anyone's guess at the present time.

Incidentally, all human beings exhale carbon dioxide as part of our breathing cycle, a fact that makes each and every one of us a polluter and potentially subject to regulation by the EPA. Do you see how ridiculous things are getting? Still, things are what they are and all you can do is try to find a way to deal with it while continuing to get the results you want or need.

So before you take a chance on ruining that model you just spent 137 hours on, read the directions on the bottle or can and follow them to the letter. Even better, keep a scrap model around to test the paint on before you use it on either that contest entry or the next addition to your display case.

Happy modeling.

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