

*Acrylic paints are long lasting, easy to use, and come in plenty of colors*

# Jump in, the water's fine: Using water-based paints

by Gary Anderson

In my 25 years in the sign business, I've seen a lot of changes. New things are always coming on the scene. One of the things I'm most enthusiastic about is water-based acrylic paints for sign work.

I've been using water-based paints more and more over the past 12 years, and hope to switch entirely to this medium in the near future. Shops who would like to start using more acrylic paints now



have more color options than ever. For shops who do a lot of window lettering or vehicle graphics, I can see where the transition from oil-based to water-based would be difficult. Our shop deals primarily with wood signs, so the transition has been easier. In this article, I'd like to share some of what I've learned about using water-based paint.

## Brands and modifiers

When I say "water-based paint" I'm talking about acrylic or acrylic-latex products made for sign work or house paint. Most water-based paint has a certain percentage of acrylic content. The higher the acrylic content, the tougher and more flexible the paint will be when it dries. Paint with a dry titanium base gives much better coverage. And like oil-based lettering or bulletin colors, some colors cover better than others. Liquid titanium-based acrylic does not cover as well and can be very frustrating to use because it requires so many coats to get adequate coverage. Once it's covered, though, it will give good outdoor performance. Most of the less expensive acrylic paints are liquid titanium based. Price is a determining factor in the quality of the paint, simply because it costs a lot more to make dry-based than liquid-based paint.

A few of the brand names that are dry-based are Porter, Benjamin Moore, and Pratt & Lambert. We have been using Porter 500 series flat and 515 acrylic bonding primer now for about 12 years with great results. Some of the sanded signs we've done have been up for nearly 10 years and still look good. Porter makes only flat and gloss acrylic paint, but I consider their flat to be more of a satin finish. Some manufacturers will offer five levels of sheen—I prefer the middle of that range.

For years, the primary problem with acrylic paint was the lack of rich colors. This has been remedied with the introduction of acrylic sign paints. These colors are so highly pigmented that I consider them to be enriching pigments. We can now mix acrylics to match any color that can be done in oil color. They are expensive because they can take up to five times

longer to make than oil-based paint. I've been using 1-Shot Acrylic Bulletin Color. It's available only in gloss finish, but can be mixed with flat acrylic house paint to achieve a semi-gloss. I inventory deep green, deep blue, and bright yellow because they are hard to get in regular house paint.

Deka® also now makes water-based bulletin and airbrushing colors. I am using the airbrush colors right now but it's too early to say what kind of exterior durability I'll get. The Deka colors work well in the airbrush and stick to just about everything. Airbrushing with acrylic house paint is difficult because it clogs up the airbrush very quickly. Artists' acrylics also airbrush well, but I'm not sure how well they last outdoors.

### **Brushes, brayers, and digits**

The question about acrylics that I hear most frequently is, "What kind of brushes do I use?" When I first began using this product, I went through the usual experimenting process. After a lot of frustration I got out some old retired lettering flats, washed out all of the oil, gave them a good bath in soap and water, and squeezed them into shape. They work almost as well in water as oil! I could letter or stripe just as I always had with enamel, using a large flat to fit the letter size or an 1/8" flat for striping or outlines. I have not had the same luck with quills. In water, they are just too soft.

Acrylic can also be applied with light pressure on flat surfaces by using a soft brayer or a foam roller. One of the most unique application tools won't cost you a dime — your fingers! If you ever do small letters or fine-line graphics on a sandblasted sign, you will find your fingers indispensable. Just dip your finger into the paint and tap on a scrap of cardboard till you have a nice even film on a digit. Then tap the letters to coat them with a film that won't run over the edge of the letters.

I think it's a lot harder to find a good brush to coat out the backgrounds of sandblasted signs. The best that I have found are oil-based cutters and fitches that are really stiff or short-bristled. For small pic-

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*This sandblasted sign was done entirely in acrylics. Acrylic washes were used for the pictorial. Knots in the letters were carved after blasting for a more "rustic" look.*

torials I have a bunch of short-bristle sables that I bought on sale at an art supply store. For large pictorials, I use the big fitches that we use for coating sandblasted signs.

### **Durability**

This is the characteristic of acrylic that really got my attention. I had become frustrated with enamels after watching my pictorials or airbrushing shift colors over time, or just totally disappear. Acrylics last much longer, even when intermixed. They stay the color you want, even when used as a wash. I have had a sign on the front of my building for eight years that uses pink washes, and they are still there. We recently touched up a five-year-old sign with ivory acrylic and could hardly tell it had been repaired.

### **Drying**

Boy, this is the fun part of acrylic. Two to three finish coats can be applied in the same day without a problem. Humidity and temperature can affect the time frame, but experience will be your guide. In most cases, acrylics dry to the touch in 10 to 30 minutes. If you do sandblasted signs, this will cut production time to a third of what you're used to, and will give you a sign that will perform better outside. It's just faster and better, which is a rare combination.

### **Treated posts**

Painting pressure-treated wood can be a problem because a large amount of moisture is trapped within it. Oil-based paint will usually peel off of treated wood in less than a year. By coating them with acrylic, the moisture passes out of the posts and through the paint. For temporary signs (signs that will be up for only a few years) primer isn't necessary.

## **Priming**

I have been using Porter 515 Acrylic Bonding Primer now for 12 years. This is a universal primer, which means it sticks to every type of wood, and any finish paint can be applied over it. Block-out primer tends to boil off of pine or redwood because it's too hard to ride with the wood. If you use acrylic primer and finish coats, the moisture will pass through the paint without causing it to peel. Acrylic does allow some moisture to enter the wood but prevents gross absorption. I have never had a problem with peeling on overlaid plywood, redwood, or pine primed with this product. It has a small amount of oil in it to allow it to soak into the wood. Because of this, the first coat of primer will dry slower than finish coats. It also sands very well. 1-Shot acrylic bonding primer is very similar.

## **Overlaid plywood**

I have been experimenting with overlaid plywood and acrylic now for a couple of years, and it seems to be working well. Lettering, pictorials, faux effects, and striping all work the same as enamel. My concern was how well the plywood would hold up since we were no longer totally sealing out the moisture. Not only does the acrylic work well, but the edges don't peel because the acrylic expands and contracts with the edge of the panel. Granted, the finish will not be as slick as enamel but I don't have a problem with that. Gloss acrylics can be used anywhere you prefer a slicker, shinier surface.

## **Vinyl**

A lot of people say they have problems getting vinyl to stick to acrylic. We haven't experienced this. We use a satin paint, not a dead, flat paint, and that may have something to do with it.

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### Repaintability

Acrylic does not have to be sanded for adhesion unless it is gloss acrylic, which should be treated like enamel. The only reason I sand it is to get a smoother finish. I find Porter sands just like enamel.

### Gilding

We have no problem gilding with either water-based or oil-based size, and again it may be because of the brand of paint we use. We have had fish eyes a couple of times on brown acrylic for some unknown reason, but that's about three times out of 2000. We use a water-based size available from Sepp Leaf Products [381 Park Ave. S., New York, NY 10016; 800-971-7377] and it has some very unique properties. It is ready to gild in 10 minutes or less and holds a tack for a week — it's great for doing covers on sandblasted signs, repairs, or outdoor work. I would not recommend the water-

based size for large areas because it dries too fast to get the brush marks out. There are two types: Permacol (which I'm using now) and Instacol (which I have not used yet and has somewhat different properties). We also use LaFranc oil slow-size which is mixed 75% size and 25% lettering enamel thinned with turps to brushing consistency. It's ready to gild in about 18 hours.

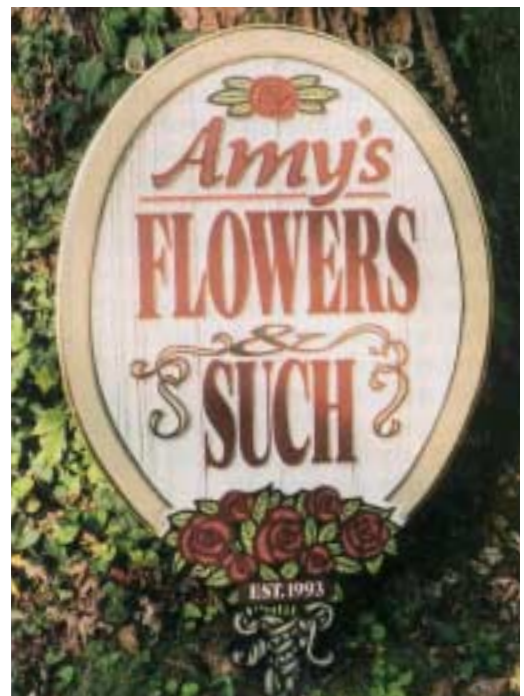
### Toxicity

I have wondered about the effects of all those hot thinners I have used over the 25 years I've been in this trade. From a health standpoint, not to mention the economics, it's really nice to know the only thinner you'll ever need is water. I believe we could be a totally water-based shop right now, but realistically, it will probably take another year or two. Switching to water-based paint would be a more difficult task for people who do vehicles.

You can probably tell how strongly I feel about the advantages of using acrylic paints for sign making. Their ease of use and longevity make acrylics the economical and healthy choice for me.

### 6 Tips on using acrylic paints

- When using 1-Shot gloss acrylics right out of the can, add three or four drops of mineral spirits per quart. Also, use a good mohair roller — otherwise the paint tends to bubble.
- Most of our big brushes just sit in a bucket of water since we use them every day. This isn't a good idea if you don't use them regularly.
- The only Porter color that seems to be somewhat fragile is Oriental Red. Double-coat if you want to get more than two years' worth of durability.



**Source List:**

**AKZO Coatings**, 3295 River Exchange Dr., Ste 500, Norcross, GA 30092; 800-431-7001

**CPF / 1-Shot**, PO Box 6369, Gary, IN 46406; 212-949-1684

**Decart, Inc.**, PO Box 309, Morrisville, VT 05661; 800-532-7895

**Matthews Paint Company**, 8201 100th St., Kenosha, WI 53142; 414-947-0700, 800-323-6593

**Panoramic Bulletin Colors**, PO Box 1093, Louisville, KY 40201; 800-626-6147

**Ronan Paint Corporation**, 749 East 135th St., New York, NY 10454; 718-292-1100, 800-247-6626

■ Here's a nifty tip for saving roller covers: Since acrylic stays wet almost indefinitely if you cut off its air supply, you can stick the roller cover in a plastic bag and twist the end closed. Then you'll always have a wet roller to do second coats or an edge you missed. Keep all the most popular colors in bags all the time so there's always a roller ready to go no matter what color you're using that day. You'll save a fortune in roller cover expense — I once figured that I saved \$500 each year by "recycling" my roller covers.

■ When I use high-density foam, I paint with acrylics just as if it were wood.

■ If you're having trouble with vinyl not wanting to adhere to

acrylic, try leaving the transfer tape on for 10 or 15 minutes before pulling it off.□

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