Progressive Epoxy Polymers, Inc. Newsletter

Products and News/Nov. 2008

PROGRESSIVE EPOXY OFFERS MULTI VENDOR EPOXY SOLUTIONS. Largest selection of two part LPU urethanes, epoxy fillers, NSF 61 approved epoxies, pipe wraps products, low temp winter epoxies, barrier coats, and more! Home of: WET/DRY 700™ Kevlar™ underwater epoxy paste and the low cost Basic No Blush™ marine epoxy.

WHAT'S NEW AT PROGRESSIVE EPOXY POLYMERS, INC.

Winter is the time of year that many 'boaters' go to work in basements and garages building kayaks, rowboats or canoes. Owners of larger boats begin researching barrier coat options, non skid deck coating options and varnish/clear coat projects.

I'm no exception. I'm already well into a pair of twin rowboats I'm building - well ahead of last winter's kayak project. Both projects were the results of boats being build by customers that 'caught my fancy' as I helped them with their epoxy and coating questions.

For homeowners, winter is the time to begin thinking about painting that garage (or basement) floor. Not all floors are suitable for an epoxy surface and the project could result in a 1 to 7 coat system. Lots and lots of options, products,

Tougher VOC Regulations in Ohio and Illinois

In January 2009, Ohio and Illinois joined the group of states (generally East Coast states) that comply with the OTC (Ozone Transport Commission) regulations regarding VOC (solvents mostly) in paints and coatings. Generally speaking, OTC regulations are tougher than the EPA regulations that most other states follow, but not as strict as the regulations in the different sections of California.

As VOC regulations become more strict, many products you have been familiar with for many years have either had to be reformulated or are no longer available. Also, they may be approved for one kind of application but not another. Also note that in most cases, if you add a solvent to a paint, coating or epoxy that already has solvents in it, it is very likely that you are now exceeding the VOC limits and breaking the law.

and different applications to consider. It could take the entire winter to figure out what is right for you!

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Solvents in Epoxies

Many, perhaps most, epoxies today contain no solvents. That can be both good and bad. With a solvent free coating, wet thickness equals dry thickness. Apply 10 mils, or fill a crack or low spot and when the epoxy cures you'll still have 10 mils worth of coating thickness or a filled in crack. So, if you buy a gallon of a solvent free coating, you end up with a gallon of results, not a half gallon, which would be the case if the product were 50% solvent (50% VOC) and half of it evaporated away as it cured/dried.

But on the other side of the coin, solvents help coatings penetrate a little bit into most surfaces resulting in better adhesion. The big molecules of epoxy otherwise just sit on the surface, resulting in a pure "surface bond." For good adhesion, your surface had better be 'ideal." Solvents also extend the potlife of epoxies. That's a good thing in hot weather and practically essential if spraying epoxy with an airless sprayer. Besides thinning the epoxy (and solvent free epoxies are usually like honey), solvents also help the epoxy flow off the brush or roller. It is a subtle thing, sort of like the difference between a $2 paint brush and a $15 paint brush. Solvents also add a little bit of flex to the epoxies, although this may last for only a few months (or years?).

It only takes a little bit of solvent to noticeably thin the epoxy. That's good because too much solvent and you begin to degrade the properties of the epoxy. Since epoxies are generally solvent free, you probably can add a bit of solvent to most epoxies and still be within your local VOC regulations and thus not breaking the law.

What to Look For When Evaluating Epoxies

The most obvious epoxy comparison issue is price! Assuming the products being compared are both solvent free (It would take 2 gallons of a 50% VOC product to equal the end results of 1 gallon of a 0% VOC coating) prices between two vendors could vary by 100% or more. This is often the difference between "normal markups" and "rip-off markups" often applied to boat owners (and sometimes home owners!).

Viscosity is another obvious characteristic. All epoxies get thinner with warmer temperatures and thicker with cooler temperatures. But the different epoxies don't start off with the same thickness/viscosity. In some cases thick is better, in other cases thin is better.

Next is potlife. What is the working time of the epoxy before it begins to gel/set? This varies greatly with temperature, the volume of the epoxy and the shape/configuration of the container. Be sure to compare apples to apples here!

Most epoxy curing agents can form a waxy film (called amine blush) on the surface as the epoxy cures in cool and damp conditions. Non blushing (or technically very low blushing) curing agents are available, but generally cost more. Be sure to compare products like our Basic No Blush (tm) marine epoxy with the non-blushing version of any of our competitors' products.

Note too that some products (using a special curing agent) can be shipped by air without a hazmat classification.

Perhaps the biggest overlooked comparative factor with epoxies is brittleness. Generally epoxies are brittle, but some are more brittle than others. There are some products, including solvents, that can improve the flexibility of epoxies. Our "Super Flex (tm)" epoxy is probably the best example of an extremely flexible epoxy. A good example of the need for a more flexible epoxy is as a barrier coat below the waterline on a fiberglass boat. Traditional "stiff" hulls can use a traditional hard epoxy coating, but light weight "racing" hulls may need something that moves as the hull moves and flexes. Also recall that wood expands and contracts based upon moisture content while paints and other materials expand and contract with temperature. Put a stiff epoxy on one side of a piece of wood and the two materials could be expanding or contracting differently and at different times. Something often has to give in cases like this. Finally, "soft" coatings handle impact better, while brittle coatings handle abrasion better.

Forward email

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