

SECTION X - TROUBLESHOOTING AND COMMONLY ASKED QUESTIONS

Following are questions we are commonly asked when something goes wrong. We hope that you will read them because the answer to your problem may appear below. If it doesn't then call us on our technical line and we'll go over it with you.

The Part A resin has hardened and turned white. Can I still use it?

Yes. The white solid or haziness is a mass of resin crystals. Crystallized resin will not cure properly. These can be melted by heating the container to 120°F. The resin will clear up and be as good as new.

The Part B hardener is darker in color than when I bought it. Can I still use it?

Probably. Hardeners yellow and darken over time due to contact with air and sunlight. This does not affect their performance. To satisfy yourself do a small test and make sure it cures properly.

What is the shelf life of your epoxy resin products?

All solvent-free epoxies have essentially unlimited shelf lives so long as they are stored in sealed containers. The resin may crystallize or the hardener may darken but this does not affect its performance. If the material is more than a year old do a test to satisfy yourself that it cures properly.

Can I put polyester gelcoat over cured epoxy?

In general, polyester resins won't cure properly or bond well to epoxy resin products without a "tie-coat" barrier resin in between. System Three SB-112 resin system can be used as a tie coat in between epoxy laminating or coating resins, and polyester laminating or gelcoat resins. Using this resin allows you to gelcoat an epoxy-built or epoxy-repaired boat.

Can I color System Three® epoxy products?

Yes. The preferred method is with System Three paste pigments. You can add these up to 10% by weight of the Part A resin. You can also use universal paint colorants from the paint or hardware store, but only up to 2% by weight of the resin.

My epoxy resin is taking too long to cure. How can I speed it up?

The only way to speed the cure of our epoxy resin products, once they've been applied, is to heat the room or the area that your project is in. Every 18°F increase in temperature cuts the time it takes for the resin to cure in half.

Which laminating resin is easiest to use for fiberglassing?

There are two main things to consider: how the resin wets out the cloth and how well it fills the weave. The thinner resins, like Clear Coat, will wet cloth easier, but take more coats to fill the weave. With thicker resins, like System Three General Purpose, the opposite is true.

Will the ultimate strength of an epoxy coating be affected if it gets cold while it's curing?

No. As long as the epoxy is completely cured, the physical properties will not be affected.

What solvent can I use to clean up cured epoxy resin products?

Cured epoxy systems are very chemical resistant, and need to be removed with an epoxy-type paint stripper containing methylene chloride, or by a combination of heat for softening followed by scraping. Uncured epoxy resins and hardeners can be cleaned up with ketones, alcohols, or lacquer thinner. White vinegar will clean up unmixed resin components.

Will System Three® epoxy products damage polystyrene or urethane foam?

No. Our coating and laminating resins are designed to go directly over solvent-sensitive substrates without any fear of softening or "melting" them.

Can I stain over cured epoxy resin?

No. Any wood that's been coated with epoxy will be sealed, and when it's cured it won't accept stain. Stain wood first; then apply epoxy resin.

What stains can I use before applying epoxy?

Dye stains are preferable because they leave no surface film. But in general, any stain can be used so long as it is completely cured before applying mixed epoxy resin. However, it is prudent to do a test by staining some scrap and then applying epoxy. Check for appearance and bonding.

What can I use as a material that epoxy won't stick to?

Epoxies will not stick to mold-release compounds recommended for use with epoxy, and polyethylene sheeting, like disposable paint tarps and sandwich bags. Epoxy does not stick to the shiny side of packaging tape or paraffin wax.

I made a small batch and after a week it has not cured. What happened?

It is difficult to measure a batch of resin and hardener less than three fluid ounces by volume. If you need to make a small batch, measure it by weight. System Three offers a small digital scale perfect for this use.

*...Zere iz no
such sing as
an instant
cure,...*



I made a large batch and found a few areas that are still sticky after most of the surface is cured hard. What happened?

The material was probably not thoroughly mixed and unmixed material was scraped from the container onto the surface. When mixing always be sure to mix from the bottom to the top and scrape the sides of the container and the stick. Experienced users dump and scrape the mixed material from the first container into a second and then mix again. This totally avoids the problem described above.

I made a large batch and found a few areas that are still sticky after most of the surface is cured hard. Can I fix it?

Yes. First, scrape off what you can. Then pour or wipe a suitable solvent on the surface. Wear a respirator or provide proper ventilation when working with solvents. Wipe or scrub the resin surface. This will remove residual uncured resin but won't harm any cured resin. Sand the underlying cured resin and apply a fresh coat properly measured and thoroughly mixed. Note: Over bare wood the fresh coat of resin will need to be worked into the wood with a stiff-bristle brush to mix any residual uncured material into the fresh material. This will ensure that the fresh coat will adhere properly to the wood.

I have material that hasn't cured after four days in a warm room. Can I apply fresh resin over the top and have the whole thing cure hard?

No. If the older material has stopped curing, applying more epoxy won't start it up again. The uncured resin must be removed and new material applied to that surface.

Can I use the hardener from one of your epoxy systems with the resin from another?

No. Epoxy resin systems are two-part products where each part is designed to go with the other.

Can I apply mixed epoxy to a piece of wood and then bend it without cracking the epoxy?

Yes, while the cured epoxy may be stiffer than an equal thickness of wood, the epoxy coating is much thinner and can be bent further than the wood it coats without cracking.

I laminated some bent wood strips with epoxy adhesive and clamped them overnight. When I found them the next day the adhesive had cured hard but several strips had sprung open. How can I keep them together?

Leave the clamps on a full 24 hours. The epoxy had not adequately cured when the clamps were removed. The force caused by the bent wood trying to straighten was sufficient to cause the uncured epoxy to fail. It opened up some time after you removed the clamps, but the epoxy continued to cure between the time the clamps were removed and when you saw the laminations the next day.

To avoid the above problem I left the clamps on for three days but the epoxy adhesive still failed at the interface between the strips. The surface appeared grainy or sugary. Why?

Likely you used too much clamping pressure. The clamps squeezed most of the epoxy out of the joints and the wood

absorbed what was left leaving a starved joint. A grainy feel at the interface is symptomatic of a starved epoxy glue joint.

How much clamping pressure do I use for an epoxy glue joint?

Epoxy adhesives, being gap-filling glues, need only enough clamping to close the joint. Unlike other glues epoxy does not require high pressure to make a proper glue joint.

Will epoxy resin adhesives bond all materials together?

Epoxy resin adhesives will bond all woods, aluminum and glass well. It does not bond to Teflon, polyethylene, polypropylene, nylon, or Mylar. It bonds poorly to polyvinyl chloride, acrylic and polycarbonate plastics. The only way to tell if an epoxy will bond to a material is to try it. Generally, epoxy adhesives are the best choice for bonding dissimilar materials together. If epoxy bonds to Material A and to Material B it will bond the two materials to each other. The best thing to do is to try it and see for yourself.

What materials can I put over your epoxy products? What materials will your epoxy go over?

Since epoxy resin system vary in compatibility with materials, there is no single list. In general, if a material is not listed in the product directions or application instructions, the best thing to do is to try it and see for yourself.

Can I use your epoxy products to build or repair a gas tank?

System Three epoxies, when properly cured, are resistant to diesel fuel and aviation fuel, but not gasoline. There are gasoline-resistant epoxy products available, but System Three does not make one.

My question isn't listed here. What are my options?

If we haven't answered your question earlier, send us an e-mail at support@systemthree.com , or give us a call at (253) 333-8118.

Paint Products FAQs

What is the coverage of WR-LPU Topcoat?

We recommend a spreading rate approximately 400 square feet per gallon. This will give a coating of 2.5 mils(0.0025") dry film thickness.

What is the coverage of WR-155 Primer?

We recommend a spreading rate of approximately 250 square feet per gallon. This will allow for some coating removal from sanding, and still leaving a 2.5 mil dry film thickness.

How long after I finish my wood/epoxy boat can I apply System Three® Spar Varnish?

You should wait a minimum of two weeks for the resin to cure, then sand it, wash it to remove the dust, and apply the varnish.