**Epoxy/Cast Resin Stabilizing**

By James Carter

**Introduction**

This document explains how to stabilize punky, soft wood using epoxy or casting resin and acetone for the purpose of turning. This process does not require a vacuum chamber or oven to cure the stabilizing compound afterwards. It is especially useful to stabilize bowls once they have been started, without using CA glue, which can discolor the wood.

Required items:

1. Epoxy or Resin (3M, Total Boat)
2. Acetone
3. Oven big enough to hold the wood
4. Zip lock bag big enough to hold the wood, 10-gallon bags are available
5. Covered vessel (bucket, Jar, pot, etc.) large enough for soaking method or paintbrush for painting method

Recommended items:

 Moisture meter, Scale, Gloves

**Drying**

First thing to do in ANY kind of stabilizing, is to make sure that the wood you are trying to stabilize is bone dry. Even if it is an old and punky piece of wood it may still have a lot of moisture in it. Place the piece of wood in an oven at 220 degrees Fahrenheit for 12 hours to cook out the moisture. Then place the wood in a large zip lock bag, and seal it to cool completely. This is to prevent the wood from taking in any moisture from the ambient humidity as it cools. Do not put hot wood in the stabilizing solution. It would heat up the mixture and cause the acetone to evaporate off too quickly, causing the epoxy to set before it is absorbed. A moisture meter is a good tool to have here. They usually only register at 6% and higher so if it doesn’t register, the wood is dry enough.

**Soaking Method**

After thoroughly drying your wood to be stabilized, you need to find a vessel that will allow you to completely submerge the piece with at least 2 inches of solution above it. Then you need to mix up an epoxy or resin. Once it is thoroughly mixed add an equal amount of acetone to the mixture and mix it until the epoxy is completely dissolved in the acetone. Make sure you have enough to cover the wood by 2 inches. Then place your wood in the container and pour the acetone/epoxy mixture over it. Make sure it is submerged by at least 2 inches as the wood will suck it up. Now cover the vessel to stop the acetone from evaporating and exposing the wood. If any wood becomes exposed, mix up more solution and add it to the vessel. The wood needs to soak at least 12 hours, 24 hours would be preferred, and longer will not hurt it either. Make sure the wood stays submerged, adding more solution if need be. Once the wood has sucked up as much solution as it can handle, pull it out, place it on something you don’t mind having epoxy on, and let it dry. As it dries the acetone will evaporate leaving the epoxy/resin behind to cure. Drying and cure time will depend on epoxy/resin used and the size of the piece. Weigh the wood every day until you get the same weight for 3 days, then it is ready.

**Painting Method**

This method is preferred when you find a punky section in a bowl you are turning. Again, you need to make sure the wood is dry as possible before starting the stabilization process. Follow the drying procedure above either before starting or once you feel a treatment is needed. Turn the wood to within one or two cuts before the final cut on the outside of the piece. Thoroughly mix the epoxy/resin, add an equal portion of acetone, and mix until it is completely incorporated. Now paint the mixture on the wood and keep adding more until the wood no longer sucks it in. This should penetrate ½ to ¾ inch into the wood depending on the wood, punky-ness, and dryness. Let the treatment dry and cure for at least 24 hours and then you should be able to finish up the outside of the piece. When doing the inside, again, get one to two cuts from the last cut and see if it needs a treatment on the inside. If it does, repeat the process used for the outside.

**Pros and Cons**

I have found this method is pretty successful at stabilizing punky woods, but it will **not** be as effective as a stabilizer that requires a vacuum chamber to get the resin (like Cactus Juice) into the wood. The advantage of this method is that you don’t have to buy a vacuum chamber, vacuum pump, or toaster oven for curing the resin.