

Green Wood Drying using Denatured Alcohol

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My results:

I was successful using the technique of drying green wood bowl blanks using denatured alcohol. To date, I have completed four blanks from cut log to finished bowls. All were successful. Two blanks were Box Elder and two were Chinese Elm. I currently have an additional 10 rough blanks of Elm in the “evaporation cycle” and each of them is defect free so far. I expect 100% yield from these as the process continues. These blanks are in the 12” to 16” range.



Recommended procedure:

Rough turned green blank per standard practices to uniform wall thickness proportioned to the size of the bowl.

At room temperature, submerge the rough turned blank into full strength denatured alcohol bath allowing it to soak for 4 to 12 hours, depending on blank size. Use the best quality denatured alcohol available, i.e. with the least percentage of water content.

Remove the blank from the bath after the soak time and let it drip dry for 1 hour. Wrap the backside to the bowl rim with brown Kraft paper securing the paper with masking tape at rim edge. Place the bowl upside down on open wire rack to dry.

Allow 14 to 21 days for the bowl to dry during the “evaporation cycle”. An odorless blank indicates that the drying cycle is complete. The blank is now stable and seasoned. Use a moisture meter or weighing to verify seasoning to EMC of 8-10%.

Remove the paper wrap from the back of the bowl and place near heat source for 2 to 3 days. It can now be turned to final thickness, profiled, sanded, and finished.



Notes/Comments:

Seasonal temperatures, starting moisture content of wood, species, and wall thickness will affect cycle times.

The soak bath needs alcohol replenishment because of dilution from water in wood cells and because of evaporation in the water/alcohol exchange.

The cycle life of bath, to insure maximum water/alcohol exchange in cells of the blank, could be a variable that affects cycle times.

Developing the “soak container” so as to use the least amount of alcohol for full submersion is a challenge. Innovation and creativity is required. Use a plastic container and avoid metal ones.

Cost of Denatured Alcohol is approximately \$12.00 per gallon. The liquid can be reused regardless of species.

Selected species, i.e. Fruitwoods like Apple, Pear, etc. should yield a better success rate compare to microwaving.

My conclusions and opinions:

The concept does stabilize the rough turned blank and results in a seasoned blank free of checks and cracks in a relatively short time frame.

I prefer the Denatured Alcohol method over the Soap Soak method even though I experienced the same results using the Soap Soak method. The Denatured Alcohol stabilized bowl felt more natural to the touch, not waxy as the Soap Soak method does..

I plan to add the Denatured Alcohol concept to my already successful microwaving program for stabilizing and seasoning of rough turned bowls.

Turner to turner discussion: Call me at 716.633.8455

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