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## **CedarShield - Revival of an Old Drying Method**

by Fred Holder / More Woodturning / May 2005

A post on the Wood Central Woodturning Message Board guided me to the web site of CedarCide Industries, Inc, the makers of CedarShield a Chemical-Free Wood Preservative and Drying Agent. The web site had this to say about the product:

"This dynamic wood preservative can be used for treatment of all hard and soft wood species. Lumber, posts, fencing material and bamboo. No pressure treatment is required. Complete penetration in less than 30 minutes will eliminate all moisture in the wood and provide a decay, water and termite proof media that will last indefinitely.

"Simply submerge and soak in the CedarShield solution or apply with a brush, roller or airless paint gun. Helps restore and maintain the natural wood beauty, or if desired, can be painted or stained 72 hours after application. The unique patented silicone and cedar oil additives will eliminate the normal splitting, warping and dimensional control issues found with kiln dried building materials".

"No special fasteners are required. Nails and screws will stay secured in the wood. CedarShield can be used on plywood, OSB and particle board. Safe around children and pets. Zero toxicity level. Hand and feet exposure permitted. Can be used to treat and seal CCA, ACQ and other chemically treated surfaces. Packaged in 1, 5, 55 and 275 gallon containers and bulk tanker delivery. Price: \$39.95 gallon. \$149.75 Per 5 gallon pail. \$1500.00 per 55 gallon drum."

Their web site address is: <http://www.cedarcide.com/default/.asp>.

I subsequently wrote to CedarCide via the e-mail capability provided at their web site with a number of questions about their product. I asked about treatment times for harder woods and whether we could treat rough turned bowls with CedarShield. I also asked if oil finishes such as Walnut Oil and other oil finishes on the market would work on woods treated with CedarShield. I asked how much a 12" rough turned bowl would use of the solution. Here is their response.

" The creation of CedarShield is the resurrection of a prior art wood drying treatment used in the early to middle twentieth century. It was abandoned in the late fifties with the introduction of the USA agency FIFRA, and subsequently the EPA. The solvents and additives used

in the earlier treatment solutions were deemed number two inert and registration of the product was mandated when insect control claims were made. The inventor, Mr. Ernest Reynolds of Carolina Chemical Company in Bowling Green, Kentucky elected in 1957 to hang up his shingle and retire in lieu of addressing the registration issues. Production of the solution was discontinued at that time.”

”CedarCide Industries in concert with GT Products, a specialty silicone manufacturer in Grapevine, Texas modified the original formula of the early product using NEXT GENERATION ingredients for their solvent based drying agent. The compounds used to formulate the product are all FDA or GRAS list approved. CedarShield, because of It’s compliance with FQPA (Food Quality Protection Act of 96) is exempt from registration with the EPA. The contents are simply explained as Cedar Oil, Highly refined White Mineral oil and a Silicone additive that aids in the crosslinking of the molecular make up of the solvent. When introduced to the wood cellular, the solution enters the wood through it’s vascular system and migrates through out the media. The displacement of the water with the solvent and, subsequently, the drying of the hydrogen tails of the hydroxyl group molecular chain, permanently prohibits the entry of H<sub>2</sub>O into the wood structure. The final result is dimensional stability with a further enhancement of the wood fiber from the transformation of the woods resins to a waxy like substance that promotes internal adhesion of the wood.

”In answer to your questions referencing treatment times, I suggest the following. Hard Woods are quicker to treat than Soft Woods because of the vascular system that is common to those species. Green woods, because of the moisture expanded cell structure, are easier to treat than kiln dried or air dried timber. The migration of the solution throughout the media is not impeded by collapsed hydrogen molecule tails found in dried wood, and the exodus of the water simulates that of a vacuum as it evacuates the wood, promoting the entry of the solution. In either green or dry wood, a 30-minute submersion is adequate. Lengthier treatment times may or may not provide any alternate results. Brush on application is not recommended for total drying endeavors, however it does have a positive result.

”It would appear to me that treatment of the wood prior to the turning would be the better protocol. The dimensional stability and the elasticity issues would have been addressed at that time.

Perhaps this is something that should be explored.

"I do not have any data on the penetration of the oils such as Walnut, etc. We do know that the post-treatment wood accepts oil based paints and stains but efficacy with the water based products is marginal. I would suggest that like likes like and that any Natural Oil would probably be compatible with the treatment. That is why we use the Cedar Oil as a synergist in the CedarShield solution."

"As to the usage, I believe you will find it to be minimal. I would suggest perhaps 5% of the wood weight, providing a re-capture of the drip off of solution is practiced.

"We are currently making no claims as to safety issues related to the use of CedarShield for food disbursement products such as Salad Bowls etc. We would anticipate no issues however each and every subsequent treatment with another product could trigger or expose an unknown result. We will take this under advisement with our scientists and evaluate the concern at a later date.

"Sincerely

"Dave Glassel

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I ordered a five gallon bucket of CedarShield to do some hands-on testing. Talking with Dave Glassel and their Scientist Dr. Ben Oldag, it appears that this product offers some excellent benefits for woodturners who use wet wood for their turning. It appears that a 30 minute to one hour soak of the solid wood in the CedarShield solution (solution should be about 100 degrees for best results) would enable you to put the wood on the lathe and final turn it after 72 hours with minimal warping and cracking. It also appears that most of the oil base finishes would work fine as a finish on the turnings.

Initially, I didn't work up a method to raise the temperature to 100 degrees, so my first testing has been done with the solution at about 70 degrees. I soaked four pieces of wood, two log sections of recently cut apple wood and two pieces of boxwood that already had a crack in it. I sawed off the ends of each piece of wood. I also soaked the 3/8" slice that I cut off the end of one of the chunks of apple wood. One side of it was coated with Anchorseal. It warped badly and cracked on the Anchorseal side.

I gave each of the pieces of apple wood over 30 minutes in the CedarShield solution. Actually, I waited until there seemed to be no more activity around the wood. I then took it out of the solution and suspended it above the bucket to drain. The boxwood was treated for almost 24 hours. It has shown no signs of cracking after 72 hours.

After 24 hours, I sawed one of the pieces of apple wood in half lengthwise as a test. The shop is maintained at about 70 degrees and during the day it was getting up to almost 80 degrees. After 24 hours more, one of the half pieces was showing some small cracks. I finally turned it into a little bowl. The solution was not dry in the wood yet. I should have waited the full 72 hours. This turned even better than the untreated wet wood.

The solid piece was showing no sign of cracking after 48 hours. It did show cracks after 72 hours.

The solution is oily but does not seem to cause any problems when it gets on my hands. If one were allergic to cedar, I would approach this product with great care.

In the short time that I had to conduct this preliminary test, I don't really have enough information to recommend that everyone run out and buy a bucket of CedarShield. However, I felt the information on this product was worth passing along. If any of you do try it please feed back your findings so that we can publish them. This looks like a product that can help woodturners get the best from their newly cut timber.

They have not had their solution tested as food safe for using on salad bowls. However, it has been tested and certified child safe so that the treatment can be used on wood exposed to children. I would suspect from that certification, we can assume it will be safe for salad bowls. More on this product next month. It is time to go to the printer.