

## How to Use the NautiPoxy/Nautithane Wood Finishing System

You have a beautiful wooden boat, and you want an equally beautiful finish—but you don't want a lot of maintenance: having to refinish every year because the finish yellows or cracks. That's why you bought the NautiPoxy/Nautithane wood finishing system! We thank you for your purchase, and we are here to help you with any questions you may have. In the meantime, we offer the following detailed instructions to help you get the most out of this fine system.

**First things First—Preparation!** Every good finish starts with good surface preparation. Also, poor surface prep can ruin a good finish. A clean, smooth, dry, dust-free substrate is a must. So your first step is to remove any loose or degraded prior coatings (if working on new wood, this step is not necessary of course). Remove prior finishes by using paint stripper, or by aggressive sanding—whatever works for you to get to sound, smooth, clean, dry, and dust-free wood. The final grit (if sanding) should be 120—150. This will give a good profile for the first coat to grab. Then be sure to clean the surface by using a good tack rag, or by wiping with a clean cloth dampened with a good solvent (such as acetone, lacquer thinner, MEK, or xylene. **(Careful, these are highly flammable!)**).

**Now, on to the NautiPoxy Penetrating.** At this point, you have a choice—if you had a previous coating, and after removing the coating the pores of the wood are completely sealed, you may skip the NautiPoxy if desired, and proceed directly to topcoating with the Nautithane. However, if the pores are now opened, or you want to make a “bullet-proof” coating system, the NautiPoxy will greatly increase the durability of your coating system. (NOTE: depending on the porosity of the wood, the NautiPoxy may darken the wood somewhat as it fills the pores. This is usually a desirable effect, in that the color development will usually be a rich, reddish-golden color. But if this is unacceptable, then simply skip the NautiPoxy and go straight to the Nautithane).

To use the NautiPoxy, be sure the two parts (A and B) are both at temperature—between 60 and 90 F. It is also recommended that the temperature of the wood be within these temperature limits as well. Accurately measure 2 parts of the A by volume, and 1 part of the B. An easy way to do this is to use disposable paper cups (be sure to get the ones *without* wax coating!). Fill 2 cups with A and 1 cup with B—now you have an accurate mix ratio. Dump all three cups into a clean container and mix thoroughly with a paint stick—stir for 30—60 seconds, being sure to scrape the sides often, but be careful not to whip air into the mix. Do not add any extra thinner or solvent, it's not needed. A Note here: there are 3 common ways to mess up an epoxy, and we've touched upon them all in the next few sentences: 1. Apply at the wrong temperature; 2. Use the wrong mix ratio; and 3. Do not mix thoroughly. Not following the directions given above will lead to uncured, gummy messes and/or brittle over-cured resin. Just be careful to measure accurately and stir thoroughly, keep an eye on the temperature, and you'll be fine.

Now, once you've mixed the parts A and B together, you are ready to apply the coating. Work quickly, but do not rush—once the two parts are mixed “the clock is ticking” on a thing called “pot life”—just as the two parts react and cure on the wood, they are reacting and curing in the pot too! And the amount of time you have before the system gels depends on the temperature. The higher the temperature, the shorter the potlife, and vice versa. So, for instance, at 75 F, you have about 30 minutes to use the material (I know the Data Sheet says 40 minutes, but trust me, you do not want to be pushing the envelope here. Near the end of the potlife the resin mix gets so thick that it will not flow and adhere properly to the substrate). At 90 F, you'd only have about 15 minutes to get it down, and at 60 F you'd have nearly an hour. And don't get nervous after the mix gets a bit warm after a few minutes in the pot, that is a normal reaction. (In fact, if you mixed a quart and let it set in the can, it would get so hot that you could boil water with it!). Now all that heat dissipates, of course, when you apply it to the substrate, so there's no worry that you will damage the wood—it only generates that much heat in a large mass in a can.

So how to apply? If you're working on coarse-grained wood, apply the first coat with a brush, and apply it thick (1/32"—1/16")—a lot of this first coat will soak into virgin wood (That's why it's called a “penetrating” epoxy!) If you're working on tight-

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grained wood, or the pores are closed, then apply a thin coat, about half the thickness of what was mentioned above. Use a bristle brush or a foam brush, whatever works best for you—the smoothness of this first coat is rather irrelevant as you will be sanding some of this off. Now sit back and allow it to cure for at least 12 hours—longer if the temperatures are cooler than 70 F.

**12 Hours Later:** OK, the first coat has cured, now it's time to smooth it out in preparation for the next coat(s). At this stage, the first coat should be completely hard, although it may have a "greasy" feel. If so, this is normal, and can be removed with warm soapy water; or you can simply opt to wet sand in the next step. And the next step is: sanding! No doubt this first coat will have some brush marks, dust, etc., embedded in it, so we'll get rid of those by sanding. Start with about 80-100 grit, and progress up to about 150—200 grit. Clean as before with tack rag or solvent, mix a fresh batch of NautiPoxy, and do it all again! But a bit thinner coat this time. And allow to cure for at least another 12 hours.

**Nautithane Time!** At this point you've probably got a couple of coats of NautiPoxy applied, giving your wood great strength, water resistance, rot resistance, and overall improved durability. Now let's begin to *really* make this baby shine!

Sand the final coat of NautiPoxy to about 200 grit—250 grit and clean thoroughly (see prior section for details on how best to do this). Now mix the Nautithane, again using 2 parts A with 1 part B (see NautiPoxy mix instructions above). Do not add any thinner or solvent. Mix thoroughly, as with the NautiPoxy. Be aware that you have a limited potlife here, too, although it's much longer than the NautiPoxy. What IS more critical here is the dry time—Nautithane dries very quickly, so you must work fast. It is extremely difficult to "melt" brush strokes with more Nautithane, like what you'd do with a slow drying varnish. So mix small batches and work quickly, and try to avoid working in direct sunlight. Again, you can apply with a bristle or foam brush, whatever you like, remembering the goal here is a smooth finish. (With NautiPoxy you were aiming for film build—here you want s-m-o-o-t-h). So put on a thin film, don't overwork it, and move on. And don't work in too many bubbles, they will be very difficult to remove. If you're having trouble keeping up with the fast dry time on a hot day, you may get a few extra minutes of working time by pre-cooling the materials before mixing—place the cans of part A and B in an air-conditioned room for about an hour or so before mixing. Starting with cool materials will help slow the dry time a little bit. (A side note here—obviously, you never want to apply a high quality finish when it's raining—too much humidity can affect the quality of the finish. Well, with Nautithane, even if it's not actively raining, if the humidity is very high, you still may have a problem, especially if it's on the cool side and the Nautithane takes longer to cure. You'll get more foaming and bubbles under these conditions. Best to wait for drier conditions if you can; if not, you may have to sand out the bubbles and apply another coat on a less humid day...)

Once you've applied the first coat of Nautithane, it's time to take a break and let it cure. Allow at least 4 hours for the first coat to dry—longer if the temps are cooler (see above for temperature recommendations). On a warm day you should be able to easily get in two coats per day—for example, the first coat at 8 am, the second coat at 2 pm. Once the first coat is thoroughly dry, lightly sand to remove any rough spots, using 150 grit—250 grit. Again, you're aiming for s-m-o-o-t-h. Clean thoroughly of all sanding dust, and apply Coat Two. After this, it's basically "Rinse and Repeat"—depending on the amount of gloss and depth of image desired, most people put on anywhere from 3-8 coats, some as many as 12! The more the merrier, as each additional coat gives better results and better protection and durability, but you will reach a point of diminishing returns for your efforts at about 6-8 coats.

**I'm Done, Now What?!** Allow the final coat to dry for at least a few days before putting the boat in the water; a week is about optimal. Beyond that, maintenance consists of mild cleaning as needed. Depending on your location (for instance, let's take the extremes of Seattle or Trinidad), you will need to touch-up the finish periodically. Seattle—probably every other year. Trinidad—probably every 6 months. Touch-up consists of cleaning thoroughly, scuff-sanding the Nautithane with 200—250 grit sandpaper, and re-coating with 2 coats of new Nautithane. That's it!

If things get away from you and the finish is not maintained for several years, you may have to start all over and remove the entire finish down to bare wood—not a pleasant task, so stay on top of things and re-coat as needed.

Hopefully this information has been helpful. If we missed anything however, and you still have questions, please call our Technical Service Department toll-free at 1-800-425-2214 and we'll offer any assistance we can to help you make your boat the talk of the marina! Thank you!