WATERPROOFING the HULL

Over the years I have tried quite a few waterproofing methods, as I am sure you have also. It is important to note the objective: To seal out water and water vapor from penetrating the plywood surface and edges of the hull. Period. The problem is that it is most difficult to accomplish. Because I recommend non-marine plywood for my boats, the problem is accentuated. As a result, even more precaution must be taken. Up until a few months ago (2013), I was recommending Thompson's Water Seal as the best waterproofing method for the ACX Plywood recommended. It penetrates the wood surface and provides a good water barrier. The downside of this method is time: after application, the manufacturer suggests at least 72 hours minimum drying time. I recommend 24 hours, but only if you use oil-based paint for the finish, and sand all surfaces prior to painting. Non-oil based paints will not adhere well to a surface treated with Thompson's. This has proven a problem to some builders.

Well, that was then, and this is now. After more than a couple of builders suggested I try a different process, I can now recommend an alternate method. We already use Titebond III Waterproof Wood Glue for construction, so why not use it as a water barrier? That is exactly what I recommend now, and here is how to apply it:

WATERPROOFING METHOD

Follow the directions and photos below for best results.

NOTE: It is important to water seal the inside surfaces of the bow & stern openings prior to assembly of the deck panel, and also the underside of the deck panel, and then all other inside surfaces of the hull modules. So, mix a container with 1/3 water and 2/3 Titebond III, by volume. Shake very well. I use an empty glue container, with 1/3 markings on the bottle, as shown above. Pour some into a plastic dish, and use a 2" disposable brush to apply. Brush evenly and completely over all interior surfaces of the module assembly. Allow to dry for at least 6 hours, at room temperature. This same process will be used for all waterproof sealing of all the hull assemblies, all surfaces, inside and out. The brush and dish can be water cleaned and reused for the next assembly, a big advantage using TB3. After the mixture has dried on the plywood, lightly sand all surfaces in preparation for a finish. The plywood surfaces will now be smooth, water sealed, and also strengthened by the application of the TB3 mixture.

Note: If the mixture is too runny on vertical, or horizontal surfaces, change the mix ratio to 25% water and 75% TB3.

Use this method for both the Inside & Outside surfaces.

PortableBoatPlans.com