For all of you who have expressed an interest in COROPLAST boat construction, I have some good news, and some not so good news. The good news is that I have found a way to bond (glue) Coroplast panels together. The bad news is that it requires a mechanical means of holding them together. What does all this mean? As you know, Coroplast is molded of Polypropylene plastic, which is quite chemically resistant, and therefore does not accept most bonding agents. There are a couple of glues on the market specifically intended for polypropylene, but they are quite expensive, and hard to come by. You can't get them at Ace, Home Depot, Lowe's or True Value stores.

After trying several alternative commercially available bonding materials, and different application methods, I have come to the conclusion that a combination of glue and a mechanical fastener is the best solution, and the safest. So what do I suggest? It's a three part system: Solvent clean the Coroplast, apply Glue, and Mechanically secure it all together. The solvent rids the surface of contaminates, the glue cures to a relatively strong bond, and the fastener prevents the panels from physically separating. This may sound like old school tactics to some; you know, glue it and screw it together, and in reality it does incorporate materials that have been around for a long time.

So what are they? The solvent I suggest is Acetone, available at all home centers. Scrub the surfaces to be bonded with acetone thoroughly. Wipe clean. Allow to dry. Do NOT inhale the vapors! The glue is Weldwood Contact Cement, or equivalent. Apply a thin smooth layer on each surface to be bonded, and allow to dry for about 20 minutes at room temperature. Do NOT inhale the vapors! Follow the Manufacturer's instructions. Then, align panels very carefully, and bring them together. Remember, once together it is very difficult to separate them. Apply light pressure to the entire bonding area. The glue will fully cure in about 24 hours, depending on temperature. Right after bringing them together, you have a choice of a mechanical fastener. If you are bonding to a wood surface, I suggest you use staples to mechanically hold the parts together. I use 9/16" long stainless staples, but they are hard to find. Regular T-50 Heavy Duty 9/16" staples will also work, but try to keep them above the water line, if possible.

A fastener should be placed near the ends of the joint, and spaced every few inches apart. If you are just bonding two layers of Coroplast together, you can use the same staples, and then bend the ends over to complete the fastening. Do not overbend. I use soft wood behind the Coroplast to staple to, and then remove it to expose the ends. Or you can use nylon ties to make a different kind of mechanical connection. I also suggest Scotch Waterproof Tough Tape to cover and seal the bonded joint. It holds well to the Coroplast. Solvent clean the areas first. Do this on both sides of the connection, as was done on my CPB-1 Folding Pram. There are other options, like aluminum pop-rivets, or pan head screws. Whatever your choice of fastening, make sure that contact is always maintained between the two panels being bonded. Any gaps will allow water penetration. As for metallic items below the waterline, treat them with a waterproof coating, like varnish or clear epoxy, to eliminate possible rust in the future. I also suggest you seal, with a good waterproof caulk, all inside seams and joints, as a protective measure.

Yes, I have placed some of the assembly process responsibility on you. Why? Because I do not know your exact needs. Even if I did, I would ask your cooperation, as this is very project specific. Once I settle on a process for a given boat design, it remains that way for pretty much ever, because it worked well for that particular boat. That process may not work so well for another design, due to differences in material or construction technique. In this regard, every design is definitely unique.

As you can see, the assembly process can be time consuming, and it may test your skill level, but the end result will be rewarding. You will have a boat that is watertight, dependable and above all, safe.

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