

CYANOACRYLATE (CA) GLUE

Ideas, Tips and Methods

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This article is intended to provide useful information about the handling and use of CA glue. This is by no means a definitive source on the subject but rather a handful of notes about some useful things I have learned and researched and would like to share for the benefit of all.

Now that you have ordered a dozen bottles because you couldn't resist a good sale price, you wonder if the glue will ruin before you can use it all. Don't panic, just **put the extra bottles in the freezer until they are needed**. They will keep for a very long time in there. (Cryogenics for Cyanoacrylates ?) **** Note: Only freeze unopened bottles.**

OK, chances are that like most of us you always make sure to put the top back on as soon as you're finished using the glue, right? Ever notice how your nozzles clog up and sometimes the glue hardens in the bottle before you ever get to use it all? It turns out that **a lack of oxygen is one of the primary conditions that causes CA glue to cure**. So from now on, **when you open a new bottle of CA throw away the top!** It may sound crazy, but this will extend the life of your glue in the bottle. If you're concerned about spilling it, make a bench top holder by drilling "bottle- sized" holes in a 2" thick block of wood. Make sure you keep it away from any source that creates much dust.

Remember to tap the base of the bottle on your bench top after each use to clear the tip.

Soapbox on...This is probably a good time to point out how we all take our health for granted until something goes wrong. CA glue is dangerous stuff. You should avoid skin contact and always protect your eyes. The fumes generated when CA glue cures are potentially harmful, they make the eyes water, and are at the very least terribly annoying. Spend a few bucks and get a respirator with replaceable filters like the ones used in body and paint shops and ***use the damn thing!*** They are good for one year and are reasonably comfortable. They are very effective when gluing with CA and also when using lacquer and polyurethane finishes. Perhaps the most important tip to remember is to be sure that you never glue yourself to anything larger than you can pick up and carry to where you keep your CA solvent!
....Soapbox off.

CA glue can be effectively used as a sealer and stabilizer on damaged or punky wood. We all use different things to spread glue. I have used a piece of paper or a manila envelope because of the smooth texture. However, the glue usually runs over everything, including my fingers. The other problem with this is that the cellulose in wood and paper products is one of those things that seems to hasten the curing of CA glue. It starts to get tacky and ruins the application. Purchase some polyester batting (in sheet form) that is used for stuffing quilts and pillows. **To make an applicator, cut a small piece of batting (about 2" square) and fold it, gathering the loose ends and wrapping them with a piece of masking tape.** It now looks like a little mushroom with a masking tape stem (sit in front of the TV some night and make a bunch). Apply two or three drops of CA on the applicator and you will be absolutely amazed at how far and evenly it can be spread. The applicator will not stick or cause the glue to set and can be used for several minutes before it stiffens up. ****Note: If you pick up any wood dust it will harden very quickly.**

When using CA glue to repair cracks or voids we would be well advised to test a spot on a waste scrap. If the wood is hard (like cherry or maple) then any dark marks from runaway glue will only be on the surface and can easily be cut or sanded away. The only thing that shows is the glue line, if that. However, on soft woods, the glue will soak right in and create a large blotch or spot and no amount of sanding will remove it! In all likelihood, this will compromise the appearance of the piece unless it has "blotches" of its own already. Try to work the piece to completion without gluing. When it is finished, use a

close matching wood filler or sawdust and white glue mix to fill the problem spots. Another method is to finish sanding the piece and apply the first coat of lacquer or polyurethane to seal it. Then repair the defect, sand, and finish. **A word of caution here....**if you are going to use accelerator on the CA, wait 30 to 60 seconds before you apply it or it will foam up white.

Many of us use the method of gluing a waste block to our blank to mount it. This is especially handy when roughing out bowls from green wood because it won't warp as the bowl does when it dries. It also allows us to use more of the blank as part of the piece. I have had failures in the past but just one since using the following method: After preparing a flat surface and alignment holes in both the blank and the waste block, apply a film of thin CA to the blank and the waste block. This will soak in and insure a solid glue joint. Next, apply a liberal amount of thick CA to the blank. Align and press the waste block firmly in place using your alignment pin. Then spray just a slight mist of accelerator at two spots on the excess squeeze out. This will secure the block from moving until the rest of the glue sets well (about an hour). If you're in a real hurry to turn, don't put any glue on the waste block but a very light mist of accelerator instead. Using the alignment pin, be fast and sure when you put the block in place because you only get one shot at it. Mount the piece using the tail stock for as long as possible for added safety. Instant glues typically reach about 50% of their strength in one minute and achieve full strength after 12 hours. You may notice that CA seems to work especially well on green wet wood. This is likely explained by the fact that moisture (even relative humidity) on gluing surfaces is another one of the primary conditions that triggers the curing of the glue into a thermoplastic solid.

Acetone can be used as a solvent but it is not as fast acting. You can soak clogged tips in it to clean them up.

Also, water in a mist bottle will serve as a cheap activator but will cause white foaming.

I hope that you can make use of these tips to make your turning safer, easier and more fun.