

SDWT Take a Turn

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Cyanoacrylate (CA) Glue Finishing

Brian Saunders

On October 10, 2012 I Googled “Super Glue Finish for Pens” and got almost 1,500,000 hits. I did not read them all!

There are many, many variations on how to achieve a high quality CA glue finish. I experimented with several methods and am showing the technique that has worked well for me. I encourage each of you to experiment and find the way that works best for you.

Supplies:

1. **EYE AND EYE GLASS PROTECTION!!!** I recommend a face shield.
2. Sand paper – up to 600 grit.
3. Micromesh – 1500 to 12,000 grit
4. Medium or Medium Thick CA Glue.
5. CA Glue Accelerator (Optional).
6. Pen Mandrel
7. Delrin Bushings (Optional).
8. Paper towel applicators.
9. Paper towels.
10. Denatured Alcohol.
11. Meguiar’s Ultimate Auto Body Compound.
12. Boiled Linseed Oil (BLO) if you desire a more matte finish.
13. Dust collection or fan to remove CA glue fumes (Please **DO NOT** breathe CA glue fumes!)

Safety:

1. CA glue is toxic and binds instantly to skin, mucous membranes and eyes.
2. Use eye and eyeglass protection at **ALL TIMES** when working with CA (Super Glue). I recommend that a face shield be used when working with super glue.
3. Be careful with CA glue on your hands and fingers. Do not touch your eyes or eyeglasses.
4. CA glue fumes are toxic to the lungs and must not be breathed! Use vacuum to suck fumes away from people or a fan to blow the fumes away from people.
5. Another reason to suck or blow CA glue fumes away from people is that CA glue fumes adhere to organic materials such as fingerprints on eyeglasses and can ruin them.
6. Protect your lathe bed from spills with aluminum foil and paper towels.
7. When proper precautions are **ALWAYS** observed, CA glue may be used safely.

Surface Preparation:

1. Turn pen or other object to be finished to desired shape.
2. Finish sand to 400 to 600 grit.
3. Wipe wood with denatured alcohol. When working with “oily” woods (cocobolo, rosewood, etc.) an immediate pre-wipe with denatured alcohol is an **ESSENTIAL** step to assure that the finish will adhere to the wood.

Application of Cyanoacrylate Glue:

1. For pens, I use Eliminator 805 Rev. II Delrin Finishing Bushings from Pen Turners Products. (www.penturnersproducts.com) Place the Delrin bushings on the mandrel in place of the regular bushings before applying any finish. The Delrin bushings prevent the CA glue from sticking to the bushings. It is possible to apply CA glue to pen blanks with regular bushings. The glue will stick to the bushings, but will usually break off without any problem.
2. Before applying CA glue finish, protect the lathe bed with a layer of aluminum foil and paper towels.
3. Apply CA finish with lathe running on slow speed (300 – 500 RPM).
4. Apply CA finish with a paper towel applicator (I will demonstrate how I make them). Place a drop of CA glue on the paper towel applicator and apply to the revolving object on the lathe. Rub the applicator back and forth across the turning in order to achieve a smooth distribution of the CA glue. I generally apply 6 coats of CA glue, letting the glue dry between coats. I usually avoid CA glue accelerator, as it sometimes seems to haze the surface. The time it takes to apply 6 coats of medium CA glue finish is 5 to 10 minutes.
5. Let the CA glue finish cure for about 30 to 60 minutes before proceeding

Polishing:

1. The raw dried surface will have streaks and surface irregularities. Sand smooth on the lathe at about 800 - 1000 rpm with 400 grit sand paper. The surface you want is a dull, smooth and uniform surface. Care must be taken **NOT** to generate too much heat. Excessive heat will melt the CA glue and ruin the finish!
2. Micromesh. Using a wet technique with water, sand the surface with micromesh pads from 1500 to 12,000 grit on the lathe at about 800 – 1000 rpm. Wipe the surface with a dry paper towel between grits. Again, care must be taken to avoid generating excessive heat. Dipping the pads in water before sanding helps to avoid the build-up of heat. (Micromesh pads are thick and insulated, so by the time that you feel heat with your fingers, it is too late!)
3. Polish: I use Meguiar's Ultimate Auto Body Polishing Compound to polish the CA glue finish. Apply with a paper towel applicator with the lathe revolving at 800 to 1000 rpm. Allow to dry and then polish with a dry paper towel applicator. I do this twice.
4. The pen or object is now finished. Some assembly required. Enjoy!

Sources:

1. Any good quality medium thickness CA glue works well.
2. Micromesh is available at woodworking stores and on line. Micromesh comes in sets of small pads for about \$15.00. There is a larger size set of pads that costs about \$25.00 and can be cut up into quarters (each quarter is about the same size as the small pads) to save you a lot of \$. With heavy use a set of micromesh pads lasts at least 6 months. They last longer when they are used wet.
3. Paper towels: Some paper towels contain chemicals that react with CA glue, so do a test before use. Apply a drop of CA glue to the paper towel – if the towel begins to smoke, the CA glue is reacting to it and the towels

should NOT be used! I find that Kirkland Signature paper towels from Costco work well.

4. Eliminator 805 REV II Delrin Finishing Bushings are from Pen Turners Products. www.penturnersproducts.com
5. Meguiar's Ultimate Auto Body Compound may be obtained from Target, Wal-Mart and auto parts stores.