

Using CA glue for your wood working projects

By Stan Stephens

CA glue (cyanoacrylate glue, also called superglue or Krazy glue) is a strong fast-acting adhesive used in industry, hospitals and around the home. It is found different in viscosities and formulations including thin, medium, thick, gap filler, semi-flexible, gel and flexible formulations. CA glue can be useful in the shop for various woodworking projects.

Some CA glue formulations (brands) are purer than others, thus better quality. You can get information on product purity by viewing the Material Safety Data Sheets (MSDS) on the manufacturer's websites.

CA glue is kept in liquid form using stabilizers. In use, water vapor in the air or on the wood piece being glued starts the curing process. The glue bonds at different rates depending on the formulation, but generally between 3-30 seconds, with the thicker formulations taking longer to set-up. Full curing takes about 24-hours.

CA glue has a relatively short shelf life, especially if not properly cared for. Once opened, it is good for about one month (my experience is that it last much longer). An unopened container will last about one year. To increase the longevity of CA glue, it is best to buy from a source that has a high turn-over rate. The longevity of the glue is increased by storing the bottle in a capped jar located in a dry, cool location. Storage of unopened containers in the refrigerator or freezer prolongs the life of the product.

Tip clogging is a common problem associated with CA glue. After use, hold the contain upright and either give the bottle a light tap on the table to force the glue from the tip back into the bottle or give the bottle a very light squeeze to clear the tip. If the tip becomes clogged, use a small drill bit to open the tip. You can unclog tips by soaking them in acetone.

Starbond (www.starbond.com), and others, sell small capillary tips that reduce the likelihood of clogged tips. These tips fit over the regular bottle tip and have very small openings. They don't require a bottle cap. If they become clogged, just cut off the very tip to expose a new part of the tip. These are very handy. You can order larger quantities of CA glue from this company and decant a small amount of glue into smaller bottles for frequent use. The large bottle can be stored in the refrigerator or freezer.

You can use an accelerator to make the CA curing process almost instant. Be sure to use an accelerator that is from the same manufacturer since using another brand accelerator may not be compatible. You can make your own accelerator by mixing ½ teaspoon of baking soda in ¼ cup of purified water. The baking soda neutralizes the acid in CA glue which is there to slow the curing process. Apply the solution to the dry part of the joint. This avoids the unpleasant odor of most commercial accelerators.

There are some indications that CA glue is not a good product for long term bonding and joints may fail over time. CA glue should be used primarily for temporary bonding of projects. Unlike epoxy, CA glue is not a gap filler. A very thin layer (a series of drops) is more effective at bonding than a thick layer of glue. There is often an exothermal reaction when applied to some material. This is greater with natural fibers like cotton, wool, and leather. I sometime used finely ground coffee (baking soda also works) to fill gaps in wood and when CA glue is applied, it gets very hot and there is smoke. You can also use sawdust and CA glue for gap filling.

CA glue can form a very strong joint, required a high amount of force to pull the joint apart. However, it has a low shear strength. A sharp sideways rap can separate a joint. The bond for smooth surfaces can be weak. However, it is very useful for short term bonding of small projects including jigs.

I find CA glue a useful tool in the workshop. I use it mostly for wood turning project, but it has many other uses. It can be used to hold small objects together, stabilizing bark, filling and stabilizing cracks. I sometime use it along with regular wood glue as a temporary clamp. I apply yellow PVA glue and a couple of small drops of CA glue to a joint and add pressure to the joint for a few seconds. The CA glue holds the joint tight while the PVA glue dries. CA glue is a very durable finish on projects, especially pens.

CA glue will bond most things including your fingers. Wear gloves when using this product. Most manufacturers sell a debonder. You can also use acetone or warm water to loosen glued fingers.

One downside of using CA glue is that it most likely will stain the wood around where the glue is applied. This can be avoided by applying light coat of lacquer or dewaxed shellac to the area prior to applying the glue. Another trick is to apply the glue to a toothpick or other small object and use this applicator to apply the glue only to the targeted area.

There are lots of cautions associated with the use of CA glue. Both the glue and accelerator should be considered a breathing hazard. The fumes from CA glue can irritate sensitive membranes in the eyes, nose, and throat. Some users eventually become sensitized to CA glue after some period of use. Use this product in a well-ventilated area. CA glue can be a skin irritant and some users seems to be allergic to the product. It would advisable to use a respirator with the appropriate chemical rated filter. For you woodturners, wear a face shield. A turning project can eject CA glue as it begins to spin and you don't want CA glue on your face or in your eyes.

CA glue can be a useful tool in the shop. Buy a high-quality product and use caution when using the product. Always work safely!