



USING CYANOACRYLATE (or CA) (or as most will know it, SUPERGLUE)

Article by Tom Wolf

I am almost too scared to write this article for fear of the follow-up mail I am likely to receive (so please, no follow-up mail). Use of superglue is contentious. I once heard an "expert" asked why he used 2 pack epoxy instead of superglue, and his answer was that he is waiting for another 50 years to see if superglue retains its bond before he answers the question as he was satisfied with the fact that other glues do bind for long periods. Certainly, we cannot vouch for CA's longevity.

Nevertheless, there are times when the use of an instant (or almost instant) glue has benefits and therefore CA is the only useful glue to be used despite the potential risks. So, here are a few hints I have learned over the years of using CA:

Cyanoacrylate is a moisture sensitive product and should be stored in a dry place. Also, storage in a cold place will extend the life span of the glue. In fact, when cyanoacrylates are maintained in a cool, dry location such as a refrigerator at a temperature of about 10°C prior to opening, the shelf life will be extended to a minimum of 15 months, but care must be taken when ready to use, as placing them in cool, then hot temperatures will create condensation. After removing the product from the refrigerator, it is best to let them sit until they reach room temperature.

So, you are now ready to use the CA. The bottle or tube containing the glue will have a narrow mouth, but getting the glue to the right spot and in just the right quantity can be tricky. There are commercially available applicators which may avoid your fingers being stuck together (at best) but here is a description of a simple and effective applicator that can be made at home:

1. Take a sewing needle with a small eye, cut or grind off the top of the eye. Then embed the pointed end of the needle into the end of a dowel or a pin-vice.
2. Drip a small amount of CA onto a piece of aluminium foil or cellophane (it can last like this for hours unless it comes into contact with moisture).
3. Dip the cut off needle head into the pool of CA and apply to where necessary and wick them into the project that you wish to adhere
4. If the needle "dispenser" becomes clogged or messy, burn off the dried glue with a flame or scratch it off with a knife

If parts do not fit tightly or cannot be held together conveniently, use CA glue and an accelerator. Squeeze the dispenser until a small drop of CA forms at the tip. Apply to one of the parts to be adhered and press the parts together. You will have several seconds to move the parts to their proper position then, while maintaining the position, apply accelerator to the seam. The CA will harden instantly and can be released. Allow the parts to be left undisturbed for three hours for complete cure.

Accelerators or "kickers" are available commercially and are recommended. If however you wish to make your own:

1. Fill gap with baking soda (sodium bicarbonate) and then drip CA onto the baking soda
2. 1 teaspoon Baking soda (sodium bicarbonate) dissolved in ¼ cup of water and sprayed onto the project (but it will make the joint white in colour and difficult to sand)
3. Alternatively a small drop of acetone (or nail polish remover) can be used, using a similar applicator

Good luck, let's hope you get the results you seek, but don't forget that you may need to try your process on something other than your valuable project first.

**AND DON'T FORGET, YOU ARE USING CHEMICAL PROCESSES AND REACTIONS, SO
WORK SAFELY IN A WELL VENTILATED AND CLEAN ENVIRONMENT.**