

Soldering

OK, I've held off on doing this tutorial long enough, mainly since I'm such a poor solderer. It's really not that tough to do. I think a lot of people just have a mental block against it. Soldering is for both strength and looks and makes your creation look extremely professional. I tried a number of hardware store solders and kept getting frustrated. Once you try this Stay Brite stuff you'll never try anything else. It flows at a low 430 degrees but is a lot stronger than regular silver solder.



Basic supplies: a propane torch (you don't need one of those fancy ones), a vice to hold the knife during soldering, (as if I don't have enough vices), and the star of the show: Stay Brite solder. You're going to find that a good solder like Stay Brite will make your life a whole lot easier.



Make sure the guard fits tight and snug. Don't plan on using the solder to fill large gaps or you'll end up with a very weak joint. Use a file to get a final fit on the guard slot and a Dremel with fiberglass cutting disk to square up the inside shoulders of the tang. Test fit often. The slots on the machined guards are just a hair undersized to allow you to do a final fitting.



Yeah, that's more like it. Good tight fit. Check it from all sides to make sure there are no gaps anywhere.



I wrap the blade in cardboard to keep the vice from marring the blade while being clamped. A lot of people like to solder from the front but I like working from the back, hence the downward facing blade. Stay Brite comes with an excellent liquid flux which, when heated, cleans and etches the surface lightly, helping the solder stick all that much better. Apply sparingly.



Heat up the guard for a few seconds until it's hot enough to melt the solder. A common mistake is thinking that the torch is used to melt the solder. The guard should be hot enough that the solder turns into a liquid and flows into those tiny gaps. If the solder beads up, the guard isn't hot enough and it'll just sit in a bead on the top.



A few seconds later. Kind of anticlimactic. Admire your work but don't touch for a few minutes before attempting to pick it up. Inspect it to make sure you haven't missed any spots.



If you have any overly large blobs of solder, you can use a braided solder wick (available at Radio Shack or any electronics store) . Heat up the solder with the torch and this stuff will soak up the melted solder like a rag soaking up water.



Find a scrap piece of brass rod and grind a chisel tip on it as shown. Use this to gently scrape the solder down flush to the surface of the blade and guard. Go slow. The brass is harder than the solder and softer than the blade but could still scratch your guard.



Use some fine (240 followed by 400 and 600) grit wet or dry sandpaper to do any final touchups . Take your time and do a nice job here. A lot of times another knifemaker will inspect your joints first . A nice job here just sets the tone for the quality of the whole project.



OK, now we're ready to start planning what kind of handle we're going to do. That'll be another lesson.