



HOW TO TURN COFFEE BEAN PEN BLANKS

Coffee beans cast in Alumilite resin create a distinctive finished pen, but the beans can loosen or pop out while drilling and turning. Work slowly, use very sharp tools and stabilize the beans with CA glue throughout the process.



1. Drill slowly

A brad-point drill is ideal when available because it produces a cleaner cut. Drill slowly, removing only about 1/8 in. (3 mm) at a time, then back the bit out to clear material. Slow down even more as the bit approaches the far end of the blank to reduce the risk of blowout.

2. Glue in the brass tubes

Use two-part epoxy for a strong bond. Coat both the inside of the drilled hole and the outside of the brass tube so there are no dry spots. The epoxy also helps fill small internal voids. With light-coloured resin, paint the brass tube first so it does not show through the finished blank.

3. Mill and stabilize the ends

After the epoxy has fully cured, mill the ends flush with the brass tubes. Work slowly and remove only small amounts at a time. Then saturate the freshly milled ends with ultra-thin or thin CA glue so it can soak into small gaps and the coffee beans.

4. Turn with very sharp tools

Mount the blanks without overtightening the tailstock. Before cutting, soak exposed coffee beans with ultra-thin CA and cure it. Begin at about 2,000 RPM; once the blank is round, increase to about 3,000 RPM.

Take extremely light passes and move the cutter slowly. After removing every few millimetres of material, stop and apply more ultra-thin CA. Keep the cutting edge sharp and be especially careful as you approach the bushings.

5. Separate the blank from the bushings

CA used during turning may bond the blank to the kit bushings. Gently score the joint with a sharp hobby knife, then separate the pieces. Lightly sand away any jagged glue. Alternatively, turn between centres and use calipers to reach the kit's required diameters.

6. Sand and fill any voids

Switch to tapered finishing bushings if available. Sand from 150 through 600 grit, stopping between grits to hand-buff out radial marks. Wipe with isopropyl alcohol. Fill small voids in the beans with thin CA; once cured, sand flush with 600 grit and clean again.

7. Apply a CA finish

Apply 4-5 coats of ultra-thin CA, followed by 3-4 coats of thin CA, curing between coats. A non-blushing accelerator helps reduce the risk of the CA turning white or hazy.

8. Sand and polish

Use Micro-Mesh from 1,500 through 12,000 grit. Spend extra time at 1,500 grit to level the finish. Stop the lathe periodically to check for shiny low spots and hand-buff out remaining radial marks. Finish with a fine plastic polish or scratch remover.

9. Assemble carefully

Make sure each pen component is perfectly aligned with the brass tube before pressing. Press slowly and evenly. If a component enters at an angle, uneven pressure can crack the finished blank.

KEY TO SUCCESS: Work slowly, keep your cutter extremely sharp, take very light passes and keep stabilizing exposed coffee beans with CA glue as you turn.