

Acrylic Acetate Pen Blanks

Translucent-colored plastics have been used since the 1920s to produce high-quality pens with an iridescent appearance. Though these blanks are a modern formulation with easy working characteristics, they require a slightly different approach than wood.

- Since the brass tubes can show through the acrylic acetate on some small diameter pens, color the tubes with a black marker or apply a light coat of spray paint.
- For drilling the acrylic acetate blanks, brad-point bits are recommended over twist drills because their sharp scoring spurs provide clean entry, smooth sidewalls, and reduce the chance of cracking the blank. Parabolic-flute or bullet-point drills may also be used.
- Set the drill-press speed to around 600 rpm. Although acrylic acetate has a higher melting point than other plastics, it can be overheated, which might cause the blank to crack.
- Lift out the drill frequently to clear any plastic that may clog in the drill flutes.
- Epoxy, polyurethane or cyanoacrylate (Hot Stuff®) may be used for gluing the brass tubes to the acrylic acetate pen blanks.
- Adjust the lathe speed to between 900 and 1200 rpm.
- For best results, be sure to use a sharp tool. Select either a shallow sweep gouge (such as a detail or forged spindle gouge) or a skew chisel, depending on your preference. A spindle gouge milled from round stock may be used, but be careful with your angle of approach – gouges with deeper flutes are more prone to digging in. In any case, maintain a bevel-rubbing cut, but avoid applying too much pressure. You'll be surprised at the level of finish that can be achieved straight from the tool, reducing sanding time.
- The shavings tend to cling to the work, but can be easily cleared with a soft-bristle or wire brush.
- To obtain a lustrous finish, sand up to 220 grit, then follow with 320-grit silicon carbide wet/dry paper for polishing. Use a few drops of water for lubrication and continue up to 600 grit. Finally, polish on the lathe by running a bar of buffing compound (e.g., Veritas® Green Honing Compound, 05M08.01) over the work or applying a plastic polish. Burnish with a soft cloth.
- Be sure to wear a dust mask or respirator when dry sanding.