Turning Cast Acrylic Pen Blanks

Sizing The Blank

Although these acrylic blanks are supplied with specific tube sizes, the type of pen you are turning will require that you cut the blanks to the correct length. Refer to the pen tubes supplied with your pen kit to determine proper length. Be sure to leave adequate length for barrel trimming the ends of the blanks. It is okay to cut the brass using a standard blade as it is a non-ferrous material and will not damage your blade.

Preparing The Blank

Proper blank preparation is critical in reducing the likelihood of "blow-out" during the turning process. Please follow carefully; Trim the corners of the blank lengthwise using a bandsaw with the blank held securely in a v-block. You can also tilt the bandsaw table to 45 degrees for trimming. You can also start shaping the blank round with 60 or 80 grit sandpaper. Removing the corners brings the blank closer to being round which will reduce stress on the blank when turning.

Scraping Only

To reduce the likelihood of the material chipping while turning, we recommend using a scraper with a small bevel ground on the topside of the tool (see photo below). Having a short bevel above the cutting edge makes the tool less aggressive and easier to control than a standard scraper. You can modify an existing scraper by grinding a short 10–15 degree bevel on the top side of the tool (shown below). Scraping may also be done using a skew chisel flat on its side. Cutting should be done with the handle in a slightly raised position. Scrapers with this type of dual bevel grind also work extremely well on unusually hard wood and highly figured areas that are difficult to cut clean using traditional scrapers.

Finished Blank Diameter

Do Not Turn the blank until even with the bushings. Because a layer of acrylic needs to remain over top of underlying material, the finished blank must be at least .07" larger than the bushing. Be sure to allow ample material for sanding in order to prevent the blank from being under size when complete.

Finishing

For a matte finish, wet sand through 600 grit. For a glass-like finish, wet sand using water through 12000 grit using Micro Surface abrasives (114-0400) then polish with 20/20 Plasti-Polish (042-0020) or similar polishing compound.

Hint: Using water while sanding maximizes the efficiency of the abrasive and prevents loading. If you don't have wet/dry sand paper, try regular sand paper as it may tolerate water long enough for you to sand.

Lathe Speed

Plastic pen blanks should be turned at the same speed you would use to turn a wood pen blank.