

# “AQUA PEARL” ACRYLIC BLANKS

## ITEM #1085 - 1096

### TIPS FOR PREPARING THE BLANKS:

For your convenience, “Aqua Pearl” pen blanks are all provided with pre-drilled holes to fit a 7mm tube, and the outside surface is turned round to 5/8” diameter. This will save you time and wear on your tools.

When using these blanks on products requiring 7mm tubes, no additional drilling is needed. Just saw off the length of each blank you need for the specific tube length to be inserted. (Pen blank trimming saw #1620 works well to accomplish this). When cutting the whole blank to make two pen blanks, always measure and cut the sections from the outside ends of the blank towards the center. (The hole in the tube was drilled from both ends and may not be perfectly aligned in the center).

“Aqua Pearl” acrylic blanks are transparent in many sections where there is little color pigment, especially visible when the blank is turned down to a thin wall. The golden shade of the brass tube inside may show through the surface and cause an unwanted appearance. To remedy this look, we recommend you paint the surface of the tubes with a thin layer of white. For best adhesion, use sandpaper to roughen the surface of the tube prior to spraying.

To glue-in the tubes, use a flexible type of glue. It will cushion the bond and prevent cracking when turning. System Three #1201 epoxy works well on acrylic. Apply glue generously per your pen instructions and follow the manufacturer’s recommendations for curing time.

### ADAPTING BLANKS TO VARIOUS PEN KITS:

“Aqua Pearl” blanks can be used for pen kits with various larger diameter tubes. You can simply re-drill the pilot hole to the desired diameter. Simply prepare a wood jig to hold the blank in the correct position when drilling. The jig can be made either with a “V” groove or a pre-drilled 5/8” hole in a 2” thick wood block. The hole must be perpendicular to the base so the pen blank is seated square to the table, and parallel to the drill press spindle. Once the proper hole is drilled in the block, cut the blank in half. When the blank is placed in the jig, it must be held in place with a vise or c-clamp while drilling. Due to the heat build up during drilling, the blank must be supported throughout it’s entire length to prevent twisting or distortion. Our drilling devise, which automatically centers the blank is a good choice here.

Select a good quality machinist drill bit (do not use a brad point). Set the drill to a slow speed and start you drilling. Apply a little pressure on the bit. Use short strokes, cleaning the shavings often to avoid melting the piece. Stop the drill frequently to allow for cooling of the bit, and if necessary, use a wet towel on the bit for additional cooling. Re-drilling a hole can be a little tricky, so be sure to hold the handle securely as the it may tend to run quickly down inside the hole and out of control and split the blank. Be sure to place the piece on top of a wood block and when the bit gets close to the bottom of the blank, ease up on the pressure. The wood block will absorb the pressure of the bit and prevent cracking the blank.



### TURNING & FINISHING “AQUA PEARL”

If you can turn wood - you can turn acrylic. As the blanks are already round, you will experience smooth turning from the start. Be sure to use sharp tools and keep them sharp throughout the turning process. A medium speed in the 1200 rpm range will produce the best finish. Use a 3/4” roughing gouge to turn down to the initial profile. Stop the lathe frequently and remove the shavings. For the final turning a 5/8” skew is recommended and will leave a smooth surface. Leave about 1/64” for sanding.

Sanding the remaining plastic down to the bushing diameter is critical. You want to remove the scratches and ultimately end up with a high gloss finish. Use the same type of sandpaper that you use for wood. Sand at slow speed on the lathe to avoid overheating the blank. You will experience a rapid buildup of the acrylic on the sandpaper and it must be turned frequently to avoid grooving caused by a build up of acrylic in the paper. Keep the paper moving on the blank. Move from one blank to the other to avoid excessive heat buildup. Do not skip sanding grits, using all grits available to step up to your final finish. When using 400 grit, you can use water as a lubricant and coolant. Wet sand with 600 grit then go to dry sanding from 1500 to 12000 grit. How fine a grit you use is entirely up to you, but the finer the grit, the better the finish. 600 grit will satisfy most users and you will get an excellent “wet look” at this grit.

For final finishing, you will use plastic polishing products, such as the Novus #1603 then #1604 to complete the pen barrels.

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