

Minwax Polyurethane Pen Finish

By Les Elm

I have experimented with many different types of finishing materials in an attempt to come up with a finish that will produce a reliable, predictable, consistent and durable high gloss finish.

I have found that the CA/BLO or the CA Only finish and a lot of other types of finishes that I have tried are too unreliable and have very unpredictable results.

In my opinion I think this Minwax Poly, that is also used on hardwood flooring, will stand up just as good or even better than the CA finish. Time will tell. I don't think my customers will be walking on their pens!

I have found that Minwax Fast Drying Clear Gloss Polyurethane gives me that reliable, consistent, clear high gloss finish each and every time! This Poly will dry in 4 hours depending on room humidity and temperature.

For me Minwax Poly gets excellent results each and every time!
Just takes a little patience!

This tutorial is what has worked for me. I am sure that other turners out there will have their own ways of producing finishes that work for them.

I have found that the blue shop towels I use make a great applicator pad. They are lint free and give me a nice smooth finish.

It is critical to avoid getting metal filings embedded into the ends of the blanks while sanding. To accomplish this, I use bushings that are smaller diameter than the ones used for the kit I am turning.

In order to use the smaller diameter bushings I have turned Corian Inserts using 7mm tubes that fit on my Adjustable "A" mandrel. I have turned inserts that fit snugly inside the diameter of the tube required for the kit I am turning.

This may sound like over kill, but I have ruined many a finishing attempt as a result of getting iron bushing filings embedded into the wooden blank!!

I also use these inserts with my pen mill and don't need to buy any other pilot guides other than a 7mm. I also use these inserts with my disc sanding jig to square blank ends.

The use of an Adjustable Mandrel will allow the turning of one blank at a time to avoid getting an out-of-round blank. I have also turned between centers to avoid out-of-round blanks.

One problem I have ran into is getting the finish to dry when using oily woods. The Poly will never dry on oily wood without sealing in the oil. I have had success wiping on 4 to 6 coats of French Polish (Padding Lacquer) which dries in a few minuets between applications. Then I rub down the length of the blank with super fine steel wool and wipe blank down with a tack cloth prior to apply the Poly.

Required Materials

Pint container of Minwax Fast Drying Clear Gloss Polyurethane
Roll of Blue Shop Towels
An Adjustable “A” Mandrel, Slim diameter bushings Corian insert
Wooden dowels
Various grits of sand paper 400 through 1200
Micro Mesh 1500 through 12,000

Preparing The Materials



Pint container of MINWAX Fast Drying Clear Gloss Poly



Fold a blue shop towel and cut in half



Cut into approx. 1" X 5-½" strips

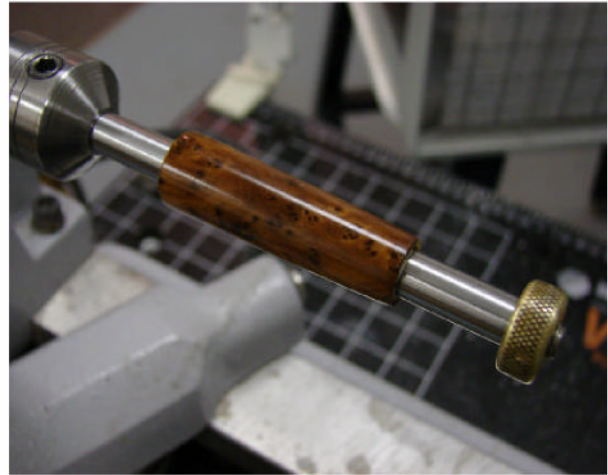
Preparing The Blanks

Step 1. I turn my blanks down to the shape I want, leaving to wood just proud of the kit bushings to allow for sanding and finishing to final kit fitting dimensions.

Step 2. I then remove the blank and kit bushings from the required mandrel. In this case I am turning a Cigar kit. I install my adjustable “A” mandrel, Corian Insert and small diameter slim bushings.



Corian Insert and Slim Bushings



Blank With Insert & Bushings on “A” Mandrel

Step 3. With the lathe running, start sanding with 400 grit through to 1200 grit stopping the lathe to sand the length of the blank between each grit to remove any sanding rings. As I am sanding I use my Micrometer sized for the kit fittings and keep checking the blank diameter until I have sanded down to about a 1 000ths of an inch proud of the required pen kit fitting diameters.

Step 4. With the lathe running I continue sanding from 1500 down to 12,000 using Micro Mesh without stopping to sand between grits.

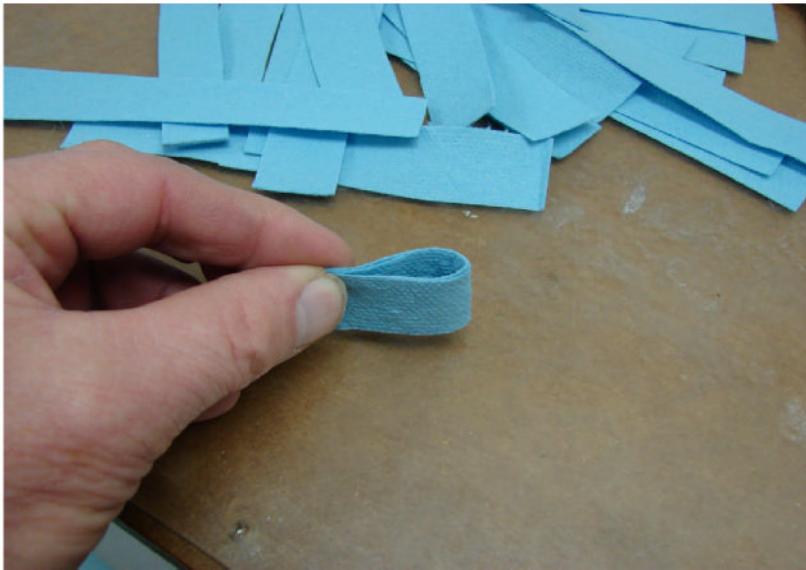
Once I am happy that the blank is sanded down to the correct diameter to match the pen kit fittings and I have a nice smooth void free finish, I wipe the blank down with a tack cloth to remove any dust.

Step 5. I remove the blank from the mandrel and slide the insert halfway out one end of the blank and install both slim bushings onto the mandrel. I then place the blank on the mandrel with the exposed insert facing the tail stock and gently snug up the mandrel nut.



Blank installed on A Mandrel with insert and slim bushings

Step 6. I am ready to apply the first coat of Minwax. I first fold a strip of blue shop towel in four to make an application pad.



Folded Blue Shop Towel Applicator

Step 7. I dip 1/3rd of the applicator pad into the can of Minwax and let the excess drip off.



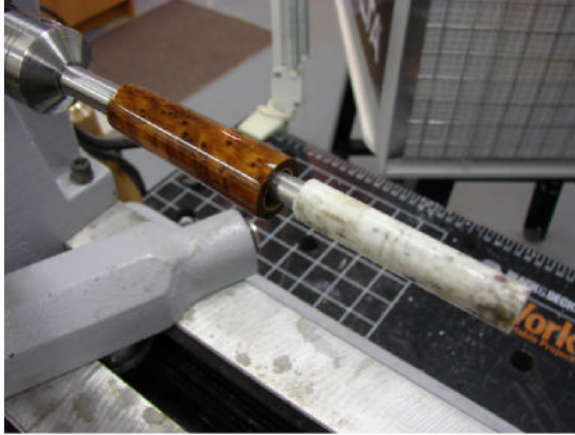
Dipping Applicator Pad

Step 8. With the lathe stopped I wipe the applicator pad the length of the blank and rotate by hand after each wipe until the entire blank has been coated. Be careful not to apply too much Poly or it will want to run.

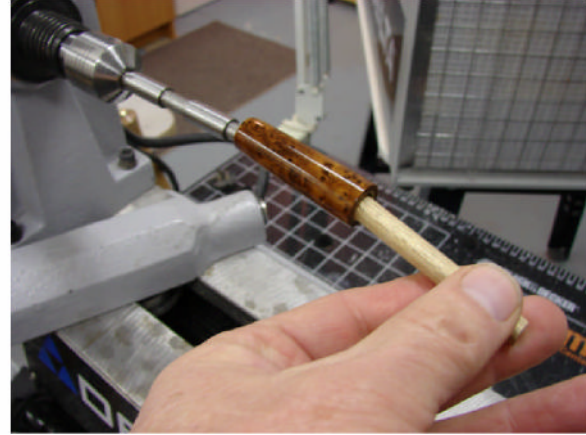


Applying the Poly with blue shop towel applicator pad

Step 9. Once I am happy with the coating I carefully push the blank off the insert onto the slim bushings and remove the insert. Then I carefully slide the blank off the mandrel onto a dowel. To ensure I don't get any runs, I will rotate the blank by hand for 5 minutes and then lay horizontally to dry for a least 4 hours.



Removing blank from insert



Installing blank on wooden dowel

Step 10. Once the first coat is dry I place the insert back into the blank and reinstall on the mandrel as explained in step 5. With the lathe stopped I lightly sand the length of the blank with 1500 grit and then wipe down with a tack cloth. I then repeat steps 6 through 9 until I have 3 coats of Minwax applied.

Step 12. Once the 3rd coat of Poly has dried I lightly sand with 1500 and wipe down with tack cloth. I then apply the final 3 coats of Poly without sanding between coats. I let the Poly dry for 4 hours between coats.

Step 13. I let the final coat of Poly harden for a least 24 hours. I reinstall the blank on the lathe as shown in step 2. With the lathe running I lightly wet sand with Micro Mesh starting with 6000 grit working my way up to 12,000 grit.



Step 14. While the blank is still on the lathe I apply a small amount of liquid Brasso on a small piece of blue shop towel folded to make an applicator pad. With the lathe running I apply two coats of Brasso by wiping back and forth along the length of the blank. I leave the lathe running for a few seconds for the Brasso to cloud up and then buff off with a piece of lambs wool.



Step 15. Finished results!!

