

Decal Application on Wood Pen Blanks

Using Polyurethane or Medium CA

By Les R. Elm © 2018

A: Polyurethane Method:

Materials:

- Testors Clear Decal Paper 5.5" X 8.5"
- Ink Jet Printer
- Play-Doh
- Krylon UV Clear Acrylic Coating
- MINWAX WBOM Clear Gloss Polyurethane
- Oil Free Ultra Fine Steel Wool
- 400 Grit Sandpaper
- Tack Cloth



Testors Decal Paper



Play-Doh



Krylon UV Acrylic Coating



MINWAX WBOM Clear Gloss



Oil Free Ultra Fine Steel Wool

1. Preparing Wood Pen Blank:

- Overturn the wooden blank by 0.002 inch
- Sand radially then laterally with 400 grit
- Buff radially then laterally with Ultra Fine Steel Wool
- Clean blank with a Tack Cloth
- Apply 2 coats of MINWAX WBOM Clear Gloss Polyurethane using the “Dipping Method” sanding with 400 grit between 1st and 2nd coat

2. Making the Water Slide Decal:

- Using Microsoft Word or Excel click insert picture and size the image to fit the pen blank
- Print a test image on plain paper and cut out to check for correct size
- Insert the decal paper into paper tray and print
- Set aside to let the ink dry for 1-2 hours
- Apply 2 coats of Krylon UV Clear Acrylic Coating letting it dry 1-2 hours between coats and let dry over night

3. Applying the Decal:

- Place a piece of dowel into one end of the blank and install in a 1/2” drill chuck mounted in the lathe headstock
- Cut as close as possible to the outline of the decal image
- Place the decal in a small container of luke warm water for no more than 15 - 20 seconds
- Carefully slide the decal off the backing paper and position onto the pen blank
- Once in position use a small piece of blue shop towel to blot off excess moisture and remove and air bubbles under the decal
- Set the blank aside and let decal dry 3-4 hours

4. Applying the Finish: Using the Dipping Method

- Fill the tall plastic container with enough MINWAX to cover the blank when dipped
- Insert a wooden dowel into one end of the blank
- Plug the opposite end of the blank with a small piece of Play-Doh



Wooden Dowel Inserted Into Blank End



Play-Doh



Play-Doh Plug in Opposite Blank End

- Lay out a folded piece of blue shop towel
- Holding the dowel, dip the blank into the container of MINWAX to cover the full length of the blank



Dipping Blank Into MINWAX

- Remove the blank from the MINWAX, hold over the container and let some of the excess MINWAX run off the end of the blank.
- Place the end of the blank onto the folded blue shop towel to “Wick Off” the MINWAX as it runs down to the end of the blank.
- Continue to move the blank end to dry areas to all allow the MINWAX to “Wick Off” the end of the blank.



Wicking MINWAX From Blank End

- Once there is no more MINWAX “Wicking” onto the blue shop towel, hang vertically to dry for minimum of 1 hour depending on ambient temperature and humidity.
- After the blank has dried, rub down the blank lengthwise with oil free ultra fine steel wool and clean with tack cloth.
- After 2 coats, remove the dowel and the Play-Doh, reverse the blank, install the dowel and plug the opposite end with Play-Doh.
This will allow for an even thickness of finish along the whole length of the blank.
- Repeat steps 5 thru 11 to apply as many coats of MINWAX desired.
- Allow to dry 24 hours after final coat.
- Clean up the blank ends

5. Apply the Finishing to the Decal Blank:

- Using the “Dipping Method” apply 2 coats letting dry 1 hour between coats.
- Reverse the blank and apply another 2 coats letting dry 1 hour between coats
- After 4 coats the decal should be completely covered and should not be able to see or feel the edges of the decal
- Rub the blank down with oil free ultra fine steel wool and clean the blank with a tack cloth or compressed air
- Reverse the blank, apply 2 more coats letting dry 1 hour between coats
- Reverse the blank, apply 2 more coats letting dry 1 hour
- After apply the final coat and let dry for a minimum of 24 hours to cure and harden
- Clean out any Play-Doh from inside the tube ends and clean up the blank ends prior to installation of pen components

Finished Results:



B: Medium CA Method:

Materials:

- Testors Clear Decal Paper 5.5" X 8.5"
- Ink Jet Printer
- Play-Doh
- BSI Medium CA
- Krylon UV Clear Acrylic Coating
- Oil Free Ultra Fine Steel Wool
- 400 Grit Sandpaper
- Tack Cloth



Testors Decal Paper



Play-Doh



Krylon UV Acrylic Coating



BSI Med CA



Oil Free Ultra Fine Steel Wool

1. Making the Water Slide Decal:

- Using Microsoft Word or Excel click insert picture and size the image to fit the pen blank
- Print a test image on plain paper and cut out to check for correct size
- Insert the decal paper into paper tray and print
- Set aside to let the ink dry for 1-2 hours
- Apply 2 coats of Krylon UV Clear Acrylic Coating letting it dry 1-2 hours between coats and let dry over night

2. Preparing Wood Pen Blank:

- Turn and sand the pen blank down to approximately 0.002 " (2Mil) smaller than the diameter of the kit fittings. I use a micrometer to measure the kit fittings to match the appropriate pen blank ends.
- With the lathe running at 500 rpm, sand with 400 grit, stop the lathe and sand the blank length-wise. Then with the lathe running use a Tack Cloth to remove all the sanding dust.
- With the lathe running at 500 RPM apply 6-8 drops of Med CA to form a puddle on a small folded piece of blue shop towel.
- Make one pass along the length of the blank.
- Stop the lathe and let dry for a few minutes. ***Do not use accelerator!** There are too many curing problems associated with accelerators.
- With the lathe running, buff with Ultra Fine Steel Wool
- With the lathe off, rub down the blank length-wise with Ultra Fine Steel Wool to remove any turning rings and then wipe down the blank with a Tack Cloth.
- Apply enough Med CA to get a smooth finish. Usually about 2-3 coats.

3. Applying the Decal:

- Place a piece of dowel into one end of the blank and install in a 1/2" drill chuck mounted in the lathe headstock and slide the blank onto the dowel
- Cut the decal as close as possible to the outline of the image
- Place the decal in a small container of luke warm water for no more than 15 - 20 seconds
- Carefully slide the decal off the backing paper and position onto the pen blank
- Once in position use a small piece of blue shop towel to blot off excess moisture and remove and air bubbles under the decal
- Let decal dry 20- 30 Minutes

4. Applying the Med CA Finish:

- Apply 2-3 coats of Med CA to completely cover the decal and should not be able to see or feel the edges of the decal ***Do not sand between coats to avoid damaging the decal.**
- Continue apply enough coats of Med CA to get enough build-up to match the kit fittings.
I use a micrometer to measure the kit fittings to match the appropriate pen blank ends.

5. Finishing the Blank:

- Using 400 grit dry sand radially @ 300 rpm.
- Stop lathe and sand the blank lengthwise.
- Clean with a tack cloth or compressed air.



Tack Cloth Purchased a Lowes or Home Depot

- Using Oil Free Ultra Fine Steel Wool (equivalent to 14,000 grit) buff radially with the lathe running @ 800 rpm.
- Stop the lathe and rub down the blank lengthwise.



*Oil Free Ultra Fine Steel Wool
(Steel Wool Purchased at Lee Valley)*

- Clean with tack cloth or compressed air.
- With the lathe running @ 300 rpm apply Huts Ultra Gloss Plastic Polish with a small piece of blue shop towel.



- With the lathe running @ 800 rpm.
- Polish with a small piece of lamb's wool with the lathe running @ 800 rpm.



Purchased at Canadian Tire Automotive Section

- Finished Results:



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