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I've been asked countless times to explain my method for applying liquid melamine as a finish to wooden pen blanks. For me, melamine is a quick and easy method of protecting wood, and of achieving a high quality, robust finish without losing the essence of what it's supposed to be - which is wood. Over the years I've gained experience with many woods, but most of my commercial output is oak, of which I turn maybe six or seven pens a day. I need a finish that is quick and easy to apply, whilst still having all the characteristics that are required of a high quality pen finish that will stand the test of time. I don't have 20 minutes to wait whilst something dries, or time to go back to a pen in order to cut it back or buff it. I need to make a pen, press it together and get it in the post - quickly. The part of that process which involves finishing takes me maybe 5 minutes. Yes, I've had a lot of practice, but if you can successfully turn a lathe on and off, I assure you it's a doddle, and I hope the following will debunk a few myths and misconceptions that have arisen over the time it's been talked about in recent months and years.

**Are you sitting comfortably?** Then let me explain a few things things before I begin.

- Once sanding is completed, it takes me about five minutes to apply the finish from beginning to end, however it's much quicker to apply than it is to explain, so my apologies in advance - I have a feeling this will not be the shortest of tutorials.
- I have no idea of the experience or even the competence of anyone reading this, so if you think that some of the points I mention are beneath your level of expertise, then I apologise for that too.
- Burnishing is the application of a second medium on the first in order to bring the first to a shine. The degree of shine will depend on the ability of the first medium to shine in the first place. A piece of wood sanded to 120 grit will not shine very much if you burnish it, whereas sanded to 600 grit then burnished, it will shine quite a lot.
- Buffing is the extra application of a soft material (in the case of turners, usually a rotating cotton wheel) in order to further improve a shine. My method involves burnishing - it doesn't involve buffing. A rotating buffing wheel is aggressive and unless you applied your melamine a week ago, the buffing wheel will simply remove it and you will be back to bare wood in seconds.
- The melamine itself. I often see references to satin lacquer and gloss lacquer. I use [Chestnut Liquid Melamine Lacquer](#) because it dries to the touch and to the re-coating stage more or less instantly. The tin says "Trade Quality" which with only one coat will produce a satin finish, but will build with subsequent coats to a gloss finish. It will never be as glossy as CA glue, but that is the whole point - I dislike the mirror shine, plasticised look that CA produces on wood because in my view a wooden pen needs to remain just that - a wooden pen, not a plastic pen. If you want a high gloss finish, you can use the [aerosol version](#), which will build to a very high shine, but will need cutting back between coats to achieve the best results.
- Kitchen roll is very absorbent and is not particularly suitable for the method you are about to read. I use single ply tissue from a centre-feed roll, which I buy in bulk, however it's possible to buy single rolls, and in smaller sizes, and blue tissue from tool stores is also suitable.

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### **Preparation**

The key to success for any finish is preparation of the medium to which it is going to be applied. Poorly prepared woods, overly porous woods, and conversely, dense non porous woods will not necessarily give you the results you are hoping for.

The very best finish on poorly prepared wood will only serve to highlight the imperfections in your preparation. The solution is to prepare your wood carefully and properly.

Overly porous wood will soak up the finish too much. The solution to the problem is to stabilise your wood, often with a proprietary stabilising resin if it is very bad, or with multiple coats of diluted sanding sealer until the wood stops absorbing it.

Non porous woods, often tropical or sub-tropical hard woods, will result in the melamine sitting on the surface rather than integrating with the wood, which can result in a blotchy appearance or even in the melamine flaking off. The solution with such woods is often to sand, burnish and buff, all to a high degree, and not apply any type of chemical finish at all.

### **Stage one - wood preparation.**

The method I describe here is the one I apply to oak, and will be no different to most other types of wood. The only difference with some woods when using melamine is that they may require sanding to a finer grit.

When I get to 320 grit with abrasives, I sand with the lathe running, but I also then stop the lathe and sand with the grain. 400 grit is just with the lathe running, then 600 grit firstly lathe running and lastly lathe stopped, with the grain. I have never found the need to sand most woods beyond 600 grit, so put away the micromesh and forget about it. All my sanding is carried out at about 800 to 1000 RPM. If you run your lathe too fast, the abrasive simply burnishes the wood rather than abrading it. To save you asking, I use Abranet, but I am sure that other makes of abrasive are equally as suitable. The purpose of sanding with the grain is to ensure that absolutely all the radial sanding marks are eliminated. If you can still see radial sanding marks afterwards, you need to sand with the grain some more.

What is key however, is after sanding is completed, burnish the wood using some of the shavings. Grab a large pinch of shavings in your fingers, and with the lathe running, still at your sanding speed, burnish the wood by pressing the shavings onto it. Move the shavings quickly up and down the length of the wood and watch it take on a lustre, well beyond what you have achieved with sanding alone, and well beyond what you would achieve had you carried on sanding using ever finer grits. If you run out of shavings because they have dropped out of your fingers, just grab some more and carry on. The process takes maybe 15 seconds, and the difference in your final finish between doing this and not doing this is enormous.

Stop the lathe and do the same, vigorously, with the grain. You won't notice much more difference in the lustre now, but there will be some, and again you are removing any traces of radial marks.

Incidentally, I always remove the dust after each stage of sanding and after burnishing with the shavings. If you don't, there is a good chance that some of the dust will contaminate the next stage. I keep a 1.5 inch medium-soft paint brush on the lathe specially for the purpose.

### Stage two - sanding sealer

I use [Chestnut Cellulose Sanding Sealer](#) because it dries in seconds. I dilute it with [Chestnut Cellulose Thinners](#), about 2 parts sealer to one part thinners. This helps the sealer to penetrate the wood, rather than just sit on the surface. Years ago I bought a small glass jar of supermarket coffee. The coffee went straight in the bin - I just wanted the jar. I drilled a hole in the lid and fixed a brush in the hole with hotmelt glue. That has been my diluted sanding sealer pot for years and is still going strong.

Grab a small amount of tissue, scrunch it up in your hand and have it ready. With the lathe stopped, quickly and generously coat the wood with dilute sealer, with the grain. As I say, I use a brush for this purpose. Immediately and quickly, wipe it off again, with the grain, using the tissue. As soon as the tissue begins to drag, which will be only after about 7 or 8 passes, turn the tissue and carry on. Turn the tissue again, run the lathe (still at your sanding speed) and burnish with the tissue. Total time is maybe 30 seconds for the whole process.

If you've done it properly, you will now have wood that shines and is perfectly smooth, with no radial marks. The shine won't have much depth to it, and has very little resilience - it's only sanding sealer after all, but it is smooth and shiny none the less. There should be absolutely no need whatsoever to de-nib, cut back or anything else. If there is, you got it wrong, and if you do, you will be inhibiting the final finish. So.... Practice if you got it wrong, and do not de-nib or cut back.

### Stage three - applying the melamine

Grab two lots of tissue. Form a rubber or pad with one lot, by folding it about 5 or 6 times - this will be used for applying the melamine. Scrunch up the second lot on your hand and have it ready - this will be used for burnishing the melamine

By the way, if you mistakenly believe that you need to give your lacquer tin a good shake before you begin, all that you will do is introduce millions of tiny air bubbles into the liquid. All you need to do is gently invert the tin once or twice and that is enough.

Run your lathe - the speed is still at your sanding speed. Hold your rubber against the open neck of the tin and invert the tin. That will put more than enough melamine on the rubber - you don't need to pour it on in a great pool.

Apply the melamine to the revolving wood by passing along its length - quickly - five or six times. The melamine will dry more or less instantly so keep the rubber moving. IMMEDIATELY burnish thoroughly with your scrunched up dry tissue.

There is no need whatsoever to allow any time between coats and there is no need whatsoever to de-nib or cut back, so straight away repeat the above process for a second time. Then stop the lathe.

Re-fold your rubber to expose a clean, dry part, or discard it and make a new one. Charge it with melamine as above but this time apply it with the lathe stopped. It needs to be evenly applied, so avoid leaving blobs and globules. Immediately run the lathe and burnish with the dry tissue.

Again, no need to wait, so repeat the process of applying with the lathe stopped for a second time, then burnish. Time taken is maybe 20 to 30 seconds per coat.

You've now applied four coats, and you should have a high shine. It should be glossy to the extent that gloss paint is glossy, but not to the extent that CA is glossy, but unlike CA, you should still be "in touch" with the wood. The depth of shine should be good and there should be no radial marks. Apart from a top coat, which I'll discuss in a moment, there should be no need whatsoever to do anything else at all to the finish.



No micromesh, no wet and dry, no buffing, no Yorkshire Grit. Put all those things away and forget about them - using anything like that will be detrimental not beneficial. I sometimes feel the need to apply a couple more coats (lathe stopped) to build up the shine a bit more, but I've found that any more than about six coats and you begin to lose the essence of the wood. Too many coats and you start to see the melamine instead of the wood, and it can start to get a bit uneven too. However, by far the majority of my pens receive four coats only.

### Stage four - applying a top coat.

The tin says that melamine fully cures over a period of 7 days, however I can assure you that the moment you finish the last coat it is more than dry enough to take to the pen press. Normally though, I like to give my pens what I call a top coat, so that the melamine is protected during the curing process and to help keep fingerprints off in the short term. Once it has a top coat to protect it, I am more than happy to send the pen out in the post. The customer is not going to be in a position to handle it for at least 24 hours, by which time I can assure you, everything is more than adequately cured. The top coat will wear off over time, but if you choose one that is fit for purpose, that period is quite long, by which time the underlying melamine is cured and bomb-proof.

I have only ever found two products that are suitable for this, one being [microcrystalline wax](#) and the other being [carnauba wax](#). There are a whole host of wax products out there which will add to the shine, but adding to the shine is not the purpose of this process. In any case, I cannot think of one of them, apart from the two I've mentioned, that will not wear off very, very easily and quickly, including friction polish, which apart from furniture polish, is possibly the least suitable finish for a pen I can think of, as it will wear off within minutes of being handled.

My choice is [Chestnut Carnauba Wax Stick](#), principally because I don't have 20 minutes to wait for microcrystalline to dry. If you use carnauba, make sure it is pure carnauba in a stick form - don't get fooled into buying a so called turners stick, which whilst it's carnauba, it also has bees wax mixed in and is therefore too soft. Carnauba has nothing to do with bees, it is made from the leaves of a Brazilian palm tree called Copernicia Ceriferahe. It also happens to be the main constituent in the best quality motor industry trade polishes, and the motor industry knows a thing or two about finishes. They don't use bees wax, or friction polish - or CA for that matter.

After inspecting my final coat of melamine, I usually leave my lathe running to help air dry the melamine while I go and prepare the pen kit and get everything ready for pressing. By the time all the bits are out of their annoying little bags and the bench is ready for action, and I've had a few sips of my cuppa, a couple of minutes has passed which is enough time for the melamine to have hardened sufficiently to take wax from a stick.

Crank up your lathe to its highest speed. Mine runs at about 3600 RPM but anything over about 2400 RPM will be enough. It is friction that melts the wax onto the surface of the melamine, so too slow and you won't get enough friction. Hold the stick onto the surface and pass it along the length of the wood, just once. Make sure you get a complete covering. If you're not sure, another pass won't hurt, but don't overdo it or you will get such a thick build up of wax it will take for ever to polish it up. Make a new rubber and use it to polish off the excess wax and burnish it up - which can be done straight away, there is no drying time required. Keep turning the rubber and keep polishing until you can no longer see movement in the surface of the wax. It's helpful to position your head so that you can see the light being reflected off the wax, to see how much more work you have to do. Applying and polishing up the top coat takes almost as long as applying four coats of melamine, but don't skim, stay with it, and you'll be rewarded for your efforts. It may add to the overall shine, however if you've got the melamine process right, it won't add a lot, but it will give it that showroom finish and protection.

The job is done - and no, you still don't need to put it on the buffer!!