

Finishing Guidelines

Finish or no finish

Some woods look great with no finish after careful sanding and buffing such as Ebony, African Blackwood, Cocobolo. Often a little wax is all that's needed (not very permanent though). However, most woods need finishing for protection, to enhance appearance and ease cleaning.

What finish should I use?

This depends on a variety of things;

- Type of wood
- Size of the piece
- Intended use
- Appearance desired (clear, tint, sheen)
- Durability (scratch, wear, chemical, fingerprints)

Types to consider

- **Wax.** I don't recommend using wax directly on wood at all. It has no chemical, water or abrasion resistance, most types will show fingerprints, some cause significant yellowing and needs re-doing regularly.
- **Non-polymerized 100% Tung oil.** Again, I don't recommend it. It is, for our intents, non-drying (although it does over a very long period), has a strong odour that takes forever to go away, offers no protection and needs re-applying frequently.
- **Polymerized Tung.** Highly recommended. Offers reasonable protection, easy to apply, cures fairly quickly, will "build" on the surface with multi applications, easily repaired, really brings out the best in most woods having attractive grain. It bonds chemically thus it is not necessary to sand between coats.
- **Boiled Linseed oil.** Although I don't recommend it for most purposes, it is widely used for special purposes. It is mainly used by woodturners to make Norfolk Island Pine (NIP) transparent after soaking in it for days. It can be used as a finish but has a strong odour that lasts nearly forever and has poor protective qualities. It is also used with alcohol and Shellac to do French Polishing.
- **Wipe-on Poly (WOP).** Recommended. Not as easy to apply as Oils and should be sanded between coats as it bonds mechanically (needs "tooth" in the surface to bond) but builds easily and has good protective qualities. When rubbed back, it can provide a nice non-plasticity looking finish and can be buffed to a high sheen if desired.

- **Shellac.** It's a wood worker's miracle preparation as virtually any finish can be put over it. It dries very quickly and seals wood fibres, sands like a dream and can be used as a beautiful final finish if rubbed back with 0000 steel wool and then waxed but it is not a "tough" finish. It is, however, easily repaired. It bonds chemically thus it does not need to be sanded between coats.
- **Varnish.** I don't recommend it for finishing turnings. It's too slow drying and tends to look "plastic", must be sanded between coats for a good bond. Save it for guitars.
- **Water-based Lacquer.** Recommended. Apply Water based sanding sealer first and rub back with synthetic steel wool (eg. 3M sanding pads). **DO NOT USE STEEL WOOL** as any little fibres caught in the grain will rust because it is water based. Offers good protection.
- **Cellulose Lacquer.** Highly recommended. Along with Polymerized Tung = my favourites. It is quite easy to apply (not as easy as Tung) and very forgiving (runs sand out easily). It bonds chemically thus it is not necessary to sand between coats. Apply Cellulose sanding sealer first and rub with 0000 steel wool (several coats to fill open grain). Can be sprayed or, for smaller pieces, apply sparingly with cheese cloth. Recoat time is only a few minutes and it builds well. Although a fairly protective finish, things like perfume will damage the finish but it's easily repaired.

Preparation

The surface must be well prepared. Sand to at least 400 and **DON'T SKIP GRITS!!** Each grit used should only remove the scratches created by the one preceding it. If they're not disappearing, back up and sand with a coarser grit until the deeper scratches are gone before proceeding. Gallery quality should be sanded to at least 600 or finer. An exception might be if the intended finish bonds mechanically - anything finer than 400 might provide a poor bond. Before applying any finish, make sure the surface is free from dust. Blow it off with compressed air and wipe it down with a tack cloth.

Choosing the finish

- What is the intended purpose of the piece? Utility = durable, easily cleaned. Must decide whether it is better to have a built-up film or no film (will water ever be used on it- such as a salad bowl? i.e. no film). Decorative = mainly maximize appearance. Again, must decide whether it is better to have a built-up film or no film.
- What kind of wood is used? Even this must be in context with the intended use. For example, if it is a highly figured burl: a decorative piece would benefit from using Tung oil as it amplifies the grain but if it is to be used as a bowl it might be better to seal the wood with 2 or 3 coats of Walnut oil (which will cure) and rub back to the wood and buff lightly.
- Is the wood "open or closed" grain? If you want a fine finish, open grain (eg. on Walnut) must be filled before the final coat is applied. This could be built up with many coats of sanding sealer and sanded back to the wood until the grain is filled or a commercial grain filler (sometimes having different colour choices) could be used before the final finish is applied.

- Is it a light wood or dark? If very light, you might want the wood to remain as white as possible. Krylon fixative (used over pastels and pencil drawings to provide a protective coat) will seal and causes little or no colour effect. Cellulose lacquer and water based finishes make it a little bit amber, but might be quite acceptable. Darker woods benefit from Tung, Lacquer, Shellac, or other oils.
- If the piece is very small, Turner's Polish is a good choice. The U-beaut system works very well too. It is a 2-part system – both parts are a kind of paste which is Shellac based. The first has Jeweller's rouge in it and you burnish with it to acquire a fine finish. This is often enough on its own. If you want a higher polish, apply the second part and buff to a high polish. Pen turners often use a CA glue finish. There are various techniques used. Some just apply CA directly to the pen barrel with a paper towel and spread it around while the piece turns at slow speed, building up layer after layer, then sand back and finally use buffing compounds. Other's put a little mineral oil on the paper towel before applying the CA. It acts much like turners polish. Apply the CA, turn up the speed and keep the pad in contact until it starts to shine. Finish with buffing compound.

Oil application technique

- Sand to perfection
- Apply oil generously. If dry spots appear, add more oil
- Wait a couple of minutes then wipe off all excess with cheese cloth. Turn the cloth frequently.
- Leave for 24 hours.
- Repeat the process at least two more times. More if you are intending to use buffing compounds for the final finish
- Rub down with 0000 steel wool and buff to a final finish using Beall buffing compounds. I DON'T USE THE CARNOBA WAX FINISH. Carnoba is not very permanent, attracts dust, and amplifies fingerprints. If you choose to wax, use Renaissance Wax. It is synthetic, easily restored and doesn't attract dust or fingerprints.