

Finishing Approaches for Woodturners

Oils

Oils are easy to apply and often provide a beautiful finish when followed by a coat of wax, then buffed. Richard Raffan for example uses mineral oil and wax almost exclusively.

Mineral Oil

Mineral oil darkens the wood less than most other oils. It is fully saturated, and thus cannot go rancid like unsaturated oils such as olive oil.

However, it will stay in a liquid state forever:

- Any finish whose solvents will dilute the mineral oil can be applied over it (all solvent based finishes). Mineral oil however acts as a plasticiser and the overlaid finish will be softer and less durable.
- For salad bowls, mineral oil followed by beeswax will result in a softer wax coating than if wax was used alone. **A more durable wax finish would be if the wax was softened with mineral spirits for easy application.** The mineral spirits evaporate.

Linseed Oil

Comes in a pure (raw), boiled (metallic drying agents added) or polymerized, (Tried and True Velvet Oil – used as gunstock finish) version:

- *Raw linseed oil* is a poor finish because it is not a natural drying oil.
- *Boiled linseed oil* is similar to Tung Oil, but it darkens faster and is neither as hard or durable as Tung Oil.
- *Polymerized Linseed Oil* dries faster and is slightly more colourfast than Boiled Linseed Oil and offers no benefits over other Linseed Oil products, **Minwax Antique oil** will give the same result at a lower cost.

Tung Oil

Comes in a pure or polymerized (has been cooked to partially complete the molecular cross-linking that occurs in drying-oil) versions – Shelf life 1 to 2 years:

Pure Tung Oil – Provides a hard and tough surface finish that is waterproof, impervious to dust, alcohol, acetone, fruit and vegetable acids. But it takes forever to dry, does not penetrate the surface well and costs more than other drying oils. It's a reactive finish that dries and hardens when exposed to air.

- The application process is the same as for Polymerized Tung Oil below
- Improve drying time by adding thinners – turpentine, naphtha, kerosene. First coat, this 4/1 ratio, subsequent coats, 2/1 then 1/1. Don't worry about overlapping.
- Great friction polish, dries faster when heat is generated
- Russ cures overnight in his drying box, with a light bulb sized to maintain 90 degrees F.

Polymerized Tung oil:

- Sand to 320-grit
- Apply a liberal coat of Watco Liquid Finishing Wax and sand to 400-grit, wipe it off and allow to dry. This will amplify any surface blemishes and allow you to remove them.
- Apply a brushed coat of DEFT semi gloss lacquer (Clear Wood Finish), let dry and sand to at least 600-grit.
- Apply a heavy coat of DEFT and immediately rub off with paper towels, let dry a few minutes, then buff with 0000 steel wool (grey Scotchbrite). Repeat if any rough spots.
- Apply polymerized Tung Oil straight from the can by putting on a thin coat and avoid overlaps. Do not wipe but let stand 24 hours or until dry. Sand with 0000 steel wool.
- Apply 4 or 5 coats of polymerized Tung Oil and sand after each coat (except the last) with 0000 steel wool

Another technique: (Malcolm Zander)

- After sanding to 2000 grit, wipe on a thin layer. Leave for one to two minutes and then immediately wipe all residual oil off. Any remaining will leave a sticky residue.
- Leave one or two days to dry and repeat one or two times more. Finally buff with Beall system (tripoli, white diamond, linen). This gives a beautiful finish, much simpler than the above procedure.

Products

Product	Supplier	Recommended by / Comments
Tung Oil:	Lee Valley Tools	50% solids ratio recommended
<ul style="list-style-type: none"> • Old Masters • Hopes 		
Polymerized Tung Oil	Lee Valley	
Watco Liquid Finishing Wax		

Advice

By	Advice
Malcolm Zander	I use this product (Lee Valley) whenever I want to show up beautiful grain. After sanding to 2000 I wipe on a thin layer, leave 1-2 minutes, and then immediately wipe all residual oil off (carefully – any remaining will leave a sticky residue). Leave 1-2 days to dry, and repeat 1-2 times more. Finally buff with Beall system (tripoli, white diamond, linen). Gives a beautiful finish, and much simpler than the above procedure.

[comment](#)