

# 2022 Finishes and Finishing update april 2022

To seal and protect wood: prepared by Sam Angelo

❖ Considerations for the selection and use of a particular finish

- Cost
- Drying or cure time
- Intended use of the piece
- Appearance
- Application

• *The information below is based upon my own research, knowledge and experiences on the topic of applying a finish to the surface of wood.*

<p><b><u>REACTIVE</u></b> CHEMICAL CHANGE TAKES PLACE Combining finish and solvent</p>	<p><b><u>EVAPORATIVE</u></b> THESE FINISHES DRY AS THEIR SOLVENTS DISPERSE INTO THE AIR (Shellac and Lacquer CAN BE DISSOLVED WITH THEIR RESPECTIVE SOLVENT)</p>		
<p>Tung Oil/Linseed Oil/Nut oils/Varnish/Poly/Urethane</p>	<p>SHELLAC</p>	<p>LACQUER</p>	<p>WATER-BASED</p>
<p>PENETRATES/SEALS SURFACE FINISH</p>	<p>SEALS/FAST DRYING</p> <p>KEEP FROM WATER/ALCOHOL HIGH WEAR AREAS</p> <p>Repairs ARE EASY</p>	<p>FAST DRYING</p> <p>BETTER PROTECTION THAN SHELLAC (KITCHIN CABINETS)</p> <p>Repairs ARE Fairly EASY</p>	<p>LESS PROTECTION THAN VARNISH/POLY</p> <p>ENVIRONMENTALLY SAFE</p>
<p><b><u>Application</u></b>~Conventional Spray equipment, Aerosol Can, Brush, Rag: (foam brushes may dissolve with some finishes).</p>			
<p><u>MIX WITH-</u> PETROLEUM DISTILATE</p>	<p>Shellac continued</p> <p>MIX WITH-</p> <p>DENATURED ALCOHOL</p> <ul style="list-style-type: none"> <li>○ Spray</li> <li>○ Wipe on</li> <li>○ Brush</li> </ul>	<p>Lacquer continued</p> <p>MIX WITH-</p> <p>LACQUER THINNER</p> <ul style="list-style-type: none"> <li>○ Spray</li> <li>○ Wipe on</li> <li>○ Brush</li> </ul>	<p>Water based continued</p> <p>THIN WITH WATER ?? Best sprayed (?)</p> <p>(NOT RECOMMENDED)</p>
<p>Originally BOILED OR “COOKED” TO FACILITATE THE ADDITION OF DRYERS (RAW LINSEED OIL WILL NOT DRY PROPERLY) Dryers are now added/boiled L-oil MAY DARKEN WOOD</p>	<p>FAST DRYING</p>		<p>Moderately</p> <p>FAST DRYING</p>
<p>SLOW DRYING ADDITIONAL COATS WILL ADHERE MECHANICALLY (SANDING) OR CHEMICALLY (BY NOT BEING TOTALLY DRY)</p>			

FOUND IN NATURE Tung-linseed oil plus others (OILS)	POLYURETHANE IS VARNISH PLUS AN ADDITIONAL RESIN FOR HARDNESS				
HEAVY METAL DRYERS ADDED (VERY HARMFUL) JAPAN DRYER		GOOD PRE-SEALER UNDER VARNISH/POLY Or finish used alone: French polishing. (Shellac and olive oil)	<u>For lacquer and Acrylic finishes.</u> Compatibility with other finishes often relates to expansion and contraction of dissimilar finishes resulting in cracking or separation of topcoat		
TUNG, LINSEED, WALNUT, DANISH OIL	MARINE VARNISH DRIES MORE SLOWLY AND IS FLEXIBLE (FOR OUTDOOR USE)				

**THINNERS** ----a specific solvent used to “dilute” or thin down a finish.

CONSIDERATIONS: Drying time (evaporation rate), Cost, amount of residue left on surface of wood after cleaning with that respective thinner.

NAPHTHA	ACETONE	DENATURED ALCOHOL	MINERAL SPIRITS	LACQUER THINNER	TURPENTINE
THINS “OILS” ~CAN REPLACE MINERAL SPIRITS	THINS LACQUER	THINS SHELLAC	THINS “OILS”	THINS LACQUER	FOR THINNING PETROLEUM PRODUCTS (slow drying)

**Sam Maloof** from the book Sam Maloof Woodworking

“Finishes and Mixtures”

Step One-1/3 part each

- Boiled Linseed Oil 1/3
- Raw Tung Oil
- Urethane varnish (semi-gloss)

Step two Heated on a double boiler Once

- Linseed Oil
- Raw Tung Oil
- Shredded bees wax

**Oil Finish Formula:** *Such a mixture is based on the use of a common solvent or thinner.*

Mix together 25% of each item listed below. Or. Mix the ingredients and amount of each according to your needs.

Tung Oil-----Expensive/Best oil finish available/slow to dry (considered natural oil)

Linseed oil-----Economical/Found in paints/varnishes for hundreds of years (considered natural oil) dries slower

Varnish-----Mixture of resin, linseed oil and a solvent. Considered a “natural” finish, adds hardness and protection: speeds drying

Mineral spirits-----Thin the formula according to your needs.

**Food Safe Finishes** “In my opinion”-based on research I have done: All finishes are safe for use on bowls, cutting boards or other wooden utensils, *when the finish has cured.*

Food Grade finish A product like mineral oil or walnut oil that is safe and can be used immediately upon application.

**My Finishing Precepts**

- A) Some Finishes and solvents, **mixed in a liquid or uncured state**, MAY NOT be compatible and may cause an adverse health reaction.
  - a. When a particular finish has been applied and has cured (ex: shellac), a dissimilar finish like linseed oil can be applied over the shellac.
- B) When **a finish has cured and the solvents and dryers have evaporated** the finish will be safe for serving food.
- C) No finish exists in nature that can be used effectively in its natural state without being processed.
- D) All finishes have polymers.
- E) Mineral oil is not a finish. (?)
- F) Re: Food Safe finishes. No finish, when cured, is unsafe.
- G) The wood or condition of the wood *can* affect the final appearance of the finish.
  - a) Density or porosity of the wood
  - b) Color of the wood
  - c) Figure and grain
  - I. The method of application can also have a dramatic effect on the final finish of a piece.
  - II. The amount of finish sanded off or buffed off the surface can greatly alter the appearance of the finish.
  - III. Finally, surface treatments such as burnishing can change the appearance of the finish applied.

