



Sutherland Welles Ltd.®

Sustainable, natural & earth-friendly Polymerized Tung Oil wood finishes.

Wind Instruments: Flutes, Pipes, Etc.



Original Polymerized Tung Oil

Also known as our INTERIOR Line

The concept for finishing these instruments is to saturate the wood with Polymerized Tung Oil. They can be used interchangeably providing adequate moisture protection without compromising the resonance. The instruments are usually placed in a container of Polymerized Tung Oil to soak for a period of time.

Our Original Polymerized Tung Oil line is VOC Exempt & has a light, nutty scent while working.

If you or your client have petroleum sensitivities, we recommend using the Botanical Polymerized Tung Oil line instead.

Before You Get Started

Application Process Tools

- 5 Gallon Paint Pail (Metal or Plastic)
- Drying Rack
- Rag: Scott® blue paper shop towel or another non-treated, lint free cloth

Other Tools For Project

Sandpaper (or Steel Wool & Pad Equivalents)

- 220 (Max before first coat)

Mineral Spirits or Di-Citrusol

Helpful Tools: Vacuum, Dust Brush, & Fan

Optimal Finishing Conditions

- Weather conditions 55-75°F
- Humidity: 65% or less

Working outside optimal conditions can lengthen curing time between coats and overall. Air flow helps finish the cure. **Tacky surfaces are NOT cured.**

Application Instructions

Wood Preparation: Wood surface should be free of lint, dirt, grease, wax, oil, and old paint. If refinishing old wood, make sure to remove any loose old finish or results may not be even.

Before Applying FIRST Coat: Sand the wood up to 220 grit paper. Avoid higher grits as they close wood pores, interfering with maximum penetration in the initial coat.

Step 1:

- Pour *Original Polymerized Tung Oil* into paint pail.

Step 2:

- Completely submerge instrument.
- Let fully soak for 48 hours.

Step 3:

- Remove and wipe surface with dry rag.

Step 4:

- Vertically hang instrument on drying rack.
- Let cure 48-72 hours (until not tacky).

Gentle touch after 24 hours. Light use after 72 hours. Do not cover from airflow for two weeks minimum. Full Polymerized Tung Oil cure through after 30 days (+/- based on local humidity/elevation/temperature)

Frequently Asked Questions

General Application & Troubleshooting with Polymerized Tung Oil

What proportion of Mineral Spirits (or Di-Citrusol™) do I mix in to make a Sealer?

Low Lustre: 10% (Low Lustre is VERY close to Sealer) Medium Lustre: 20% High Lustre: 50%

Can I use one of my usual tacking cloths for surface prep?

We do not recommend using pre-treated tacking cloths as they can leave behind a residue that will interfere with the bonding and aesthetic of the polymerized tung oil finish. Use a lint free rag or blue shop towel instead.

Why does my finish have tiny spots after the first few coats are cured?

This usually only happens when using a wiping technique with the first couple of coats. It's known as *speckling* or *bleed back*, which is when the oil seeps back out of the wood and cures causing small spots or dots.

Typically, this happens on open grain woods, like Oak and Walnut, and most often with the first couple of coats if they are being wiped. The friction of wiping speeds up the evaporation of the solvent in the finishes and makes the Polymerized Tung Oil very thin and it migrates to the surface as the solvent gases off. This can be avoided by NOT wiping the excess off your first coat. Apply a thin layer and let it soak into the wood and cure. This almost always will eliminate these spots from happening in the first place.

How do I get rid of tiny speckles of glossy oil cured on the surface?

See above for how to keep that from happening. It's important to deal with them as soon as you notice them. They aren't going to disappear with adding another coat. Sand the surface lightly with 400 grit sand paper. Wipe the surface down with mineral spirits on a cloth. Let dry and observe the surface. If it's a large surface area, but not all areas have the spots, you should still sand the entire surface. You can't spot sand with uniform end results.

Why do I have uneven sheen with streaks of dull and shiny areas?

There are two possibilities for what could be happening. When there isn't even surface build on the wood itself, the wood has deeply absorbed the finish. Keep "feeding" the wood more polymerized tung oil by building coats up until it all evens out on the surface coats. This is common with "thirsty" woods like Walnut.

If you have an even surface build and this is happening WITHIN the finish coats, then you have streaking and flashing. This happens when a prior coat of finish didn't dry properly, most likely due to humidity shifts, before another coat was applied. Moisture is trapped under the surface of the finish creating the streaks. This will need to be sanded back down to that layer and allowed to dry and re-coated.

Why am I seeing scratch marks in the wood?

You did not effectively sand out these marks before application. Oil finishes will absolutely highlight improper sanding marks. You will have to sand them out with courser sandpaper and rebuild from there.

What can I use to fill in voids in the wood?

Two-part epoxy. You can take it a step further and mix sanding dust with the epoxy before filling. You can also purchase tinted epoxy or dyes to add to epoxy to match or highlight the voids, but do a Sealer coat first. Make sure you sand the epoxy to the grit the manufacturer recommends then return to the wood and sand back down before applying more finish coats.

Can I coat over polymerized tung oil with a lacquer or a polyurethane?

We do not advise coating over any of our finishes with a lacquer. You can coat over with an oil based poly, but you will need to wait for the polymerized tung oil to completely cure through (30 days minimum) before applying. We **strongly** suggest using our Murdoch's resin fortified products as a more durable and easily repairable option in place of any oil based polyurethanes. Any Murdoch's line option can be applied over the polymerized tung oil after the 24 hour minimum coat cure time.

What if I want to stain this project?

Please refer to our website for more information and staining techniques with the Old World Concentrated Stains and polymerized tung oil. If using another brand, follow their curing instructions before applying polymerized tung oil over. Only mix with OIL based stains/paint or aniline dyes if tinting our finish.

Frequently Asked Questions

Care Instructions for a Polymerized Tung Oil Finish

How Do I Care for a Polymerized Tung Oil Finish?

- **CLEAN:** Use *Sutherland Welles Ltd.[®] Wood Cleaner* OR 1 cup vinegar or ammonia to 1 gallon warm water* with a soft, clean cloth. Do not use any cleaner with a SOAP base (Murphy's Oil Soap/Bona etc.) under any circumstances, as they will leave a film that will gum up the surface of the oil. Do not use a steam cleaner.
*Ratio is 1 part vinegar or ammonia to 16 parts water to scale up or down as needed.
- **REFRESH:** Apply *Sutherland Welles Ltd.[®] Tung Oil Polish* and buff with a clean dry cloth. This will help with the longevity of the finish, delaying the need to re-coat.
- **RE-COAT:** Scuff lightly with fine steel wool, sandpaper or pad. Vacuum & Tack. Re-apply finish as needed.

Can I spot repair a polymerized tung oil finish?

Yes, you can if there is a scratch or blemish on the finish. Sometimes wiping our polymerized tung oil over a scratch will make them disappear and blend in. Blemishes or marks in the surface layer of finish will need to be removed by lightly sanding with fine sandpaper first. Sometimes the entire board will need to be refinished to blend in or the entire surface of a counter top or table.

Can I use a wax over your products?

If you choose to, we recommend using Teddy's Polymerized Tung Oil Paste a week after the last coat is applied. Keep in mind that wax has a tendency to "halo" or leave rings on a dining room table under hot drinks/food. It will also need to be removed before any re-coating can occur. We suggest not using wax on dining tables, counters, or coffee tables if wet drinks will be placed there. *Sutherland Welles Ltd.[®]* also has a Tung Oil Polish that is a great alternative to paste wax. It can be used as extra protection and as maintenance product.

Storing Polymerized Tung Oil

I have an unopened can of finish. How long is it good for?

With the exception of our Exterior line of products, any unopened can of our finish has no shelf life.

What's the BEST way to store an opened can of finish?

These are the two most reliable ways to store residual finish. Both options are available for purchase on our website:

- **StopLossBags[®]**. The bags are made with a plastic that can withstand a variety of solvents and not breakdown so the product is preserved in an oxygen free environment and remains shelf stable indefinitely.
- **Bloxygen** displaces oxygen with ultra-pure Argon, a nontoxic, inert gas naturally found in the air. It prevents thickening, gelling, skinning, and clogged spray guns caused by oxygen exposure.

Other methods:

- Clean the inner rim of the can well so the plug seats uniformly and firmly in place and store it inverted.
- You can also pour it into a smaller container (metal or glass) leaving little air space- make sure to label it properly. Perfect way to reuse old sauce or jam jars!
- Marbles or clean rocks can also be dropped in to take up the airspace.

What can I do if my finish gels up in the can after I have opened it?

This only happens in a partially full can that has been used. If the finish is thick and gel-like, the finish has oxidized in the can. You can attempt to thin it down by adding mineral spirits or our Di-Citrusol[™] and stirring it gently to see if you can coax it back into solution. You may need to pass it through a fine paint strainer to remove any small globs.

For more tips & tricks, visit our Youtube page for video tutorials:

youtube.com/@sutherlandwellesltd