

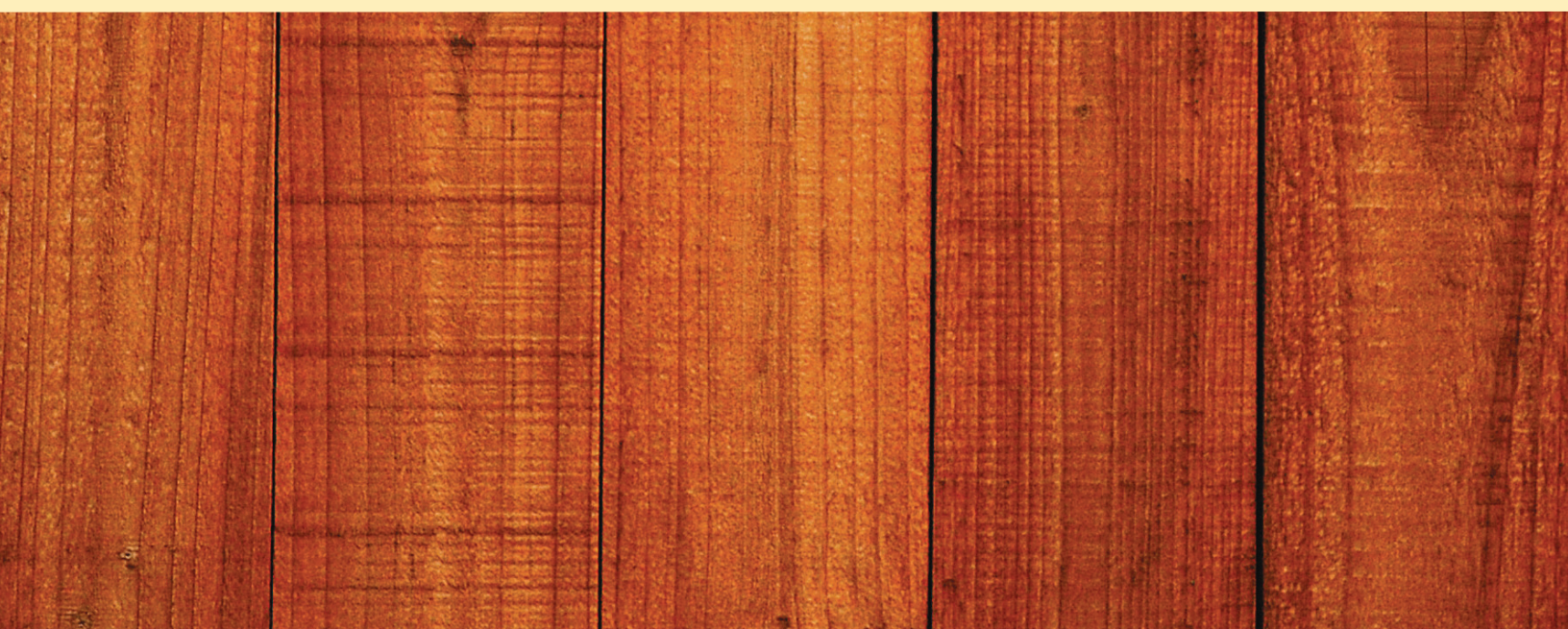


Sutherland Welles Ltd.[®]

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

FLOOR INSTRUCTIONS

Interior/Original Formula & Botanical Polymerized Tung Oil



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Floor Sanding Prep



Interior/Original Formula & Botanical Polymerized Tung Oil Sanding Process

It's important to be meticulous in sanding any surface you plan to finish with Tung Oil. Tung Oil penetrates deep into the wood and highlights every mark or defect in the wood.

step 1: First Sanding

The initial cut either removes finish from an existing floor or on a new floor removes the chatter lines left from the planner that surfaced the board and any variation in height from board to board known as “over-wood”. The grit to be used depends on new or old, usually **50-60 grit**.

step 2: Sanding sequence

After the initial sanding, ideally there are three more sandings; **80, 100 and 120 grit sandpaper**. The third surface sanding using the 120 grit should be done lightly. For an oil finish, you need a finish surface that is furniture grade. Modern milling practices create boards that are almost finish ready with minimal sanding required to eliminate chatter marks, etc. Always start with as high a grit as possible to minimize scarring the wood. This is very important with soft woods such as Eastern White Pine and Spruce.

step 3: Edging

Begin edging with a grit above the previous directional sanding, i.e. directional sanding at **80 grit** – edge out at **100grit**.

step 3: Screening

Flooring contractors will blend the drum sander line and edger line by screening the floor to marry the center with the perimeter. This should be done thoroughly and carefully to minimize swirls in the wood. Any circular sanding should always be followed with directional sanding. Poor edging will create a halo effect around the perimeter of the room which will become evident once the stain cures and settles into all the swirl lines left by the edger or the screening process. Sutherland Welles Sealers and Stains are formulated to penetrate deep into the wood. Any sanding flaw not properly addressed in the wood preparation step will appear once the sealer and/or stain is applied. Not pretty! To verify all swirl lines are removed, put a drop light on the perimeter and look towards the light- it will highlight any lingering sanding blemishes.

Helpful Hint!

- All sanding is directional with the grain.
- Edging or screening should always be followed with directional sanding.
- Avoid using hand held orbital sanders because they create swirls that show up after they are stained.
- **Special Surfaces:** If the flooring is a reclaimed timber or new wood with special surface treatment such as hand-planing, you will need to prep the wood with hand sanding only. Hand sanding will smooth the surface without changing the special character marks.

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Interior/Original Formula & Botanical Polymerized Tung Oil

These two lines are all Polymerized Tung Oil with no resin fortification. The difference in the two formulations is the solvent. The Original Formula is a petroleum solvent and the Botanical is our proprietary citrus solvent, Di-Citrusol™. They can be used interchangeably. Easy to apply and maintain, a Tung Oil floor develops a rich patina as it ages. Hand Wiping a flooring project is often easier in small, confined spaces.

Hand Wiping Instructions

FOR ALL CHOSEN LUSTRES

step 1:

- Apply *Polymerized Tung Oil of Choice* on entire surface.
- Don't Wipe
- Let cure 24 hours

step 2:

- Sand (400 grit)
- Vacuum & tack surface

(use Mineral Spirits on a rag to clean surface)

step 3:

- Apply *Polymerized Tung Oil of Choice* in 3 ft wide section for the length of board
- Wait 20-25 min.
- Wipe unabsorbed finish
- Let cure 24 hours

step 4:

- Apply *Polymerized Tung Oil of Choice* in 3 ft wide section for the length of board
- Wait 20-25 min.
- Wipe unabsorbed finish
- Let cure 24 hours

Note: To even sheen or smooth surface between coats, buff with #0000 steel wool or sand with 600 grit

step 5:

- Apply *Polymerized Tung Oil of Choice* in 3 ft wide section for length of board
- Wait 20-25 min.
- Wipe unabsorbed finish.
- Let cure 24 hours

Hand Wiping Application

Applicator Options

Brush: Natural white china bristle brush (thin coats only)

Lambs Wool applicator

Synthetic applicator

Rag: Scott® blue paper shop towels

Coat Cure Test

Push finger tips against the grain of the wood (especially corners). If they glide easily over the surface, you are ready to apply your next coat. Cure times for wiped topcoats are a minimum of at least 24 hours and after several coats and other variables such as Lustre, temperature and humidity it can extend longer. The important point is to check the floor in several places.

Helpful Hint!

Tips during finishing

- The first wet layer tends to raise the grain of the wood. It is common to see an uneven surface. This is why you sand the surface to bring the surface to a uniform level of sheen before starting with your wiped coats. Let the solvent dry and observe the floor for a uniform "dullness". If not repeat sanding process.
- To prevent streaking or flashing the oil needs to be completely wiped off as there isn't enough chemical drier to allow the oil to cure adequately if left on the surface.

Tips POST finishing

- Allow the floor to remain unused for **72 hours** for the surface to become harder and more resistant to damage.
- If this isn't practical covering the floor with contractors paper is the next best option if other trades people need to access the area.
- Allow at least 48 hours after last application prior to covering.
- Do not tape any covering directly to the finish.
- No rugs should be laid for **2 weeks** to allow thorough curing of the finish.

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Buffing Machine Instructions FOR ALL CHOSEN LUSTRES

step 1:

- Apply *Polymerized Tung Oil of Choice* on entire surface.
- Don't Wipe
- Let cure 24 hours

step 2:

- Sand 400 grit or buff with used 220 grit screen or Maroon 3M buffing pad.
- Vacuum & tack surface

(use Mineral Spirits on a rag to clean surface)

To even sheen or smooth surface between coats, buff with #0000 steel wool or sand with 600 grit

step 3:

- Apply *Polymerized Tung Oil of Choice* in 3 ft wide section for the length of the board. With steel wool pads continue with the three buffings listed below:

Buffing #1: With steel wool (*To avoid splashing buff toward the wall*)

Buffing #2: Change to dry steel wool pad. Re-buff section

Buffing #3: Change to dry terry towel. Re-buff section

Repeat for entire floor

- Let cure 24 hours

Repeat step 3 to complete a four coat process.

Buffing Machine Application

Applicator Options

Brush: Natural white china bristle brush (thin coats only)

Lambs Wool applicator

Short Napped Synthetic applicator

Polishing Pads: 3M® White polishing pad

Terry Cloth Towels: Bar size

Rag: Scott® blue paper shop towels

Coat Cure Test

Push finger tips against the grain of the wood (especially corners). If they glide easily over the surface, you are ready to apply your next coat. Cure times for wiped topcoats are a minimum of at least 24 hours and after several coats and other variables such as Lustre, temperature and humidity it can extend longer. The important point is to check the floor in several places.

Helpful Hint!

Tips During Finishing

- Only use a **LOW RMP** buffing machine.
- The first wet layer tends to raise the grain of the wood. It is common to see an uneven surface. This is why you sand the surface to bring the surface to a uniform level of sheen before starting with your wiped coats. Let the solvent dry and observe the floor for a uniform "dullness". If not repeat sanding process.
- To prevent streaking or flashing the oil needs to be completely wiped off as there isn't enough chemical drier to allow the oil to cure adequately if left on the surface.

Tips Post Finishing

- Allow the floor to remain unused for **72 hours** for the surface to become harder and more resistant to damage.
- If this isn't practical covering the floor with contractors paper is the next best option if other trades people need to access the area.
- Allow at least 48 hours after last application prior to covering.
- Do not tape any covering directly to the finish.
- No rugs should be laid for **2 weeks** to allow thorough curing of the finish.

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Steel Wool Pad Instructions



Why # 1 Steel Wool?

You need a coarse steel wool to cut through the oil and polish the wood. Additionally, the coarseness creates air spaces that collect the oil that isn't burnished into the wood.

How to create a steel wool pad from a roll?

- **Caution:** Make your pads outside, away from your finishing area, as separating the roll will cause loose steel wool fibers to fall in your work area.
- **Buffing machine:** The size of the buffing machine will determine the size of the pad you make.
- **3M™ white synthetic polishing pad:** The pad acts like “Velcro” to hold the steel wool in place.
- **Folding Steel Wool:** Fold strips of steel wool in a zig-zag patten from one side of the pad to the opposite side until you have reached the desired size. Cut or pull the steel wool fibers apart to end the pad. Tuck in the ends of the steel wool so it won't unravel. To speed the process along make multiple pads at one time.
- **Buffer stability:** The steel wool pad is secured in position under the drive pad by the weight of the buffing machine. The evenness of the steel wool weave will ensure the buffer is stable.

How much steel wool do I need?

- Average yield per 5lb roll = 2000sq.ft.
- 8-10 16inch pads per roll
- You will need a fresh pad for every 250 sq. ft of flooring.
- You can flip the pad and use the other side for another 250 sq.ft.



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Polymerized Tung Oil & Old World Concentrated Stain

Sutherland Welles Ltd.® Concentrated Stains enhance the natural beauty and graining of any wood. Formulated with our Polymerized Tung Oil, a touch of varnish, low toxic mineral spirits and aniline dyes; these non-pigmented colors are a part of the complete finishing process that guarantees years of enhanced beauty as natural aging of the wood occurs. How the stain is absorbed into the wood is dictated by the technique of application. Options listed below.

Penetrating Stain Instructions *With Interior/Original Sealer**

step 1:

- Apply clear coat of *Sealer*.
- Do not wipe.
- Let cure 24 hours

step 2:

- Sand (400 grit)
 - Vacuum & tack surface
- (use Mineral Spirits on a rag to clean surface)

step 3:

- Mix *Sealer & Stain*
- (Using determined ratio of Sealer:Stain)

step 4:

- Apply *Sealer & Stain* mixture.
- Do not wipe.
- Let cure 24 hours.

step 5:

- Sand lightly (600 grit or #0000 steel wool)
- Vacuum & tack surface

step 6:

- Apply *Sealer & Stain* mixture.
- (Adjusting stain ratio if needed.)
- Do not wipe.
 - Let cure 24 hours.

step 7:

- Sand lightly (600 grit or #0000 steel wool)
- Vacuum & tack surface

Top Coats: *Follow Hand Wiping Application Steps 3 through 5*

**Or use Botanical Polymerized Tung Oil Sealer if preferred.*

Rustic Stain Instructions *With Interior/Original Sealer**

step 1:

- Apply clear coat of *Sealer*.
- Do not wipe.
- Let cure 24 hours

step 2:

- Sand (400 grit)
 - Vacuum & tack surface
- (use Mineral Spirits on a rag to clean surface)

step 3:

- Mix *Sealer & Stain*
- (Using determined ratio of Sealer:Stain)

step 4:

- Apply *Sealer & Stain* mixture.
- Wipe to desired color depth.
- Let cure 24 hours.

step 5:

- Sand lightly (600 grit or #0000 steel wool)
- Vacuum & tack surface

step 6:

- Apply *Sealer & Stain* mixture.
- (Adjusting stain ratio if needed.)
- Wipe to desired color depth.
 - Let cure 24 hours.

step 7:

- Sand lightly (600 grit or #0000 steel wool)
- Vacuum & tack surface

Staining Your Floor

Applicator Options

Brush: Natural white china bristle brush (thin coats only)

Lambs Wool applicator

Rag: Scott® blue paper shop towels

We always recommend brushing out the stain as you have better contact with the wood. If you want to speed the process along, apply the stain with a lamb's wool applicator – thinly and then back brush it in.

Cure Test

Push finger tips against the grain of the wood. If they glide easily over the surface, you are ready to apply your next coat.

Total Saturation Stain Instructions *With ONLY Old World Stain*

step 1:

- Apply *Old World Stain*.
- Do Not Wipe.
- Let cure 24 hours.

step 2:

- Sand lightly (600 grit)
 - Vacuum & tack surface
- (use Mineral Spirits on a rag to clean surface)

step 3:

- Apply *Old World Stain*
- Don't wipe
- Let cure 24 hours

Repeat steps 2-3 until desired depth of saturation is achieved.

step 4:

- Sand lightly (600 grit or #0000 steel wool)
- Vacuum & tack surface

Top Coats: Follow Hand Wiping Application Steps 3-5

Dilution Ratios for Stain

Tint	8 parts Sealer : 1 part stain
Light	6 parts Sealer : 1 part stain
Medium	4 parts Sealer : 1 part stain
Dark	2 parts Sealer : 1 part stain

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Murdoch's Hard Sealer & Old World Concentrated Stain

The concept of a glazing staining process is to create a barrier with the initial coat of Murdoch's Hard Sealer that minimizes the stain being absorbed into the grain. Essential the color "floats" on the surface above the wood. The Process begins with using our Murdoch's Hard Sealer as a wood conditioning application that allows better control over color saturation into the wood.

Glazing Stain Instructions

step 1:

- Apply clear coat of *Hard Sealer*.
- Do not wipe.
- Let cure 24 hours

step 2:

- Sand 400 grit
 - Vacuum & tack surface
- (use Mineral Spirits on a rag to clean surface)

step 3:

- Mix *Hard Sealer & Stain* using determined ratio of Sealer:Stain

step 4:

- Apply *Hard Sealer & Stain* mixture.
- Do Not Wipe.
- Let cure 24 hours.

step 5:

- Sand lightly (600 grit or #0000 steel wool)
- Vacuum & tack surface

step 6:

- Apply *Hard Sealer & Stain* mixture.
- (Adjusting stain ratio if needed.)
- Do Not Wipe.
 - Let cure 24 hours.

step 7:

- Sand lightly (600 grit or #0000 steel wool)
- Vacuum & tack surface

Top Coats: Follow Hand Wiping Application Steps 3 through 5

Staining Your Floor: Glazing Technique

Applicator Options

Brush: Natural white china bristle brush (thin coats only)

Lambs Wool applicator

Rag: Scott® blue paper shop towels

We always recommend brushing out the stain as you have better contact with the wood. If you want to speed the process along, apply the stain with a lamb's wool applicator – thinly and then back brush it in.

Cure Test

Push finger tips against the grain of the wood. If they glide easily over the surface, you are ready to apply your next coat.

Dilution Ratios for Stain

Tint	8 parts Sealer : 1 part stain
Light	6 parts Sealer : 1 part stain
Medium	4 parts Sealer : 1 part stain
Dark	2 parts Sealer : 1 part stain

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Floor Maintenance



Timely maintenance of a floor finished with our Interior/Original Formula or Botanical Polymerized Tung Oil will keep the floor looking beautiful, develop a patina and protect the wood. How often to re-oil your floor is a function of how much wear and tear the floor is subjected to. Most floors will require an additional coat between the third and fifth year of use. Re-oiling fills in surface scratches and restores the lustre. Timely maintenance is also key to keeping the process simple with a minimum of applications to rejuvenate the floor.

Weekly Floor Care

- **Vacuum:** To minimize scratching vacuum regularly to keep the floor grit free.
- **Dust Mop:** Use an oil-prepped all cotton (not synthetic) dust mop.
The new "Swiffer" type of wood floor dusters are fine but avoid using the "wet" version as they will dull the finish.

Floor Care Do's & DON'T's

- **Do:** Wash the floor using a cup of white vinegar to a gallon of warm water. Use a sponge that has been moistened in the vinegar water. Buff the floor dry with a clean soft cloth.
- **Do:** Replace the vinegar with ammonia for stubborn dirt.
- **Do:** Spray WD-40® on a soft, dry cloth to rub off black shoe marks.
- **DON'T:** Use ANY cleaner with a **SOAP** base (*such as Murphy's Oil Soap*) under any circumstance. These cleaners leave a film that will gum the surface of the oil!
- **DON'T:** Flood the floor with water when washing.
- **DON'T:** Use steam cleaners.

Re-Oiling the Floor

- **When to re-oil:** An oiled floor needs to be re-oiled every 3-4 years depending on traffic patterns and use.
- **Prep:** Wash the floor with TSP (Trisodium Phosphate) available in hardware stores. Follow directions on package.
- **Sand:** Lightly sand with **400-600 grit** sandpaper if there are scratches you want to minimize or eliminate.

Re-Oiling Hand Wiping Instructions

- Apply *Polymerized Tung Oil of Choice* in 3 ft wide section for the length of board.
- Wait 20-25 min.
- Wipe unabsorbed finish
- Let cure 24 hours

Repeat step if needed.

Re-Oiling Buffing Machine Instructions

- Apply *Polymerized Tung Oil of Choice* in 3 ft wide section for the length of board.
- Buffing #1: With steel wool (*To avoid splashing buff toward the wall*)
- Buffing #2: Change to dry steel wool pad. Re-buff section
- Buffing #3: Change to dry terry towel. Re-buff section
- Repeat for entire floor.
- Let cure 24 hours

Repeat step if needed.