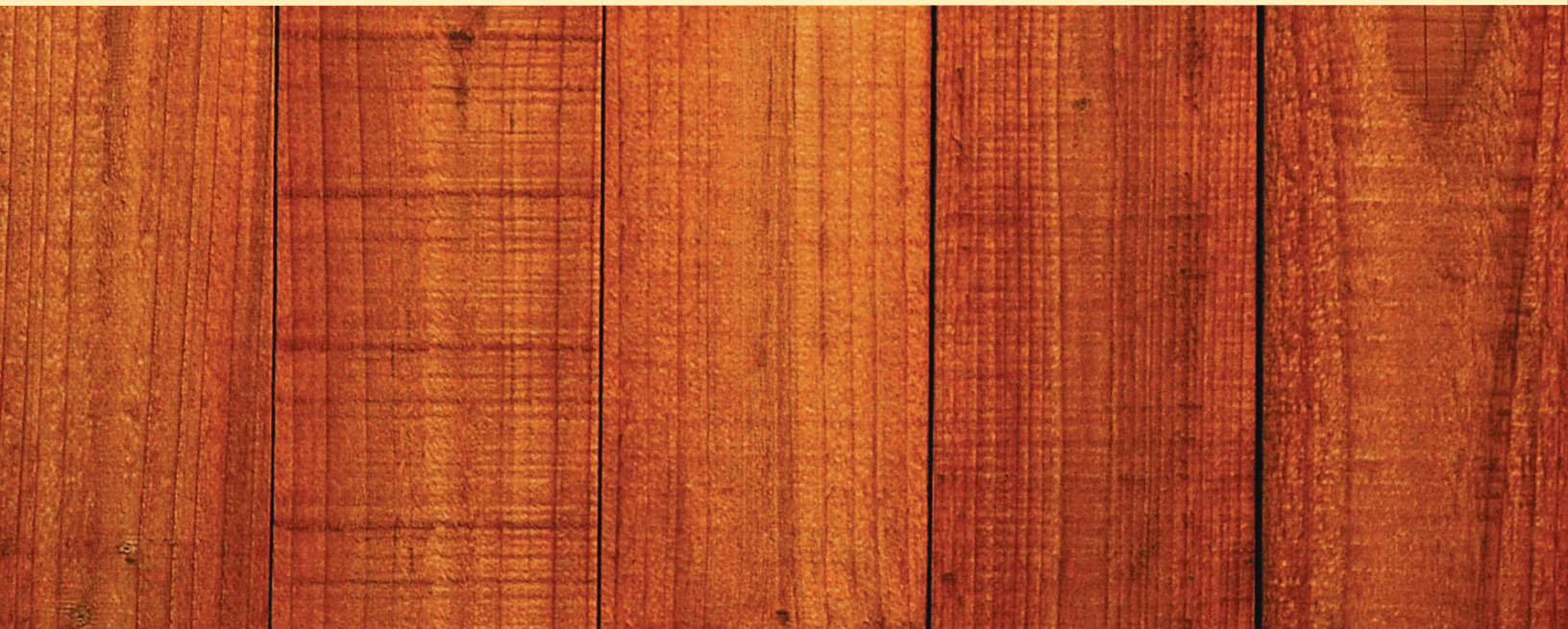




Sutherland Welles Ltd.[®]

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

FLOOR INSTRUCTIONS
MURDOCH'S SYSTEM



Sutherland Welles Ltd.®

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

Floor Sanding Prep



Murdoch's Hard Sealer & Uralkyd 500 Floor Finish

Sanding Process

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.

Sutherland Welles Ltd.®

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



Murdoch's Floor Instructions

Murdoch's Uralkyd 500 Floor Finish

Murdoch's Hard Sealer applied as the initial coats enhance the grain definition that is often characteristic of the wood species chosen for drums. The final appearance is produced by the choice of topcoat. Murdoch's Uralkyd 500 Matte, Satin or Gloss or Satin provide maximum protection. We recommend this for high moisture areas such as kitchens and bathrooms.

Uralkyd 500 Floor Instructions (ALL FINISHES)

step 1:

- Apply Murdoch's *Hard Sealer*
- Don't wipe
- Let cure 24 hours

step 2:

- Sand 400 grit or new screen 120/150 grit or new synthetic 3M™ maroon BCP (Between Coat Pad)
- Vacuum & tack surface

(use Mineral Sprits on a rag to clean surface)

step 3:

- Apply Murdoch's *Hard Sealer*
- Don't wipe
- Let cure 24 hours

step 4:

- Sand 400 grit or used screen 120/150 grit or used synthetic 3M™ maroon BCP (Between Coat Pad)
- Vacuum & tack surface

step 5:

- Apply Murdoch's *Uralkyd 500 Floor Finish*
- Let cure 24 hours

step 6:

- Sand 600 grit or used screen 120/150 grit or used synthetic 3M™ maroon BCP (Between Coat Pad)
- Vacuum & tack surface

step 7:

- Apply Murdoch's *Uralkyd 500 Floor Finish*
- Let cure 24 hours

Applicator Options

Rag: Scott® blue paper shop towels

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

3M™ Synthetic Maroon BCP

Short Napped Synthetic Applicator

Cure Test

Lightly sand several inconspicuous areas. A fine, white powder indicates that you can safely apply another coat.

Helpful Hint!

Tips During Finishing

- Do not roll the topcoat.
- Minimize loading the brush/applicator. You want to flow on a thin even coat.
- Avoid rigorous brushing. The finish will level on its own.
- If you have bubbles in coat work them to other areas as they won't go away. They will burst and create marks in the cured surface.
- If using Satin or Matte, make sure to stir the product periodically while coating to distribute the flattening agent evenly.

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.

Sutherland Welles Ltd.®

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



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. Brushing gives you an even, uniform layer. If you get too much on and you have bubbles and brush strokes, brush excess onto next section of boards.

Penetrating Stain Instructions

step 1:

- Apply *Murdoch's Hard Sealer ONLY*
- 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 with 600 grit or #0000 steel wool
- Vacuum & tack surface

step 6:

- Apply Sealer and Stain mixture.
Adjusting stain ratio if needed.

- Do not wipe.
- Let cure 24 hours.

step 7:

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

Glazing Stain Instructions

step 1:

- Apply Murdoch's *Hard Sealer ONLY*.
- 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 with 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 with 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

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.

Rustic Stain Instructions

step 1:

- Apply Murdoch's *Hard Sealer ONLY*
- 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 and Stain* mixture.
- Wipe to desired color depth.
- Let cure 24 hours.

step 5:

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

step 6:

- Apply *Hard Sealer & Stain* mixture.
Adjusting stain ratio if needed.

- Wipe to the desired color depth.
- Let cure 24 hours.

step 7:

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

Top Coat Instructions Uralkyd 500: Matte, Satin or Gloss

step 8

- Apply Murdoch's *Uralkyd 500 Floor Finish*
- Let cure 24 hours

step 9

- Sand 600 grit or **used** screen 120/150 grit or **used** synthetic 3M™ maroon BCP
- Vacuum & tack surface

step 10

- Apply Murdoch's *Uralkyd 500 Floor Finish*
- Let cure 24 hours

Dilution Schedule 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

General Application Tips & Frequently Asked Questions

Troubleshooting with Murdoch's

I'd like to use the Table Top Finish instead of the Uralkyd 500. What process do I use?

We recommend following the Uralkyd 500 instructions, just substitute the Table Top for the top coats over the Hard Sealer. Bear in mind that the Table Top is slower to dry and more prone to dust settling into the finish. If you are new to our finishes, we recommend the Hard Oil or Uralkyd 500 topcoats in place of the Table Top.

Why am I having bubbles in my finish?

Too much finish is being applied. Use less finish on your brush and move the finish to make a very thin coat.

What to do if bubbles dry in the cured finish?

You need to lightly sand them away with fine sand paper – 600 grit should remove them. If that doesn't work, switch to the next coarser grit of sandpaper using even pressure across the entire surface. Wipe the dust off with a dampened cloth with mineral spirits to see if they gone. Bubbles must be removed before applying more finish.

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 and have the end result be uniform.

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

This is called *streaking* and *flashing*. This happens when a prior coat of finish didn't dry properly 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 a 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.

Can I spot repair a Murdoch's finish?

Yes, you can if there is a scratch or blemish on the finish. Sometimes wiping our Murdoch's Hard Sealer 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 have it 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 also has a Tung Oil Polish that is a great alternate to paste wax. It can be used as extra protection and as maintenance product.

What if I want to stain this project?

Please refer to our Staining Instructions for more information and techniques of staining with Murdoch's.

General Application Tips & Frequently Asked Questions

MATTE SHEEN GUIDELINES

Especially with OPEN Grain Woods (Ex: Walnut, Cypress, Ash, Mahogany, Oak, etc.)

A SEALED base provides a consistent topcoat.

A sealed base means the Hard Sealer adequately fills the open grain. The whole surface should have a slight sheen (when dry) before building with the Uralkyd 500 Matte finish.

Repeat Steps 3 & 4 until surface is sealed, BEFORE applying Uralkyd 500 MATTE.

Open grained wood can also be filled by making a slurry of Hard Sealer using 400 grit paper when applying, then wiping off.

These extra steps prevent the grain from hazing or telescoping through each successive coat.

A super flattened resin finish like our Matte has heavier amounts of flattening agent that ends up sitting in the unfilled open pores, especially on dark wood.

Troubleshooting with Murdoch's Uralkyd 500 Floor Finish

Why did my finish turn "Milky"?

There are many environmental & application reasons WHY your finish can turn milky on the surface.

Environmental:

- Moisture in Wood
- Water or moisture getting into the finish
- Residue on surface
- Relative humidity too high, preventing curing
- Curing TOO fast (heated floors too hot)
- Storage of finish too hot or too cold

In Process:

- Added thinner (Do NOT thin Uralkyd 500)
- Over working the finish
- TOO much finish, laid on too thick
- Finish was not cured before application of the next coat

What do I do to fix this?

- Try to gently heat the finish with a hair dryer or a heat gun.
- Sand down and re-coat.
- Wait a day or more to see if it disappears.

Sutherland Welles Ltd.®

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



Murdoch's Maintenance

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. To prep a new mop, use Sutherland Welles Ltd.® Dust and Tacking Oil according to the directions on the label. 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:** 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:** Under no circumstances should any cleaner with a soap base such as Murphy's Oil Soap be used. 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.
- **DON'T:** Wax a Murdoch's floor. Waxing interferes with adhesion of maintenance coats and can be slippery.

Re-Surfacing the Floor

- **When to re-surface:** A Murdoch's floor needs to be re-surfaced every 5-8 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-Surfacing Murdoch's Instructions

step 1:

- Apply Murdoch's Uralkyd Matte, Satin or Gloss
- Let cure 24 hours