

## Waterlox Floor Finishing Guide

### WHERE TO USE

Beautiful. Natural. Durable. That's a Waterlox finish. A unique blend of Tung oil and resin, Waterlox showcases the natural beauty of wood, providing lasting, durable protection. This elegant, one-of-a-kind finish has been made by the Hawkins family since 1910, and is still made by hand according to the original family formula. Waterlox delivers spectacular results, and to make sure you achieve just that, this guide will take you step-by-step through the proper application of a Waterlox finish in conjunction with the online floor application video and FAQs (located on our website at [waterlox.com](http://waterlox.com)).

### PERFORMANCE HIGHLIGHTS

Features	Benefits
Tung oil-based	Penetrates surface Easy to maintain Enhances beauty of wood
Flexible	Moves with the wood Does not chip or crack Tolerates wide temperature ranges
Water resistant <sup>1</sup>	Excellent water resistance Great for use in known water-related areas <sup>2</sup>
Protective	Protects against common household spills Heat and Cold
Easy to Maintain	Easier to maintain than surface finishes and/or oils

Unlike common surface finishes such as polyurethanes (solvent or water-based) that conceal the wood's grain and beauty under a layer of plastic, Waterlox Original Tung oil finishes offer a unique handmade blend of Tung oil and resin that penetrates the wood, yielding a rich, hand-rubbed look that's durable and easy to maintain.

### CHOOSING YOUR FINISH<sup>2</sup>

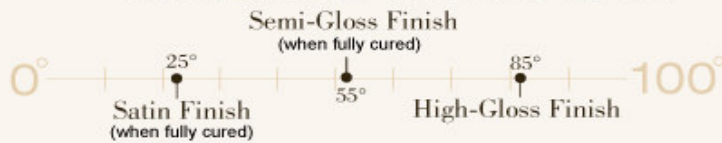
There is no right or wrong choice in terms of performance between each of the three interior finishing products. All Waterlox Original Tung oil finishes offer a durable protective finish that enhances the natural character of wood.

Each:

- Penetrates, is water resistant and forms a protective yet elastic finish against foot traffic, common household spills, moisture and daily use.
- Non-toxic and food-safe when fully cured.<sup>3</sup>
- Easy to use and apply.
- Easier to maintain than other interior clear finishes or surface finishes.

Begin all projects with our Waterlox Original Sealer/Finish. If you would like a medium sheen, continue using the Waterlox Original Sealer/Finish for all coats required. If a lower sheen is desired, the last coat applied should be our Waterlox Original Satin Finish. If a higher gloss is desired the last coat applied should be our Waterlox Original High Gloss Finish.

## WATERLOX GLOSS SCALE



### TIP

Regardless of the sheen desired for your project, we strongly recommend that you begin your project with our Waterlox Original Sealer/Finish. This product allows you to seal the wood and acts as a base coat.

### Waterlox Original Sealer/Finish

- Produces a medium sheen (semi-gloss) appearance (75° gloss level when finished; fades to a 50-55° gloss level in 3-6 months).
- Our oldest and truly “original” product, since 1910.
- Our most versatile product. Many customers use only this product for all coats of finish.

### Waterlox Original Satin Finish

- Produces a satin appearance (20°-25° gloss level).
- Our lowest gloss level offered.
- Used as a finish coat only, over base coats of Waterlox Original Sealer/Finish.

### Waterlox Original High Gloss Finish

- Produces a shiny appearance (85° gloss level).
- Our highest gloss level offered.
- Used as a finish coat only, over base coats of Waterlox Original Sealer/Finish.

### COVERAGE/THINNING

One gallon covers 500 square feet per coat. One quart covers 125 square feet per coat. The number of coats depends upon the porosity of the wood being finished (check the wood hardness (Janka chart) FAQ on our website at [waterlox.com](http://waterlox.com)). No thinning necessary.

### DRY TIME

Our general rule of thumb is to wait 24 hours between coats. Poor ventilation, high humidity or cool temperatures may increase dry times.

### VENTILATION

Proper ventilation and adequate air circulation must be provided when using any wood finishing materials. Most oil-based varnishes dry upon exposure to oxygen, which is also known as “oxidative cure.” A lack of cross-ventilation (air exchange) provides less free oxygen, slowing the drying process. Cross-ventilation is the biggest factor affecting dry times. It is not recommended that any solvents or solvent-based materials be used in a non-ventilated area. It is the oxygen molecules in the air that interact with the varnish, creating a chemical reaction and causing the film to dry. Therefore, the better the ventilation (during and after all coats) the quicker the film obtains its final hardness and other chemical resistance properties.

ASHRAE (The American Society of Heating, Refrigerating and Air Conditioning Engineers) states that the typical air exchange in a residence using only mechanical HVAC can be as low as 0.35 air exchanges/hour. In most cases 0.35

air exchanges/hour will not be adequate to dry Waterlox in 24 hours. We therefore strongly suggest achieving a gentle flow of air by cross-ventilation. This can be achieved by the use of a box fan running at low-speed in a window or door exhausting to the outside air as well as an open window in some other part of the room or house to achieve 3 - 4 air exchanges/hour. Not only will this aid the drying process by pulling in fresh air loaded with oxygen, but it will exhaust the solvent odor.

Read the directions on the label completely before using, including information related to the use of a respirator while applying the finish. Lingering odor indicates inadequate ventilation, high humidity or both. If you cannot ventilate the area choose another product.

Be sure to use proper ventilation:

- While applying the coating,
- During the curing process (first 24 hours after each coating is applied), and
- Continue to ventilate the area for 7 days after the final coat is applied.

Examples of poor ventilation:

- Ceiling fans do not bring in fresh air from an outside source, even if windows are opened. They circulate stale air around the room. In fact, ceiling fans have a tendency to direct too much air downward on the surface of the freshly applied coating and can potentially “skin” over the fresh coat. This slows down the drying time because the solvent is trapped beneath the skin, causing a longer or improper cure.
- Heating and air conditioning do not provide enough ventilation. Opened windows with air being exchanged, replenishes the room with fresh oxygen and vents the evaporating solvents.
- Closed doors cut off airflow in a room even if a window fan is in place. If the window fan is working properly, solvent odors should be exhausted and will not enter connected rooms.
- Closets are typically the most difficult areas to ventilate – leave closet doors fully open.

**TIPS**

Always read the Waterlox label instructions closely before using, including information related to the use of a respirator while applying the finish.

**APPLICATION TOOLS**

For safety: rubber gloves, goggles and a respirator fitted with an organic cartridge.

An 8” to 12” lamb’s wool applicator block and pad, plus one refill pad to complete each coat.

A natural bristle paint brush. This type of brush will hold more finish than a synthetic bristle brush.

A paint roller pan or five-gallon pail. Be sure to use a pan or pail that allows your applicator to become immersed in the finish.

Mineral spirits, turpentine or paint thinner.

A vacuum.

Tack mop.

**TIP**

- To make your project even easier, order a complete Waterlox Floor Finish Application Kit by visiting [waterlox.com](http://waterlox.com). It has all the materials you’ll need to complete your project, including a FREE bottle of Waterlox Original Cleaner Concentrate and a copy of our Wood Finishing DVD.
- Before using a new applicator, be sure that any loose hairs are removed or cleaned from the applicator. This can be achieved by any of the following methods:
  - Wrap the applicator with masking or painter’s tape and then remove the tape completely, or
  - Put new and unused applicator pads in the dryer for a spin, or

- Use a lint roller on the applicator pad until the lint-roller paper does not pick up any further hair or remains sticky.

Cleaning/disposal options for applicator pads and paint brushes between coats:

#### Applicator Pads

1. Disposal. Allow the applicator pad to dry and dispose of it in a proper trash receptacle. Once the applicator pad has dried it is inert and non-toxic. Use a new applicator pad for each subsequent coat, or
2. Cleaning. Clean the applicator pad completely:
  - Using mineral spirits or paint thinner. This may not be practical as it will require quite a bit of thinner to completely rinse out all of the coating.
  - Rinse the applicator pad with paint thinner, squeezing out as much of the thinner as possible between rinses (probably 2 or 3 times) and then wrap in it a plastic bag or tin foil. Wrapping it in this manner will prevent it from being exposed to oxygen.

#### Paint Brushes

1. Cleaning method:
  - Have two containers ready. One for the brush and one for the “used” paint thinner.
  - Pour about 1 inch of paint thinner (mineral spirits) into one of the containers.
  - Insert the brush into this container and press out the bristles into the thinner. Varnish will be released into the thinner.
  - Pour the contaminated varnish/thinner mixture into the other can.
  - Repeat steps 1, 2 and 3 several times until the thinner remains clear (no varnish).
  - The brush is now cleaned and ready for the next coat or job.
2. Disposal method. Allow the brush to dry and dispose of it in a proper trash receptacle. Once the brush has dried it is inert and non-toxic. Use a new brush for each subsequent coat.

#### TIP

NEVER just soak the applicator or brush in paint thinner, the Waterlox will gel and you will be applying what looks like little seeds on your next coat.

#### CLEAN UP & STORAGE

##### CLEAN UP

Clean application tools immediately with paint thinner (mineral spirits) or turpentine. Properly dispose of rags, applicators and waste. Read carefully cautions on the product label(s).

##### STORAGE TIPS

Keep containers of Waterlox Original Tung oil finishes closed when not in use and keep in a cool, dry place. If stored properly, an unopened can of Waterlox Original Tung oil finishes have an almost indefinite shelf life. Cold temperatures will not negatively affect the product, but if Waterlox has been chilled or exposed to freezing temperatures, allow the product to stand for at least 6 hours in temperatures above 60° F before using. DO NOT artificially heat Waterlox products.

Partially filled containers may gel since Waterlox Original Tung oil finishes dry through oxidation. When a container is opened, it is exposed to oxygen and the remaining unused portion may begin to oxidize. This leads to skinning and eventually gelling of the product.

For the best results, pour the Waterlox you need to complete your job into another container and promptly reseal the original container (replace both the metal seal and screw top on the oblong can(s) and the lid on the round can(s)). DO NOT return any unused portion to the original can.

For proper storage, oxygen inside the Waterlox can must be displaced, by one or more of the following methods:

- Decant the product into a smaller airtight glass or metal container. DO NOT use plastic. If using a previously vacuum-sealed jar (e.g. pickles or baby food) use plastic wrap inside the lid to create an adequate seal.
- Use clean marbles or stones to raise the level of the finish and thereby displace the oxygen.
- With rectangular cans, squeeze the sides to push the liquid up and seal before the air returns into the can.
- "Float" the product with an inert gas, such as carbon dioxide or argon, or Bloxygen that is heavier than air.

Read carefully all cautions on the product label(s).

### STAINS AND FILLERS

In today's ever changing world, more and more products are available on the market due to market forces and general reformulation. Therefore, we are not aware of every type of colorization and filling process available on the market today.

#### STAINS

Generally speaking, Waterlox Original Sealer/Finish can be used over any type of stain (water-based, solvent-based, alcohol based dyes, fast set types, etc.) provided it is completely dry (follow manufacturer's recommendations for dry time or wait 72 hours, whichever is longer) and does not contain any waxes or silicones. We also recommend that you steer away from any type of stain that forms a film over the wood, for example a stain containing urethane or some thicker gel type stains.

#### TIPS

- If staining a wood project, do not skip any of the recommended coats of Waterlox as described in the project guides.
- An unstained surface finished with Waterlox Original Tung oil finishes produces an old-fashioned, hand-rubbed natural looking finish. Our special formula based in Tung oil brings out the natural patina of wood. With some species of wood this will dramatically change the look and staining may not be necessary, we suggest testing an inconspicuous area of your project or a scrap piece of wood from your project first before assuming you will need a stain coat. Regardless if stain is used or not, you will want to test all coats of the finishing system before making your decision.
- Keep in mind that not all pieces or boards of a single species of wood will stain the same; some will not match your sample board. Your stain/topcoat system may not transfer from one species of wood to another with the same effect.
- If stain is desired, be sure to follow the manufacturer's directions for cure time or wait 72 hours, whichever is longer, before applying coats of Waterlox Original Tung oil finishes. NEVER apply Waterlox Original Sealer/Finish over a stain coat that is not dry. Applying finish over top of it will only elongate the dry time because oxygen will not be able to get to the stain coat.
- NEVER sand a surface that has been stained as this process will change the color.

#### FILLERS

Most fillers are compatible with Waterlox Original Tung oil finishes other than those containing any wax or silicone. We also recommend using fillers that are marketed as being paintable and stainable, as this is an indication that they can be coated.

For a working surface such as a floor, which is subject to expansion and contraction, you may want to reconsider using a filler as the expansion and contraction over time will work out the filler from in between the boards. Keep in mind that since Waterlox Original Tung oil finishes are penetrating oil finishes, they will penetrate and seal between the boards and into knots, etc.

Follow proper application and spread rate procedures.

### PREVIOUSLY FINISHED WOOD APPLICATION

Waterlox Original Tung oil finishes perform best over bare wood and are not designed to be used as a top coat over previously finished surfaces (does not refer to stain coat(s) if used). For best results, strip previously finished surfaces to bare wood, and then apply as described under “New Wood Application”.

If stripping a previous coating off the surface, doing a “sand and recoat” (and it is not previously a Waterlox product) or where not possible to apply to bare wood, our Waterlox Original Sealer/Finish can be used as a primer/tie-coat. It is imperative to identify the previous coating on the floor to know how to proceed.

Waxed surface. Nothing will adhere to wax other than more wax, and wax surfaces are extremely difficult to re-coat. In this case, you will need to strip the surface completely of any wax. We recommend against sanding or abrading the wax from the surface first as this has the potential to spread the wax around even more and not remove it completely.

We recommend stripping the wax from the surface by using water and ammonia, following the directions on the manufacturer’s label for “stripping wax”. If there is a wax build up, the wax may become gummy and need to be removed by scraping or wiping with rags. Repeat the procedure several times to be sure all wax has been removed. To remove any wax that has penetrated the wood fibers, the surface should be sanded to bare wood.

### TIP

- Even though the wax has been removed from the surface, it may still be present in any gaps or spaces between the boards. These are extremely challenging to remedy and may require scraping to remove the wax. If Waterlox or any other coating is applied over these gaps/spaces and the wax is still present, the coating will not dry and will remain soft and cloudy.
- As we mentioned in the beginning of this section, removing wax can be very difficult and great care needs to be taken in doing so thoroughly. In some extreme cases, the wax may not be completely removable and the surface may therefore not be re-coatable.

After the surface has been stripped completely, begin by coating a 2’ x 2’ test area and allow it to dry for 24 – 48 hours. Initially, test for adhesion with your fingernail. It should be difficult to remove the coating if the wax has been properly removed. Also observe the coating that bridges the gaps/spaces between the boards. The film should not be cloudy or soft. Next, we recommend conducting a cross-hatch test to check for adhesion before beginning the entire project.

Surface coating finish (e.g.: oil-modified urethane, water base urethane, etc.). Since a surface finish lies on top of the wood, and will block the penetrating ability of Waterlox Original Tung oil finishes, we recommend sanding down to bare wood before applying Waterlox Original Tung oil finishes. One method of testing for an oil-modified urethane coating is to apply a drop of ammonia to a small, inconspicuous area. Cover the drop with something hollow to prevent the evaporation of the ammonia (e.g.: Dixie® cup, shot glass, etc.) If the spot where the ammonia was applied becomes yellow, it is most likely surface finish.

When removing the previous surface finish, the last sand should be done with 100 - 150 grit sandpaper.

Other Oil Coatings (e.g.: raw non film-forming linseed oil, soya oil, Tung oil, mineral oil, etc.). Our Waterlox Original Tung Oil products are most likely compatible with these types of finishes. One method of testing for an oil coating is to apply a drop of ammonia to a small, inconspicuous area. Cover the drop with something hollow to prevent the evaporation of the ammonia (e.g.: Dixie® cup, shot glass, etc.) The ammonia will not only yellow, but will eventually wrinkle the film if it is an oil coating.

To prepare the surface, we recommend cleaning the surface with TSP (trisodium phosphate) and water, doing a clear water rinse and allowing it to dry for 24 hours. After the surface is dry, a light buff with a maroon pad or a 3M® white pad is sufficient. After the surface is prepared, re-coat with the Waterlox Original Tung oil finishing system.

To be sure the surface is ready, we recommend conducting a cross-hatch test to check for adhesion before beginning the entire project.

Shellac. Our Waterlox Original Sealer/Finish is compatible with dewaxed shellac. One method of testing for shellac is to apply a drop of alcohol to a small, inconspicuous area. Cover the drop with something hollow to prevent the evaporation of the alcohol (e.g.: Dixie® cup, shot glass, etc.). The drop of alcohol will dissolve the shellac if the finish is shellac.

To prepare the surface, we recommend cleaning the surface with TSP (trisodium phosphate) and water, doing a clear water rinse and allowing it to dry for 24 hours. After the surface is dry, a light buff with a maroon pad or a 3M® white pad is sufficient. After the surface is prepared, re-coat with the Waterlox Original Tung oil finishing system.

To be sure the surface is ready, we recommend conducting a cross-hatch test to check for adhesion before beginning the entire project.

Pre-finished/Aluminum Oxide Finishes. These finishes are primarily found on pre-finished wood floors, and like surface finishes, lay on top of the wood surface. These finishes are normally not formulated to be re-coated and can sometimes contain silicone. Therefore, sanding down to bare wood is normally the only option for re-coating these types of finished surfaces.

Contact a local floor professional who may specialize in refinishing these types of wood finishes. Once the floor is ready for re-coating, we recommend conducting a cross-hatch test to test for adhesion before beginning the entire project.

#### **TIP**

A cross-hatch test is an industry test for adhesion. Waterlox Original Tung oil finishes are penetrating oil finishes and are therefore best used on bare wood (does not refer to stain coat(s) if used). Sometimes, sanding the surface is not an option for a project. To test the adhesion properties of a combination of finishes, test on an inconspicuous area first.

Directions to test for adhesion: Scuff sand a small inconspicuous area with 320 grit sandpaper. If you will not be sanding the surface to bare wood in the actual project, clean the area with TSP (trisodium phosphate) and water and complete a clear water rinse. Apply 1 coat of Waterlox Original Sealer/Finish. Allow the finish to cure for 4 days. Scratch a “tic-tac-toe” board into the cured finish by cutting through the film and into the wood. Place a piece of Scotch® tape over the cross-hatch and press it down firmly with your finger(s). Pull one end of the tape off with a

steady motion. If there is any film on the tape, other than the pattern of cuts you made into the substrate, this finish combination will not have adequate adhesion.

If the test fails, proper sanding of the surface down to bare wood, or chemical stripping of the previous finish will need to be performed before applying Waterlox Original Tung oil finishes.

### **NEW WOOD APPLICATION:**

1. Waterlox may alter the appearance of the wood. Waterlox Original Tung oil finishes are based in Tung oil, which brings out the natural patina of wood. With some species of wood this will dramatically change the appearance and staining may not be necessary. Test an inconspicuous area of your project or a scrap piece of wood from your project before assuming the need for a stain coat. Even if stain is not a consideration, test all intended coats in a test area before beginning the entire project.

2. Preparation of the surface is the most important step in the finishing process. In order to achieve the desired results, the floor must be properly sanded prior to finishing. Because of the importance of this step, hiring a professional to do the sanding could be money well spent. To maximize penetration of a Waterlox finish, final sanding should be done with 100 – 150 grit sandpaper.

3. When sanding is completed, vacuum the floor thoroughly. Vacuum with and across the grain. Follow up by vacuuming every surface in the room that could potentially hold dust, including doors, walls, mantles, windowsills and lights.

4. After vacuuming the surface with and across the grain, we recommend tacking it. This can be accomplished by using a mop, lint-free rag or micro-fiber mop dampened with mineral spirits (paint thinner) which will attract any remaining dust and dirt. Mineral spirits (paint thinner) is recommended because the Waterlox Original Tung oil finishes are based in this solvent and are therefore compatible with it if any residual is left on the surface. Mineral spirits (paint thinner) also evaporates slower than other more intense solvents such as lacquer thinner.

### **TIP**

- When the mineral spirits is wet, it will provide a preview of what your finished floor will look like and allow you to address any sanding or substrate imperfections.
- As you're preparing the surface, take a moment to plan where you'll begin and where you'll exit the room.

5. Whatever gloss level you choose, we recommend applying Waterlox Original Sealer/Finish as a base. The number of base coats will vary based on the type of wood being finished. As a general rule, most hardwoods will require two base coats. Softer woods like pine, fir or American cherry will require three. Use the wood hardness FAQ (Janka Chart) on our website at [waterlox.com](http://waterlox.com) to help determine the hardness of your wood species. Below is a breakdown of the number of coats to apply to a larger surface such as a floor.

### **HARDWOODS**

**red/white oak, walnut, Brazilian cherry, etc.**

- Medium sheen (semi-gloss) appearance = 3 coats of Waterlox Original Sealer/Finish applied @ 500 square feet per gallon per coat.
- Satin sheen appearance = 2 coats of Waterlox Original Sealer/Finish, followed by 1 coat of Waterlox Original Satin Finish applied @ 500 square feet per gallon per coat.
- High gloss appearance = 2 coats of Waterlox Original Sealer/Finish, followed by 1 coat of Waterlox Original High Gloss Finish applied @ 500 square feet per gallon per coat.



## **SOFTWOODS**

### **white pine, yellow pine, red pine, fir, spruce, cherry, etc.**

- Medium sheen (semi-gloss) appearance = 4 coats of Waterlox Original Sealer/Finish applied @ 500 square feet per gallon per coat.
- Satin sheen appearance = 3 coats of Waterlox Original Sealer/Finish, followed by 1 coat of Waterlox Original Satin Finish applied @ 500 square feet per gallon per coat.
- High gloss appearance = 3 coats of Waterlox Original Sealer/Finish, followed by 1 coat of Waterlox Original High Gloss Finish applied @ 500 square feet per gallon per coat.

To determine the amount of finish needed (in gallons), simply multiply the square footage of the hardwood floor times the amount of coats needed and divide by 500. We have made it easy for you with our materials calculator located on the website at [waterlox.com](http://waterlox.com). Examples are shown below:

Example: 1,500 square feet of oak: 1,500 square feet x 3 coats = 4,500 total square feet ÷ 500 square feet per gallon per coat = 9 gallons of Waterlox Original Tung oil finish.

Example: 1,500 square feet of Pine: 1,500 square feet x 4 coats = 6,000 total square feet ÷ 500 square feet per gallon per coat = 12 gallons of Waterlox Original Tung oil finish.

## **TIPS**

- Waterlox Original Satin Finish should be stirred thoroughly before use.
- **BATCHING.** If more than one container of finish is needed to complete a coat, the containers should be batched together before starting the coat.

6. Use a quality natural bristle brush for cutting in around the room. Only cut in an area of enough size to provide adequate time to complete that area before it begins to set up.

7. Apply all coats liberally with the grain using an 8" – 12" lamb's wool applicator. We recommend the use of a lamb's wool applicator over a roller or T-bar because rollers leave bubbles in the film and T-bars apply the finish too thinly. Further, the applicator should be no wider than the pan or pail you're using to hold the finish to allow for complete immersion.

Saturate the applicator and spread the finish evenly along the entire length of the floor, reloading the applicator as necessary. Remember that in order to get the proper film build and allow Waterlox's self-leveling properties to work; Waterlox should always be applied at 500 square feet per gallon per coat.

## **APPLICATION TIPS & TRICKS**

- To avoid lap marks, maintain a wet edge by overlapping sections you previously finished by several inches. Be sure to feather the finish every time you start or stop.
- Also, be sure to apply only light pressure to the applicator while finishing. Waterlox's penetrating action does the work for you. Too much pressure can result in bubbles in the finish or an uneven coating.
- Your floor may look uneven in appearance after the first or even the second coat of Waterlox Original Sealer/Finish. This is completely normal. Waterlox penetrates deep into the wood and will build up to an even film when applied with the suggested number of coats and coverage.

## **TIP**

If you notice any mistakes or drip marks, simply sand the area lightly and apply more finish.

8. Sanding for adhesion purposes is not required between coats of Waterlox Original Tung oil finishes. This makes Waterlox unique and different from most surface finishes which need abrasion for inter-coat adhesion.

Most surface finishes such as urethanes require the sanding process to create what's called a "profile". A profile is similar to a mountain range microscopically. Failure to sand/abrade between coats of a surface finish can result in delamination of the new coat from the old coat. With Waterlox Original Tung oil finishes, new coats will actually bond with the previous Waterlox coat and becomes part of it rather than a layer on top of it.

Even on a finely sanded wood surface, there are peaks and valleys as well as spots of hard and soft grain. When you apply the first coat of Waterlox, it's like snowfall on the mountains. The snow caps the peaks and begins to fill the valleys. If you sand, you will unseal the caps and there will be less to flow to the valleys when you apply the next coat of finish. This will result in the cap being re-sealed again, and will therefore result in less available finish to flow into the valley. If you do not sand, then the next coat will flow away from the sealed caps and do more to fill the valleys. After the third or fourth coat, this self-leveling process is complete.<sup>4</sup>

#### ABRASION TECHNIQUES FOR AESTHETIC REASONS FOR FLOORS:

- Heavy debris or applicator fuzz can be removed from the film with 0000 steel wool, 320 grit sandpaper, or a Scotch-Brite® pad (as shown in the Waterlox application video on our website at [waterlox.com](http://waterlox.com).)
- Some customers perform a light buffing between the second-to-last and last coat. This is for aesthetic reasons only. Depending on the size of the project you may choose to use a new or used maroon pad or a 3M® white pad with a low-rpm buffing machine. For smaller rooms, try a drywall pole sander or an orbital sander with 320 or finer grit paper.
- Keep in mind if you can visually see any sand or swirl marks in the finish before the final coat, these need to be sanded or removed with a finer grit paper or pad before proceeding with the final coat as they WILL be visible. To check for sand or swirl marks, wipe a thin coat of mineral spirits over an area. While still wet it will give you an accurate visualization of what the final coat will look like.
- Waterlox Original Tung oil finishes should never be abraded with a coarser grit than 150.
- NEVER sand a surface that has been stained as this process will change the color.

#### TIP

Before using a new applicator, be sure that any loose hairs are removed or cleaned from the applicator. This can be achieved by any of the following methods:

- Wrap the applicator with masking or painter's tape and then remove the tape completely, or
- Put new and unused applicator pads in the dryer for a spin, or
- Use a lint roller on the applicator pad until the lint-roller paper does not pick up any further hair or remains sticky.

9. Allow each and every coat to dry for 24 hours. Dry time will depend upon ventilation, humidity and temperature.

#### CURING

Even though the recommended dry time is 24 hours, Waterlox Original Tung oil finishes completely cure in 30 - 90 days.

There are two basic steps to the drying and curing of a Waterlox Original Tung oil finish:

1. The first step is the evaporation of the solvent "carrier" system. The evaporation of solvent usually occurs in the first 2 - 4 hours with proper cross-ventilation techniques.

- The second step is the curing of the solids system, which is comprised of the oil and resin. The solids system completes 95% - 98% of its cure cycle in 7 – 14 days with proper ventilation; full cure, film hardness and chemical resistance properties are achieved in 30 - 90 days with continued adequate ventilation.

As discussed above, the solvent portion of our formula is gone within 2 - 4 hours of application with proper cross-ventilation techniques. After that, any odor that remains is likely from the Tung oil itself. Tung oil is pressed from the nut of the Tung tree and is not petroleum based. Although some may notice a Tung oil odor, it is not toxic<sup>3</sup>. To help determine the source of the odor, compare the odor you're noticing to any denomination of US paper currency. Tung oil-based inks are used to print US paper currency and the odor will resemble the odor of the solids portion of our finishes.

#### **Care after the final coat is applied.**

The first 7 days are the most critical after applying Waterlox Original Tung oil finishes. Please adhere to the following practices:

- After the last coat is applied, we advise staying off the floor for at least 24 hours. After this time, the floor may be used for sock traffic only. No shoes or bare feet (oils from the skin may dull the surface).
- During the first 7 days keep room/ambient temperature above 70° F if possible. Continue to cross-ventilate the room to help replenish the required oxygen needed to cure the finish.
- Avoid common household spills in newly finished rooms for the first 7 days (cleaning spills with cleaners may damage or dull the finish as the film has not obtained its full chemical resistance properties).
- Red rosin paper or non-abrasive throw rugs can be used in high traffic areas after 48 hours but should be removed each night, as the finish needs direct oxygen exposure to cure.
- After 7 days, (depending on drying conditions) replace furniture and throw rugs. Be sure to use felt pads on the bottom of all furniture to help prevent scratching of the finish. Some woods, such as American cherry and pine, oxidize on their own and will naturally darken during the first month. To achieve a consistent color across the entire floor, you may not want to place area rugs on the floor during this period. We recommend that you consult the wood manufacturer.
- Since the final cure of the finish occurs after 30 - 90 days, we recommend using caution for this period of time.

#### **SUGGESTED CARE DURING CONSTRUCTION**

Allow the surface to dry for 48+ hours with adequate cross-ventilation. Cover the floors with red rosin paper. For extra security and to prevent dents, use ¼" Masonite® (smooth side facing downward toward the floor) to cover the heavy traffic/work areas (ladders, tools and scaffolds, etc.). Once all the trades have completed their projects, pull up the Masonite® and paper.

#### **TIP**

Some customers choose to finish the floor with all but the last coat of finish. After the trades have completed their projects, pull up the Masonite® and paper. Clean the floors with TSP and water; perform a clear water rinse and let dry for 24 hours in a well ventilated area; apply the last and final coat(s) as per the finishing guide.

#### **CLEANING AND CARE**

After the Waterlox Original Tung oil finish has dried and cured for at least 7 days, cleaning may be performed. For floors, we recommend using a broom or damp mop or microfiber mop on the surface as needed.

When a heavier cleaning is required for floors we suggest any of the following methods:

- Waterlox Original Cleaner Concentrate (following the directions on the label). We do NOT recommend the use of other wood coating manufacturer's cleaners as these have been proven to damage all types of wood finishes including Waterlox Original Tung oil finishes; or
- A damp mop with a maximum mixture of 1 - 2 oz. of white vinegar to 2 gallons of warm water; or
- Non-abrasive diluted household cleaner (stay away from ammonia and/or bleach products); or
- Murphy's Oil Soap® can be used, but will tend to reduce the gloss by leaving a film on the surface.<sup>5</sup>

#### TIP

After cleaning any surface finished with Waterlox Original Tung oil finishes, rinse with clear water.

Avoid ammonia-based cleaners and products containing wax or acrylics, and try to prevent water from pooling or standing on the surface for long periods of time. We believe wax creates time-consuming maintenance issues, scuffs easily, leaves water spots and attracts dirt. Wax also makes it difficult to recoat your wood surface with Waterlox when necessary. Even though waxes are compatible with Waterlox finishes, we don't recommend using them for the aforementioned reasons.

#### RE-COAT AND MAINTENANCE

Another benefit of Waterlox Original Tung oil finishes is that they are tough enough to protect against foot traffic, moisture, common household spills and are easier to maintain than other type of surface finishes or raw oils. Our motto at Waterlox is: "Not everything is fixable; but at least with Waterlox you have a chance". As your surface ages, complete the following to freshen it up:

Scratches and Scuffs. Waterlox Original Tung oil finishes are penetrating oil finishes which penetrate into the wood pores and build up to a film. One of their benefits to being used on working surfaces is that they are elastic and forgiving. When applied according to our recommendations, your surfaces will wear and scratch with normal every day use, but because the finish is part of the wood, you may not be able to see them as much as you would in a surface finish that will scratch white. To fix scratches and/or high wear areas in your floor, you have two choices:

1. You can do nothing at this time. One of the phenomenon's of Waterlox Original Tung oil finishes is that sometimes scratches or imperfections have a way of working their way out on their own through time.
2. You can apply more of the finish you used in your last coat to the surface by hand wiping/feathering the coat with a lint-free/microfiber cloth and letting it dry for 24 hours.

Deep Gouges. Use a fine paint brush or Q-Tip® to "fill" in the deep scratches by building them up.

Keep in mind that the gloss level of Waterlox Original Tung oil finishes softens over time; therefore, any repair may be shinier than the rest of the surface when initially completed. After the repair has been allowed to cure it will become less noticeable.

Black Heel Marks. Black heel marks are what's know as a transfer of material and the material has actually been transferred to the coating. To repair, remove the mark with a rag dampened with mineral spirits.

#### PRODUCT INFORMATION HOTLINE

To answer any wood finish questions or for more information visit our website at [www.waterlox.com](http://www.waterlox.com) or call 800.321.0377, Monday – Friday, 9 am – 4 pm EST (excluding holidays).

#### CAUTIONS

- For MSDS information, visit the technical download page within the product section of our website at [waterlox.com](http://waterlox.com).
- DANGER! CONTAINS ORGANIC SOLVENTS. COMBUSTIBLE LIQUID AND VAPOR. HARMFUL OR FATAL IF SWALLOWED. USE WITH ADEQUATE VENTILATION. KEEP OUT OF REACH OF CHILDREN.

#### FOOTNOTES

<sup>1</sup> Waterlox Original Tung oil finishes are water resistant when applied at the proper spread rate and number of coats.

<sup>2</sup> We are asked quite often if our Waterlox Original Marine finishing system is recommended for surfaces near water – like a bathroom or kitchen. The simple answer is “no”, our interior Tung oil finishing line will give you the water resistance needed for these type of applications. It is true that our Waterlox Original Marine finishing products are water resistant; however, they are primarily recommended for use outdoors in direct UV as they are formulated as a traditional spar varnish finish system.

<sup>3</sup> Tung oil is non-toxic and food-safe, although, Tung oil is pressed from the nut of the Tung tree which would be considered a tree nut oil. If you or someone who will be living with the finish has a tree nut allergy, consider whether or not this is a factor in finishing your wood project.

<sup>4</sup> This is the most important reason to obtain the recommended spread rate of 500 square feet per gallon per coat.

<sup>5</sup> Residue of any type including Murphy’s Oil Soap® should be removed by a mixture of TSP (trisodium phosphate) and water, followed by a clear water rinse before re-coating.