

REAL MILK PAINT TUNG OIL BUYER'S GUIDE





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Whether you're a new or experienced woodworker, you're probably on the lookout for finishing oil options that provide maximum versatility, durability and dependability. Tung oil offers each of these qualities, making it fast and simple to protect your hard work and investment in a way that's equally easy to maintain. Just what is tung oil, though, and why is it the right finishing oil for your most important DIY projects?

ORIGIN, HISTORY AND PROPERTIES OF TUNG OIL

Tung oil, aka Chinawood Oil, is an all-natural formulation derived by crushing the seeds from the nuts of the tung tree. First noted in the 500 to 400 B.C. writings of Confucius and prominent for its use during the Song Dynasty, this oil proved its worth by delivering dependable waterproofing to boats and ships. Though primarily found in China, Vietnam, and South America, tung tree groves once grew in Florida, and the trees can still be found in the state's northern region.

High-quality tung oil formulations like Pure Tung Oil typically contain just one ingredient — tung oil! This finishing oil does its work by deeply penetrating porous surfaces and curing via polymerization, creating a hard yet flexible surface that resists moisture, marring, acids, alcohol and numerous other environmental hazards. The durability it conveys to wood and other materials keeps out dust and debris and keeps wood looking its best over time.

DIFFERENCES BETWEEN TUNG OIL AND OTHER FINISHING OILS

While tung oil has many similarities with a variety of finishing oils, key differences exist that may make or break your DIY projects. Other finishing oils and their differences from tung oil include:

Danish Oil

Whereas 100% Pure Tung Oil by the Real Milk Paint Co. boasts a pure tung oil formulation, Danish oil includes a combination of varnish and thinner with oil, usually linseed or tung. This formulation dries more quickly than tung oil alone, part of the reason woodworkers created Danish oil in the first place, and it offers similar levels of waterproofing as well. Danish oil can be durable or flexible as tung oil finishes, and it sometimes darkens with time for an unattractive look when it includes lots of linseed oil. Another key difference is Danish oil dries to a gloss finish, whereas tung oils typically confer a matte sheen to projects. Additionally, Danish oil usually has toxic ingredients and concerns of flammability, making it inappropriate for use when food contact safety is a concern.



Linseed Oil

Pure linseed oil and tung oil have several things in common — they’re both nontoxic, safe for food contact and have a pure, all-natural formulation that’s plant-based and eco-friendly. Key differences exist between the two finishing oils, however, including the fact that raw linseed oil requires significantly more curing time than pure tung oil and has a slight yellow tint that may change the look of wood more than you want. Other advantages of tung oil include a finish that’s harder, more durable and more resistant to water than a linseed oil finish. It’s also worth noting that boiled versions of linseed oil often contain other chemicals or metallic driers to decrease curing time and enhance the cured hardness of the oil, while raw linseed oil has a semi-drying formulation that may not dry or cure at all on certain surfaces.

Polyurethane

While tung oil is all-natural, polyurethane is a synthetic polymer finish invented by Otto Bayer in 1937 to replace rubber during World War II. This polymer is used in numerous consumer products, and its main advantage is faster drying times than tung oils like 100% Pure Tung Oil by the Real Milk Paint Co. Taking only 12 hours to cure, polyurethane works better than tung oil on time-sensitive projects like flooring because it adds a waterproof barrier with just a couple of coats of coverage. The downside of polyurethane, however, is the thick layer it leaves behind. This finish doesn’t work well for ornate scrollwork or intricate carvings as it never absorbs into the surface like tung oil, and once scratched, marred or dented, repair is difficult to achieve.

Teak Oil

About the same pricewise, teak oil and tung oil are both top-of-the-line finishing oils for outdoor spaces like decks, porch railings and furniture such as tables and chairs. Teak oil comes out ahead when it comes to outdoor durability; however, some downsides exist that may counter its protective qualities. For instance, tung oil formulations like 100% Pure Tung Oil are typically all-natural and nontoxic, whereas teak oil is generally a combination of varnishes and solvents, so there are environmental concerns with use. Likewise, teak oil dries a lot quicker than tung oil, but the former has the potential to discolor porous wood while the latter stays true to color. Additionally, teak oil can help wood resist mold and has similar levels of water resistance as tung oil.

Hemp Oil

Hemp Oil differs from tung oil in three very important ways. First, Hemp Oil comes ready for application straight from the container, while tung oil usually requires thinning with **Citrus Solvent** or **Odorless Mineral Spirits**. But even though Hemp Oil is easy to work with right away, you can mitigate mixing by getting **Half & Half** — a 1:1 combination of 100% Pure Tung Oil with Citrus Solvent. In terms of finish durability and water resistance, tung oil beats out Hemp Oil, though Hemp Oil has its place. For example, hemp oil offers a reliable lightweight finish for infrequently used indoor items and works well when you need to touchup previously finished items since tung oil doesn’t work well on unknown finishes. This hypoallergenic drying oil option is great for lighter-toned woods that you wish to keep as close to natural color as possible.

Dark Tung Oil

Dark Tung Oil by the Real Milk Paint Co. utilizes the same base tung oil as what’s used in our 100% Pure Tung Oil product, with the only differences being the addition of natural resin to deepen the color and that it delivers a stained finish in a singular product. Formulated to create an instantly aged look, Dark Tung Oil offers a dark wood finish without the use of PCBs or carcinogens for a nontoxic product useful in any situation that you’d use our Pure Tung Oil. For premixed convenience, try **Dark Half** — a combination of Dark Tung Oil and our Citrus Solvent mixed at a 1:1 ratio for smooth, easy application.



Mineral Oil

There are key differences between tung oil and mineral oil. One key difference is that the former is a drying oil, while the latter is a nondrying oil. What this means is that mineral oil is removed over time through use, so surfaces protected by this option require reapplication to preserve the finish. Another important aspect is that mineral oil is derived from petroleum. Additionally, mineral oil finishes don't provide surfaces with long-term waterproofing, leaving tables vulnerable to water rings and other such damage. On the upside, mineral oil finishes enhance the natural appearance of wood rather than adding a tone to it like tung oil. Mineral oil can also add moisture to wood and sometimes help prevent cracking.

BENEFITS OF USING TUNG OIL IN WOODWORKING PROJECTS

Tung oil provides multiple benefits to woodworkers seeking a protective, attractive finish that goes on easily and cures in a reasonable amount of time. The reasons outlined below showcase why finishing oils like 100% Pure Tung Oil from the Real Milk Paint Co. are often your best options for completing the look of projects while making them simple to maintain going forward.

Safe for Food Contact

Extracted from the seeds within tung nuts, tung oil boasts 100% food contact safety, (approved by the FDA) making it perfect for application on kitchen essentials like hand-carved wooden spoons and bowls. Though your finish needs to cure at least 30 days before use, tung oil from the Real Milk Paint Co. confers food safety straight from the container, helping you finish frequently used items like butcher blocks, countertops and cutting boards worry-free. Another advantage of using our Pure Tung Oil to finish utensils and tools for the kitchen is that the finish acts as a wood pore filler, which prevents moisture from entering and causing bacterial and fungal growth. Having no volatile organic compounds in the pure formulation also prevents potentially hazardous chemical reactions with vegetables, fruits and meats for added peace of mind.

Waterproofs Surfaces

One main benefit of tung oil is that it waterproofs surfaces, which prevents moisture and water droplets from penetrating furniture with a flexible film surface. This makes tung oil especially well-suited to use on woods that have no water resistance, though care must be taken to ensure those surfaces are fully cured before being deployed in moist spaces. Formulated to cure via exposure to air rather than by evaporation, penetrating tung oil hardens by crosslinking with oxygen in the atmosphere and polymerizing. This chemical reaction, in turn, creates a hard film that easily resists water.

Enhances Color

Our 100% Pure Tung Oil delivers a rich golden finish once dry that deepens the look of wood grain for a warm, lustrous effect. High-quality oil cold-pressed from tung nut seeds in the formula means this finishing oil doesn't yellow with time, and it doesn't add unnatural shine to surfaces no matter how many coats you use, providing instead a discreet matte finish that complements most projects.



All-Natural Formula

The all-natural formulation without volatile organic compounds (VOCs) makes our 100% Pure Tung Oil nontoxic and safe for use in homes with kids and pets. Formulated with no ingredients except oil from crushed seeds of tung trees, this woodworking finishing oil also naturally resists insects and other pests to lend durability to your projects.

Elastic and Protective

Once dry, our Pure Tung Oil protects surfaces not only with hardness but also with elasticity. This flexibility means that when used on floors and outdoor surfaces, the tung oil layer doesn't crack even in harsh weather conditions, which in turn helps boost the longevity of your wood. Further, this finish handles constant expansion and contraction due to cycling between hot and cold temperatures well, maintaining stability whether used on outdoor furniture or for garage or attic shelving. Full curing of tung oil also protects against scratches and dull spots for a high-quality finish.

Alcohol and Acid-Resistant

Water resistance is but one of the advantages of Pure Tung Oil — it also resists acids and alcohol. This means mild acids like those in ketchup and fruit acids from lemons and oranges don't penetrate surfaces finished with tung oil, so you can easily clean up countertops with just a cloth when spills occur. Other materials tung oil resists include dust for extra protection in areas with multipurpose use. For added versatility, tung oil handles heat well to reduce damage risks from hot pots and pans in the kitchen.

Easy To Apply and Maintain

Application of our Pure Tung Oil is quick and easy when you thin it down properly with our Citrus Solvent or Mineral Spirits. All you need to add it to surfaces is a clean cloth or paintbrush, and it absorbs well when you rub it into the surface following the direction of the wood grain. This ease of use makes tung oil an excellent choice for beginner woodworkers who want a durable, flexible finish that goes on easily and protects the surface to your satisfaction.

Suitable Indoors and Out

Numerous uses exist for our Pure Tung Oil, no matter if you're finishing interior or exterior wood projects. Suitable for butcher blocks, flooring, countertops and walls, tung oil also offers a high-quality finish option for decks, porch rails, wood siding, doors and windows.



DISADVANTAGES OF USING TUNG OIL IN DIY PROJECTS

While tung oil confers numerous advantages to woodworking projects, there are a few disadvantages to this all-natural finishing oil. Some of these include:

Slow Wood Penetration

The main disadvantage of using tung oil in DIY projects is slow wood penetration. This thick finishing oil penetrates wood very slowly and requires multiple coats for complete saturation. The Real Milk Paint Co. solves this issue with its 100% Pure Tung Oil products. Designed to mix at a 1:1 ratio with our Citrus Solvent, our finishing oil absorbs quickly, requiring only three to five coats with 40 minutes of time between each for complete penetration.

Long Processing Times

Long processing times means tung oil probably isn't your best bet if you need to use the item immediately. Like many other finishing oils, tung oil takes roughly 30 days to achieve a full cure, and until that occurs, you need to keep your wood project from dust, debris and liquids. The first 10 days may see seepage of tung oil onto the wood surface, and when that happens, you need to wipe it away. After about 10 days, you should be able to lightly use projects, but to enjoy the best possible results, keep heavy objects off surfaces that haven't fully cured and protect the piece from mud and dirt.

Difficult To Store

Since tung oil reacts with heat, oxygen and light, it's best to store it in a dark area that doesn't get excessively hot or cold and in a closed container. Exposure beyond this has the potential to create a film or gummy debris around the mouth of the can or lead to the oil curing within the bottle. Fortunately, 100% Pure Tung Oil from the Real Milk Paint Co. comes in an easily resealable container with a secure lid that's simple to stow in the correct conditions for worry-free storage between uses.

Doesn't Smooth Wood

When finishing wood projects, many professionals and hobbyists alike want a smooth wood grain effect. Unfortunately, tung oil doesn't provide this as it doesn't form a top coat like varnish or polyurethane. This also means it doesn't have the ability to smooth out surfaces and leaves wood grain with a natural tactile feel. To achieve a smoother effect, you can sand the surface you've just coated with tung oil to smooth out the wood grain. Pure Tung oil flows out so there are no brush strokes.



SURFACES THAT READILY ABSORB TUNG OIL

While you may automatically think furniture, cabinets and countertops when considering surfaces that work well for tung oil, this finishing oil works on a vast array of materials. Some common surfaces that benefit from sealing with tung oil include:

- Flooring
- Walls
- Cabinets
- Concrete countertops
- Doors and windows
- Interior furniture
- Food contact surfaces
- Woodworking projects
- Outdoor furnishings
- Exterior surfaces
- Decks
- Unglazed tile
- Porch railings
- Siding
- Musical instruments
- Handmade toys
- Carved woodware

HOW TO USE TUNG OIL TO FINISH WOOD

Tung oil offers a simple, effective way to protect wood from the rigors of daily use. These are the steps required for proper application of this all-natural finishing oil that's easy to use and good for the environment.

Clean and Prep Surface

Starting with a clean, prepared surface enables proper application of tung oil. This means you need to thoroughly clean the surface before you begin. After sanding and stripping to remove previous finishes, use **Trisodium Phosphate** on a clean, soft rag to wipe away any leftover dust and debris and clean any surface contaminants like oil, grease, dust and dirt. Sand the surface again using 150-grit sandpaper, then remove all the dust you create with a vacuum cleaner.

Thin Tung Oil for Application

Since you need to mix 100% Pure Tung Oil with a thinner like Citrus Solvent or Odorless Mineral Spirits, it helps to know how much you need so you can blend it at a 1:1 ratio with your chosen thinner. Thinning tung oil benefits you by enabling easier application and improving penetration. Keep in mind that the only time you shouldn't thin tung oil is when you're using this finishing oil on old, unfinished or weathered wood or to cover highly absorbent surfaces like concrete.

Apply a Generous First Coat

Now that your tung oil is mixed with thinner, you're ready to start the application process. Start by gathering necessary supplies, including a natural bristle or foam brush, soft rag or paint roller, depending on the surface you're finishing. Working quickly along the grain of the wood, liberally apply the tung oil so that it fully saturates the wood and absorbs deeply into any grooves. It's important to not be applying the oil to a surface that's in direct sunlight as this may cure the oil on the surface and prevent it from absorbing. Let the oil absorb thoroughly, then move on to the next step.



Continue Applying Tung Oil Coats

Full saturation of 100% Pure Tung Oil typically requires a minimum of 40 minutes between coats if you've properly thinned it for easier absorption. With that in mind, continue coating the wood with tung oil two to four more times, waiting until the previous coat soaks in before adding another coat. Once over 80% of the surface maintains glossiness after a 40-minute wait time, you know the tung oil has fully saturated the wood cells and you're ready for the next step.

Remove Unabsorbed Tung Oil

Now that your project piece can't absorb more tung oil, it's time to wipe the surface with a clean rag to remove the excess. If you encounter surface puddles, either move them to an area that's absorbing the oil or simply mop them up with clean rags to prevent thick areas from curing and creating an uneven surface. Though your wood is saturated fully, the tung oil continues to sink into the grain overnight and into the next day. This absorption means you may need to apply one to two more coats the morning after you finish your piece to achieve optimal results.

Cure for Up to 30 Days

Tung oils like 100% Pure Tung Oil from the Real Milk Paint Co. usually take between 15 and 30 days to cure fully. For the first 10 days, it helps to not touch the wood aside from wiping away excess oil, as the surface may gum. Once the oil has absorbed into the wood, moderate exposure to sunlight is acceptable. Be sure to wipe away any tung oil that rises to the surface during the curing process. While you can use some items lightly while they're curing, be sure to wait the full 30 days for items that undergo frequent use.

Reapply Tung Oil as Needed

One of the best things about tung oil is ease of maintenance, making it simple to fix damaged finishes quickly and enhance protection as needed. When you want to revive the look of your countertops, furniture or flooring, simply mix two parts thinner with one part tung oil, rub the mixture onto surfaces that need refreshing and allow the surface time to dry before use.

MYTHS ABOUT TUNG OIL

Myth: Tung oil is a recent find.

Fact: Tung oil has a long history of use protecting wood, and it was even used during China's Song Dynasty to waterproof ships and boats.

Myth: Tung oil will leave an oily feel.

Fact: Tung oil is a drying oil, so it will completely harden. It does, however, need 15-30 days to cure fully.

Myth: Tung oil is difficult to work with.

Fact: Raw tung oil is indeed difficult to work with due to its thick viscosity. However, thinning this finishing oil with all-natural solvents can help it absorb faster and more effectively.



Myth: “Tung Oil Finish” and Pure Tung Oil are the same.

Fact: Pure Tung Oil and “Tung Oil Finish” share one commonality — that’s the use of tung oil in their formulation. Beyond this, “tung oil finishes” are applied differently and typically contain varnishes, thinners and other chemicals alongside the tung oil.

Myth: Tung oil will spontaneously combust.

Fact: Pure Tung Oil is not known to spontaneously combust due to the lack of sources of ignition, mainly heavy metallic driers and other chemicals commonly found in “tung oil finishes.”

Myth: Tung oil isn’t food-safe.

Fact: All-natural tung oils with no additives like 100% Pure Tung Oil from the Real Milk Paint Co. are entirely safe for food contact. Mixing with Citrus Solvent maintains this food safety while enabling fuss-free thinning for easy absorption.

Myth: Tung oil is risky for those with nut allergies.

Fact: Tung oil isn’t made from nuts at all but from seeds, so it’s most likely safe for those with nut allergies. Categorized as drupes like plums, peaches and cherries, tung nuts have as low a possibility of triggering allergies as those fruits.

Myth: Boiled linseed oil (BLO) is the same as tung oil, only cheaper.

Fact: While BLO and tung oil may seem similar on the surface, tung oil doesn’t discolor or go rancid and confers numerous benefits flaxseed-derived oil just doesn’t. For example, BLO typically contains metal compounds to speed drying times, which raises concerns of spontaneous combustion and can hinder your project by forcing you to work more quickly than you’d probably like.

Myth: Tung oil dries by evaporation.

Fact: Tung oil is a drying oil that cures via polymerization rather than evaporation. This means air exposure delivers oxygen to the finishing oil, which then polymerizes to create a hard, water-resistant film.

Now that you understand the ins and outs of tung oils like 100% Pure Tung Oil by the Real Milk Paint Co., you’re ready to incorporate it into your woodworking projects. No matter if you’re a professional or a hobbyist, this versatile finishing oil offers a reliable, effective way to seal your handmade creations and ensure they maintain their integrity for years to come.