Tung Oil

**HISTORY:** Pure Tung Oil is a finishing product that provides a tough, flexible and highly water-resistant coating. It is classed as a drying oil along with linseed, poppy seed, safflower seed, walnut, soybean, oiticica and a few other oils. Although it is relatively new to the Western world, tung oil has been known for centuries to the Chinese, and until this century, China was the main source for the oil. It comes from the seed of the tung trees, Aleurites fordii and Aleurites montana, deciduous trees that are very susceptible to frost damage. This vulnerability has restricted the cultivation of the tung trees to China and South America.

Tung oil received wide application in China: in the building trades as a treatment for both stone and wooden structures; in marine trades as a preservative and water repellant on wooden boats. It is said to have been introduced to the West by Marco Polo. From the 13th to the 19th century, tung oil had only limited use in the West. In the 19th century it was adopted by the paint companies to become a major component in paints and varnishes. More recently, tung oil has gained favor over linseed oil for furniture finishing because it is faster drying and does not darken as much with age.

**PROPERTIES AND CHARACTERISTICS:** The same as our Pure Tung Oil except that we have added a non-toxic naturally occurring resinous hydrocarbon for color. The resin is non-carcinogenic and does not contain any PCB's. Dark Raw Tung Oil is water and alkali resistant. It resists marring, penetrates well, is elastic and unlikely to check. Dark Raw Tung Oil builds quickly consolidates the wood surface and builds a dark matte finish. It should be kept in an airtight container with minimum air space.

**USE:** The application is the same as our Pure Tung Oil. Dark Raw Tung Oil will give your work an instant antique water-resistant coating. It can be worked into the cracks and corners much like a glaze, giving the appearance of an old surface and patina. Dark Raw Tung Oil can be thinned 50% with Citrus Solvent, mineral spirits, turpentine or naphtha, which will improve penetration and drying time. The surface should be dusted to remove all loose particles. Alternatively, you can lightly sand the first coat before applying a second. Any filling, sealing or staining must be done before the oil is applied. The first coat should be a liberal one, and you can rub it over the wood with your hand, a soft rag. Allow this application to sit for 20 minutes so the oil can soak in and then remove any excess with clean soft rags. Check after about half an hour for any seeping, and rub this off as well. Let dry completely (24-48 hours) between coats. For woods with very open pores, allow an extra 24 hours drying time.

Dark Raw Tung Oil can be applied pure or with Citrus Solvent added if a non-toxic finish is required. Thinners can accelerate the drying process and greatly improve the penetration by cutting the first coat of oil with Citrus Solvent, mineral spirits or turpentine by 50%. Remember by adding mineral spirits or turpentine, Pure Tung Oil becomes toxic with these substances mixed into it, although the finish produced is not toxic because the driers evaporate.

The number of coats of oil to be applied will be determined by the intended use of the piece. Two to four coats are enough for decorative work, paneling and moulding. Surfaces that receive moderate to heavy use or handling could need up to six coats for maximum protection, plus a light renewal coat a couple of times a year. Apply till the surface reaches the saturation point. This will be evident as the surface will not absorb more oil. Renewal and building coats are quickly applied with cheese cloth, a lint free cloth or old nylon stockings. This process will give you a surface that will stand up to vigorous use and spills: water will bead on the surface.
Dark Raw Tung Oil is recommended for kitchen tables, chopping blocks and boards, and similar uses. Its non-toxic nature makes it particularly appropriate for children's toys and furniture. It gives good protection to wood paneling and moulding.

Dark Raw Tung Oil's matte finish will do nicely on certain pieces of furniture, but if a glossy finish is preferred you will need to buff and wax the finish, or use polymerized tung oil or a formulated tung oil based product.

We have found tung oil to be a valuable helper in the workshop. It adheres very well to metal, and a light coat rubbed onto tool steel is an effective rust inhibitor. Wooden handles will also benefit from the occasional coat.

**FDA:** Dark Raw Tung Oil is approved for food contact by the [FDA](http://www.realmilkpaint.com/fda).

**TIPS:** If you find Dark Raw Tung Oil to be too dark, just mix with Pure Tung Oil to get the color you desire. With each application of Dark Raw Tung Oil your project may get darker. If you have achieved the color you want with your first coat, but would like more protection, just apply Pure Tung Oil for remaining coats. Let dry completely between coats 24-48 hours or until you see a consistent even sheen.

Keep containers tightly closed away from extreme temperature changes and open flames. As with all oils, rags, steel wool or waste soaked with oil, may spontaneously catch fire if improperly discarded. Immediately after use, place the oil soaked material in a sealed water-filled metal container or hang outside separately to dry.

**REFERENCE:** Gunstock Finishing and Care by Donald Newell, Bailey's Industrial Oil and Fat Products - Vol. 1 - 4th edition.

**PURE Tung Oil compared to other Tung Oil?**

**Pure Tung Oil** is just what it says - Pure Tung Oil without any additive or distillates and FREE of Volatile Organic Compounds (VOC). Pure Tung Oil is concentrated and economical with a long shelf life. Naturally polymerizing, Pure Tung Oil cures by oxidation, not evaporation. It will not build a gloss finish or build a heavy finish on the wood, but penetrates deeply into the wood to enhance the character and water resistance that is resistant to abrasion and acids. It is easy to maintain with a follow up application. It however does dry slower than other generic Tung Oils.

Here is an old cabinetmaker formula for a combination oil finish blend with build to protect wood surface:

- 1/3 Pure Tung Oil
- 1/3 varnish, polyurethane or oil base finish
- 1/3 mineral spirits

You can vary the ingredients to adjust the working qualities of the finish.

**(Non-Pure) Tung Oil** can be any of a number of things, from a thinned down varnish to a polymerized Tung oil. Most have added petroleum distillates and metallic dryers that generally build a gloss finish as well as build on top of the wood surface.

**Resources**

How to stain floors with Tung Oil: [http://www.realmilkpaint.com/stainfloors.html](http://www.realmilkpaint.com/stainfloors.html)
How to finish Decks and Porches with Tung Oil: [http://www.realmilkpaint.com/finish_decks_porches.html](http://www.realmilkpaint.com/finish_decks_porches.html)
How to finish a floor with Pure Tung Oil: [http://www.realmilkpaint.com/floortung.html](http://www.realmilkpaint.com/floortung.html)
MSDS: [http://www.realmilkpaint.com/msds_tungoil.html](http://www.realmilkpaint.com/msds_tungoil.html)