

What Is A Woodworker To Do?



What *is* a woodworker to do when a so-called "Oil Finish" is not an oil finish. What is a woodworker to do when a finish marketed as "Varnish" or "Lacquer" is neither varnish nor lacquer? We are going to change direction a bit in the next few issues and devote this column to exposing (or at least attempting to expose) examples of misleading and deceptive advertising in the world of finishes. Unfortunately there are far too many examples from which to choose. Because misleading advertising is so common, it has become much too easy for unsuspecting woodworkers to purchase finishes that are not at all what the product name and associated marketing would lead us to believe we are buying. Most of the time this deception will not cause a major problem for our finish; but, there are times when we have a specific need for a particular type of finish and we buy the wrong product. It is at these times that deceptive labeling is, at the very least, annoying and at worst may result in an inferior finish or even finish failure. This article, then, is intended to help you distinguish between marketing hype and reality; to select a finish that is appropriate for your need, regardless of what the manufacturer has printed on the label.

I will begin this series with an examination of "oil finishes" in general and so-called "Tung Oil Finishes" in particular. When we talk about oil finishes, two basic types of oil are envisioned: drying oils and non-drying oils. (There is a type of oil referred to as semi-drying oil but it will not be considered here. We will introduce it when we get to varnishes.) There are only two *drying oils* regularly used to finish wood; boiled linseed oil (BLO) and tung oil. The term "drying oil" simply means that these oils, when exposed to oxygen, will "cure", or more properly, "*polymerize*" to form a finish film. Oil finishes (BLO and tung) are characterized as being 100% solids—there are no solvents or thinners (volatiles) to evaporate during the curing process. All of the oil applied to the wood will *polymerize* during the curing process to form the finish film. Stated another way, nothing evaporates; all of the oil that is applied, and is not subsequently wiped from the surface, remains on the wood and cures to form the finish. Understanding this property of oils is our first clue in determining whether a finish that is advertised as being an "oil finish" really is *oil*. If the label states that the can contains "petroleum distillates" or thinner of any kind, it most definitely is not an oil finish. Pure boiled linseed oil and tung oil are never thinned

(and *should not* be thinned by the user)! Therefore, we know immediately that the so-called "Oil Finishes", whether labeled as "Tung Oil Finish", "Antique Oil Finish", "Danish Oil", or any other "*fill-in-the-blank* Oil Finish" are not "oil finishes"—all such pretenders list petroleum distillates or thinners in their ingredients.

So, if these products are not oil finishes, what are they? Minwax, Behr, McCloskey, Formby's, Zar, and a host of other manufacturers make "Tung Oil Finish". Most of these products contain absolutely no tung oil, and of those that do contain tung oil, the actual volume of the stuff is so small as to be irrelevant. So, why do these manufacturers call these finishes "Tung Oil" when there is no tung oil in the can? Simple! Because inclusion of the *magic words* "Tung Oil", beginning with the introduction of Formby's Tung Oil finish back in the 50's, has been shown to stimulate the sale of these products, demonstrating conclusively that the important thing for far too many woodworkers is not what is *in* the can, but what is printed *on* the can.

OK, so there is no tung oil in these finishes—and they are really not "oil finishes". Then, what are they? Well, it depends on the manufacturer. Minwax and Behr Tung Oil Finishes, two of the more popular brands, are actually what is defined as an *oil/varnish blend*. An Oil/varnish blend is simply a mixture of more or less equal parts *varnish*, *boiled linseed oil*, and *mineral spirits*. Neither of these products contain so much as a drop of tung oil. "Tung Oil" appears only on the label.

On the other hand, Formby's, Zar, Gillespie, and Hope's "Tung Oil Finish" are a type of finish described as "wiping varnish"—nothing more than varnish to which mineral spirits has been added, thinning the varnish so that it can be wiped on rather than applied with a brush. Here the labeling deception is being reinforced by application instructions (wipe the finish on) because *everyone knows that this is how oil is applied*.

Finally, let's consider "Danish Oil" and "Antique Oil" finishes. Is Danish Oil something found only in Denmark? Is it extracted from some exotic source only in Denmark, perhaps from Danes? Is Antique Oil a particularly old oil, perhaps something manufactures in the last century and only now brought to market? These are simply marketing terms intended to capitalize on a *look*. "Danish Modern" was a term first applied to a furniture style back in the 40's and 50's that was typified by a dull to satin sheen with an *in-the-wood* look. This finish was actually applied in the furniture factory using nitrocellulose lacquer. But, in an attempt to capitalize on the popular look of this finish with a product that was not sprayed, the marketing term "Danish Oil" emerged. Danish Oil is a low sheen wipe-on varnish marketed to mimic this popular look. The name "Antique Oil" came about because "Danish Oil" was already taken.

Is there anything wrong with "Danish Oil" or wiping varnish? Of course not, just understand what you are buying and be sure that it is what you want. These products are not oil. They are thinned varnish. If varnish thinned so it can be wiped on is what you want, why not consider making in yourself in your own shop. Buy a can of satin or dull sheen varnish. Thin it 50/50 with paint thinner/mineral spirits, and presto; you have the very same product. And, it will cost you less for a given volume if you make it yourself.

But, sometimes deceptive labeling can create a problem. To illustrate, in the December, 2005 issue of *Fine Woodworking*, Lonnie Bird, an incredibly accomplished woodworker, concluded a series of articles on building a curly maple secretary. In his final installment he applied the finish, which he describes as:

"water-soluble dye followed by oil and topped with shellac."

This is a finish schedule that I wholeheartedly endorse. Unfortunately, this is not the finish Mr. Bird actually applied. Here, in part, is what he had to say:

"(After the dye is dry) I flood the surface with an oil finish such as Waterlox or Formby's Tung oil, making sure to cover all the crevices and details. After a few minutes, wipe away the excess (oil). Let the finish cure overnight (and then apply the shellac)".

If either Formby's or Waterlox actually were "oil", whether tung oil or BLO, this finish schedule would make sense and the application method Mr. Bird described would be appropriate. He would have augmented the natural color of the wood with dye imparting a more appropriate aged look. The application of the "tung oil" (or BLO) would have brought out the grain and figure of the maple; and finally, the shellac would have provided a hard, durable, period-appropriate finish.

But, as already explained, neither of these finishes are "oil" nor are either of them tung oil. Formby's Tung Oil Finish is an *alkyd resin wiping varnish made from soya (soybean) oil*. The only place where "tung oil" appears is on the label. There is none in the can. Waterlox Sealer/Finish, on the other hand, *is a phenolic resin wiping varnish made from tung oil*. (Please note that Waterlox, to their credit, makes no claim that their Sealer/Finish is "tung oil". The label clearly states that it is a finish *made from* tung oil. No deceptive advertizing here.) Being *made from* a particular oil and actually *being* that oil are two completely different things. In a future article, when we examine varnish, I will explain that distinction.

But for now, the bottom line is that whichever of these two finish Lonnie Bird applied over the water-soluble dye, he was actually applying varnish. He then applied shellac over the varnish. My appologies to Mr. Bird; but, that finish schedule makes absolutely no sence. Why on earth would one apply shellac over varnish? It won't hurt anything; but, neither will it achieve anything. Had he applied the shellac over the dye and then the wiping varnish a logical case could have been made for the schedule. Shellac is an excellant moisture barrier; far more moisture resistant than wiping varnish. The desired sheen would then have been imparted by the wiping varnish. Clearly, Mr. Bird has been led to believe that Formby's Tung Oil Finish and Waterlox Sealer/Finish are *oil finishes*, specifically tung oil. There can be no other explanation for this curious finish schedule.

If Lonnie Bird can be swayed by deceptive advertising then we are at risk aswell. Our only hope is to learn to recognize the clues and not to rely on the truthfulness of labels. Here is a simple test that you can conduct in your shop to confirm the accuracy of a manufacturer's label. This test that will conclusively identify the the nature of a finish. Is it *oil*. Is it an *oil/varnish blend* or simply oil-based varnish.

Begin by applying a few drops of the finish to a pane of glass laid flat on your bench. Wait 6 to 8 hours and observe how it has "cured".

- If the finish look as it did when it was applied and is easily wiped from the glass *it is oil*.
- If the finish is "cured" but has a wrinkled appearance, particularly around the edge, *it is an oil/varnish blend*.
- If the finish is hard and smooth, *it is varnish*.

Always be alert to the *label game*. *Words printed on a label don't always, and all too frequently don't, indicate what is actually in the can*. Make sure that you understand what you are buying. If you have questions, ask.
