



FINISHING OILS

With so many of our members now working with natural timbers, the finish achieved is of importance.

This article is aimed at making our members aware of the qualities of the finishes. The main article was featured in an old model shipbuilding newsletter in the 1980's by an author whose identity, after such lapse of time, could not be ascertained, HOWEVER, it is enhanced for us by observations by **Ian Dawes** and we thank Ian for his contribution.

TUNG OIL, also known as "China wood oil", is one of the oldest and best wood preservatives. It is extracted from the nuts of the tung tree native to the Orient. This tree is now commercially grown in the Gulf States.

The name comes from the Chinese word "tung", meaning stomach, because it has a purgative reaction when taken internally.

This oil is deeply penetrating and serves to bind the fibres of the woods and thus seal and preserve them. Heat will not draw out tung oil as it will other oils. It is water and solvent resistant.

To apply, rub on with a soft cloth until all the oil is in the wood and not on the surface. Immediately wipe off all the excess from the surface as a thick coat of surface film will wrinkle on drying. If the oil becomes tacky, wipe it off with a rag moistened in fresh oil. It is also possible to thin the oil with turpentine.

The oil should soak into the wood anywhere from 30 seconds to 10 minutes depending on weather conditions and the properties of the wood. Wait at least 12 hours between coats.

It is recommended that three coats be applied with a rubbing of 4/0 steel wool after each coat to assure a smooth surface.

Subsequent cleaning and polishing should be done with lemon oil. If a brush is used to apply the oil, it can be cleaned with mineral spirits or lacquer thinner.

Tung oil tends to dry non-glossy, a varnish made with tung oil has more lustre. There are other staining products containing tung oil with which wood can be stained.

You do have to be careful with tung oil, as it will solidify or jell in the jar or container once it is exposed to air.

LEMON OIL is very good for use as the final oil finish, especially over tung oil. It should not be used over a wax finish, and it is recommended that you should use pure lemon oil, not one that contains linseed oil, bee's wax or silicones.

LINSEED OIL is an extract of the flax seed. It dries slowly but seals well. Always use boiled linseed oil and not raw linseed oil as the latter contains the non-drying elements of the oil.

The linseed oil reacts with oxygen to become a solid film. When it dries it leaves a soft surface and has poor moisture resistance, allowing double the moisture to pass compared to tung oil. The finish should never be overcoated with lacquer or shellac.

CHEMICALLY MODIFIED OILS penetrate faster and deeper and dry more quickly and harder than unmodified oils. They are particularly good for woods with a natural beautiful grain. They usually dry without gloss, giving a natural oil finish.

You should allow at least eight hours between coats. Some of the products readily available are:

1. Penetrating finish oil;
2. Danish oils containing resins which polymerise and dry in the wood;
3. Teak oil which are used on highly resinous woods such as rosewood and teak.

Some additional comments from **Ian Dawes**:

OTHER OIL FINISHES:

Like lemon oil there are a number of vegetable oils that can be used to enhance the appearance of wood. ORANGE OIL can be used straight but like lemon oil is useful over other finishes.

I use it to revive the appearance of bowls that have become somewhat dusty or lacking in lustre with age. The smell is also something that the boss likes (so it gets used on furniture as well).

For bowls and other items to be used with food it is best to use an edible vegetable oil of which there is a range available - grape seed oil and oils used in cooking or as salad dressing are fine.

For food use, definitely avoid Tung oil (which is great for sealing floors) or linseed oil, which is toxic to humans but great for cricket bats. In fact the best approach for a salad bowl is to use the oil that is in the salad dressing – and after the meal is over rinse the bowl and wipe off any excess oil.

I have removed the varnish layer from a myrtle bowl we use for salads (made by a professional – the bowl not the salads) and it now has a rich patina from the salad oil, much better than its appearance under varnish.

Oils that polymerise and harden include tung oil, linseed oil, and walnut oil. If you want to coat an item for outdoor use and are considering Danish oil (which is based on linseed oil) make sure that it contains an antifungal agent, otherwise it will go black with fungal growth on exposure to the weather.

For items that will be subjected to hard wear one can use Tung oil, or a commercial spirit-based varnish, e.g. one based on polyurethane. This is available for a matt, satin or gloss finish.

If you don't like the high gloss from any of these on a bowl you can put the bowl back on the lathe and use 0000 steel wool to gently give a more satisfactory appearance. I don't like water-based polyurethane since it is very viscous and hard to apply without leaving brush marks.

Another alternative, especially for bowls is to use a wax-based finish. There are commercially available ones with the wax dissolved in a solvent – either forming a liquid or a gel.

These are rubbed on a bowl and then with the lathe turned on the application cloth is used to provide friction. The heat will allow the wax to penetrate the bowl to provide a very acceptable finish.

Waxed surfaces will gradually dull with age, but can be revived with orange oil. My own recipe is to use beeswax dissolved in eucalyptus turps with a small dash of boiled linseed oil. The mixture in a glass or plastic jar is gently heated in a saucepan of boiling water until the wax melts/dissolves. On cooling it forms a gel that is easy to apply.

Finally, there are many other options, e.g. penmakers are probably familiar with cyanoacrylate finishes. I recommend that you look at past issues of woodworking magazines, which frequently feature special techniques for finishing a project to appreciate the wide range of available methods and products