

A Wax Primer



Although it's not waterproof, wax is a simple finish that can be blended, buffed and tinted

BY STUART M.
ALTSCHULER



Wax is one of the most versatile finishes around, in part because it is more than a finish. In addition to adding protection and luster to a piece of furniture, it can help drawers slide more easily, it lubricates steel tools such as handsaws, and it is perfect to use as a rust-inhibitor on tablesaw or jointer beds.

Perhaps because it's such a staple in any shop—and almost used as an afterthought in the finishing process—woodworkers of-

ten use whatever wax product they have on the shelf without knowing a lot about what it does, when to use it, which kind to use or how to apply and remove it.

Wax as a finish

Plain wax and the variety of mixtures of wax with solvents, pigments and other ingredients (hence wax “polish”) are traditional wood finishes that have been used for centuries, and they haven't changed

much in all that time. In fact, it's worth taking the time to learn something about wax polishes because they are easy-to-use topcoats appropriate for many types of fine woodworking.

Since the early part of the 20th century, wax has faded from use as a primary finish due to the invention of other, more durable coatings. Today, wax has been relegated to being used as the topcoat, that is, as the final layer over another finish. Occasionally,

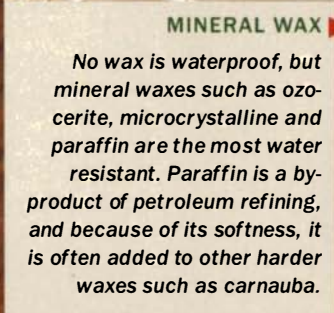
Animal, mineral or vegetable

Wax is used for everything from coating supermarket apples to making lipstick glide more easily. And of course, wax is one of the oldest furniture finishes, having been in use since the 16th century. There are many types of wax, each with its own characteristics. Commercial furniture waxes can be made from animals, minerals and plants or a combination thereof.



ANIMAL WAX

Although wax can come from whales and wool, animal-based furniture wax comes from bees. Beeswax is not the hardest wax, and it has a relatively low melting point. A simple mixture of beeswax and turpentine makes a good, simple paste to use on wood.



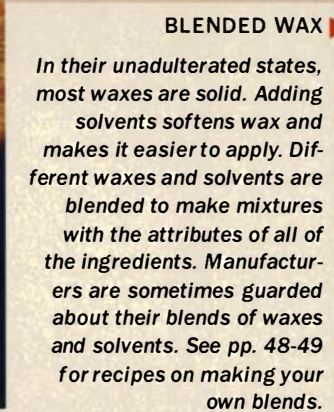
MINERAL WAX

No wax is waterproof, but mineral waxes such as ozocerite, microcrystalline and paraffin are the most water resistant. Paraffin is a by-product of petroleum refining, and because of its softness, it is often added to other harder waxes such as carnauba.



VEGETABLE WAX

Carnauba wax comes from a palm tree, and candelilla wax comes from a shrub. Both waxes are very hard and melt at 185°F. When buffed, carnauba and candelilla produce a high sheen.



BLENDED WAX

In their unadulterated states, most waxes are solid. Adding solvents softens wax and makes it easier to apply. Different waxes and solvents are blended to make mixtures with the attributes of all of the ingredients. Manufacturers are sometimes guarded about their blends of waxes and solvents. See pp. 48-49 for recipes on making your own blends.

I wouldn't use it on a dining table or on any surfaces that get wet a lot. The thickness required to be truly water resistant is far greater than what is practical for furniture—a heavy buildup of wax is both unsightly and sticky.

Think of all those other pieces of furniture that won't be exposed to water. On these pieces, wax is one of the easiest finishes to apply and maintain. Unlike varnish or lacquer, a wax topcoat never needs to be sanded or stripped. In fact, the solvents in a wax polish will dissolve a previous coat of wax. Also, with a little pigment, wax can be used to create all sorts of special effects, and it can be buffed out to almost any degree of polish.

Types of wax

There are many types of wax, each with its own characteristics, and many waxes have an application in woodworking. They are divided into three categories: mineral (paraffin, ozocerite, montan, microcrystalline), vegetable (candelilla, carnauba, Japan) and animal (beeswax).

The first wax used in finishing was beeswax, in the 16th century. It was dissolved in turpentine and settled into a creamy texture. This mixture was applied to furniture and provided some protection, but beeswax is soft, melts at 145°F, a relatively low temperature, and it yields only a low luster.

Carnauba and candelilla, both vegetable waxes, are very hard (carnauba is the hardest), and they melt at 185°F. These harder waxes can produce a high-gloss sheen on a surface when buffed.

Petroleum-based (or oil-based) mineral waxes such as ozocerite and microcrystalline are the most resistant to water. Paraffin wax, also petroleum-based, was commonly used to carry the slurry when rubbing a finish. It also can be used in the same fashion with wet-or-dry sandpaper to carry away the slurry of the abrasive.

Wax polish

The wax you are most likely to have stashed on a shelf above your workbench, however, is more than just a wax. It's probably a wax polish of some sort—a combination of different types of waxes mixed

in a situation where little protection is needed, waxes (particularly specialty waxes) can be used alone, often yielding results that are quite pleasing.

What does wax do?

All wooden surfaces deteriorate, and like other finishes, wax both protects and preserves the surface (other finishes underneath) or the wood itself if there is no other finish. The primary culprit that attacks

wood is not always wear and tear. Ultraviolet rays, exposure to the air, airborne pollutants and microbes also take a heavy toll. Why wax? Because wax is extremely resistant to dirt, fungi and even moisture.

Although wax retards the deterioration process and protects an underlying finish, it's not a hard coating like lacquer or varnish. And even though wax does resist water—as we all know from ads for car waxes in which water beads and runs off—

with a solvent and possibly some pigment. The solvent creates a workable viscosity that makes it easier to apply.

The most traditional solvent is pure gum spirits of turpentine, but turpentine is getting hard to find these days because (like many other solvents) it is hazardous. If you wander into a large home center and ask at the paint department for turpentine, you will most likely be shown a turpentine substitute. Don't be fooled by names that are close—they won't work quite the same in a wax mixture. Read the label on the can to make sure you get the real thing.

Another solvent in wax is toluene. If you are making your own wax polish (see the story at right), you can do so without toluene, which is a strong solvent that can eat into finishes such as varnish if they are



One of the oldest finishes around. A creamed beeswax polish, made by dissolving pure beeswax in turpentine (not mineral spirits), has been used on furniture for centuries.

not fully cured. Toluene is used in the mixture for many wax polishes, including common brands such as Briwax. Toluene is a more powerful solvent than turpentine, and therefore a greater quantity of the harder waxes, such as carnauba and candelilla, can be incorporated into the polish while maintaining a workable viscosity.

In most off-the-shelf brands of wax, the blend is usually a mixture of beeswax and the harder carnauba wax. It's hard to tell, however—most brands do not let you know what's in them. Briwax prints the ingredients on the label (it's beeswax and carnauba wax dissolved in toluene) but

For best results, make your own wax polish

Many people resist making something from scratch that can be bought premade—especially when it comes to finishes—perhaps because they are in a hurry to see results. But when you use a premade product, you lose control. You don't always know what is in the can, so how can you adjust the mixture for best results?

The answer is to make your own. Making your own wax polish is easy; simply follow any of these recipes.

A few simple precautions: First, remember that the solvents are flammable. Never use an open flame of any type to heat the waxes. Second, remember that hot wax is just that—hot. Be careful not to get burned, particularly from wax that splatters when you pour from one container to another.

STANDARD BEESWAX POLISH

This is an easy wax polish to make and is a fine finish on all types of wood for imparting a low luster.

3 parts turpentine
1 part beeswax, shaved into thin pieces

1. Melt the wax in a double boiler (a bowl or jar floating in a pot with water) over an electric hot plate. Although it is not necessary, shaving the wax into small pieces makes the process go faster.
2. Remove it from the heat. Add turpentine while stirring.



Grate the wax so that it dissolves faster. The first step in making wax is to melt or dissolve it. This process goes faster if you shave the wax into small pieces.



Use a shopmade double boiler to melt the wax. Most waxes will dissolve in turpentine, but it's faster to melt them (waxes used in polish melt between 145°F and 185°F). Place the wax in a heat-proof glass container, and put the container in a pot of hot water.



Add remaining ingredients to the melted wax. Before the wax cools and hardens, add the remaining ingredients, such as turpentine or pigment (top). Stir the mixture well, then pour it into a jar or a clean, pint-sized paint can and allow it to cool (bottom).

As an alternative, you can make this recipe without heating the ingredients. Simply combine the beeswax shavings and turpentine in a jar, stirring occasionally. The beeswax should dissolve into the turpentine overnight. If it does not, add more turpentine very slowly.

The addition of solvents changes only the viscosity of the polish, not its characteristics as a polish. If your polish is too dry, add a few drops of solvent. If the consistency is too thin or runny, leave the cover to your container open so that some of the solvent evaporates. In other words, there is no such thing as bad or unusable wax.

CREAMED BEESWAX POLISH

A suitable finish for most furniture and easy to apply, creamed beeswax should not be used on open-grained woods because it might leave an unsightly residue in the pores if not carefully applied and buffed.

- 1 pint turpentine
- 1 pint water
- 5 oz. beeswax
- 1 tablespoon ammonia

1. Melt the wax, using the double-boiler method described previously.
2. Remove it from the heat and add the turpentine while stirring.
3. In a separate container, combine the ammonia with the water.
4. Add the ammonia-water mixture to the wax-turpentine mixture while continuing to stir.
5. Transfer to a clean container while still warm.

NO-SOLVENT WAX POLISH

This blend can be used in situations where a finish could be damaged by a strong solvent.

- 1 part beeswax
- 1 part ammonium carbonate
- 8 parts water

Note: Use a pot that is at least four times the size of all of the ingredients because the mixture will bubble and foam when the ammonium carbonate, available from Kremer Pigments (see Sources of Supply on p. 51), is added.

1. Melt the wax in water, using the double-boiler method.
2. While stirring, add the ammonium carbonate a small amount at a time. If the solution threatens to spill over, remove it from the heat, continuing to stir, until it subsides.
3. Add pigment, if desired.
4. Transfer to a clean container while still warm.

GLOSSY WAX POLISH

This mixture is suitable for everyday polishing. The recipe produces a nice,

glossy sheen without being too hard to buff out.

- 8 parts beeswax
- 3 parts carnauba wax
- 9 parts turpentine

1. Melt the waxes, using the double-boiler method.
2. Remove the wax from the heat and add the turpentine while stirring.
3. Add pigment, if desired.
4. Transfer to a clean container while still warm.

HIGHEST-SHEEN WAX POLISH

This recipe makes a hard wax that produces a glossy sheen. But because of its hardness, the wax is more difficult to apply and buff.

- 5 parts beeswax
- 2 parts carnauba wax
- 2 parts candelilla wax
- 27 parts turpentine

1. Melt the waxes, using the double-boiler method.
2. Remove it from the heat and add the turpentine while stirring.
3. Add pigment, if desired.
4. Transfer to a clean container while still warm.



Adding pigment to clear wax works, too. If you don't want to go to the trouble of making your own wax, you can add pigment to any liquid or paste wax. You can use dry artist's pigments or mica powders (shown above). The author mixes the wax on glass, which is easy to clean.



Buff a surface like you're shining shoes—with a brush. To bring out the shine in a waxed surface, start with a quill brush (above right) and finish with softer hog-hair brushes (above left). The more you brush the surface, the harder and shinier it gets.



A random-orbit sander makes buffing fast and easy. Although the author seldom uses one, a random-orbit sander equipped with a soft buffing pad will make short work of large surfaces. Make sure the wax has fully cured before buffing for the highest sheen and hardest surface.

does not divulge the mixing proportions. Briwax 2000 substitutes another (unspecified), less-hazardous solvent. Most of the creamed beeswaxes are beeswax dissolved in turpentine—the traditional formula for centuries.

Turpentine and toluene can be used to remove wax (depending on the type of wax). Mineral spirits (paint thinner) also works, though not as well. If mineral spirits

doesn't work, try naphtha, which is stronger than mineral spirits.

When to use wax

It has often been said that there is no surface that wouldn't be helped by a coat of wax. But this couldn't be further from the truth. For instance, wax wouldn't be my first choice for anything that will see a lot of moisture, such as dining tables, coffee

tables or (obviously) any outdoor furniture. Still, some people like the look and aroma of wax, so if you absolutely must use wax in these situations, I would recommend something that is microcrystalline, which has the highest water resistance. Renaissance wax would be a good choice. It is expensive, but when applied in very thin coats, it offers the best protection from water.

Also think about the use of a particular piece of furniture before waxing it to a high polish. Chairs and benches, for instance, are not good wax candidates because you don't want them to be too slippery. Also, a wax with low heat resistance might begin to melt and get sticky from body heat.

What finishes can you apply wax over? Varnish, oil and shellac love a coat of wax on top. The solvents in wax polish won't dissolve a water-based finish, so they will sit happily (and beautifully) on top of most water-based coatings.

Pigmented wax works like a stain. Highly pigmented waxes such as these (manufactured by Liberon) can create interesting effects on open-pored woods such as oak and ash. The author is using a clear paste wax to remove excess pigmented wax.



Remember, the wax itself is not going to be harmful to much of anything. It is the solvent, particularly toluene, that may cause problems. Be sure to let a finish fully cure before waxing it, and your best bet is to test the wax on a sample piece or in an area that won't be seen. And, of course, don't apply anything over the wax finish, except for more wax.

How to apply wax

Wax polish is easy to apply. Start with a clean, smooth, dust-free surface. If the surface has been previously waxed, it is not necessary, in ideal conditions, to remove the old wax. Over time, the wax polish will wear away so that you really aren't building up too much polish. You should only have to remove old wax that has yellowed or become brittle.

On older furniture, if the surface is extremely dirty, you may want to use a commercial degreaser. Vulpex, a soap often used in conservation and restoration work and available from Conservator's Emporium (775-852-0404; www.consemp.com), can be diluted in water, denatured alcohol, mineral spirits and other solvents.

Wax polish comes in liquids or thicker formulations known as paste wax. Keep in mind that the consistency of wax affects not how it looks but how easy it is to apply. If you have a can of old wax that looks dried out, try adding a little turpentine to thin it. If the wax seems too runny, let the solvent evaporate until it thickens.

In its liquid form, wax polish can be applied evenly using a brush or a rag. Wipe off the excess when the surface feels dry to the touch. If you're using a paste wax, you can place a generous amount of the wax directly on the surface to be waxed, or you can make a wax pad or "rubber" by folding a chunk of wax inside a clean cotton cloth. After applying the wax, but before allowing it to dry, remove the excess by rubbing with a clean, dry cotton cloth.

You also can use 0000 steel wool (or the synthetic variety) to apply wax, but this is usually reserved for rubbing out a hard

Wax puts a specialty finish within anyone's reach. Pigmented or liming finishes work best on open-pored woods such as the white oak of this side table. Applied the same way as plain paste wax (inset), the white liming wax fills the pores of the oak, creating a pickled finish.



coating such as varnish, because it gently abrades the surface, creating a matte finish.

Two coats and a buffing out

Like many other finishes, the wax polish surface is built up. You should be able to achieve a nice sheen in two coats. If you do not, the application is probably too heavy and the buffing too light. Shine occurs when the molecules of the wax polish are compressed and reflect more light.

After applying the first coat and wiping off the excess, let the surface sit for at least two hours while the solvents evaporate. The longer the evaporation time, the better; a day or two is not too long. Apply a second coat and let it dry for the same amount of time.

Buffing can be done using a soft cotton cloth for low sheen. For higher sheen, you will need more pressure. A number of different brushes will yield a higher sheen. For open-pored woods such as oak, start with a quill brush to compress the polish. Then switch to a hog-hair polish brush similar to the kind used for polishing shoes. For large projects, it may be practical to use a random-orbit sander fitted with a buffing pad.

Specialty waxes

Finally, a word on some specialty waxes that are available. Liming wax allows you to achieve a pickled, limed or French

country look in just minutes with the application of two coats of wax polish. Patinating wax comes in a number of colors (black, green, terra-cotta and blue) and can create a startlingly beautiful effect. Both of these waxes work best on open-pored woods such as oak or ash, and wire-brushing the surface of the wood to deepen the grain can enhance the effect.

When it comes to pigmented waxes, being able to mix your own and adjust the ingredients is important. True, manufactured wax polish comes in many colors, but it's often easier to make the color yourself. You can do this by making wax polish from scratch or by adding pigments to clear polishes (or sometimes even to those already pigmented).

Natural earth pigments (see Sources of Supply below) work best, but you can use any dry pigment. Special effects are easy to achieve by adding pigments or mica powders to the polish. Micras are nontarnishing, nontoxic metallic pigments that will not react with the solvents in the polish.

One important piece of advice: Keep track of the exact ingredients of anything that you make or modify. You never know when you'll have to duplicate a recipe. □

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SOURCES OF SUPPLY

Some waxes are available through woodworking catalogs. The sources at right have a wide selection of pure waxes, pigments and other unusual items mentioned in this article.

LIBERON/STAR WOOD FINISH SUPPLY
P.O. Box 86
Mendocino, CA 95460
(800) 245-5611
www.woodfinishesupply.com

KREMER PIGMENTS, INC.
228 Elizabeth St.
New York, NY 10012
(212) 219-2394
www.kremer-pigmente.de

BAGGOT LEAF CO.
430 Broome St.
New York, NY 10013
(212) 431-4653
www.goldleaf.net

SEPP LEAF PRODUCTS
381 Park Ave. S.
Suite 301
New York, NY 10016
(212) 683-2840
www.seppleaf.com



All About Wax

Use it to perfect a finish
or create special effects

BY PETER GEDRYS

There is a quality to a wax topcoat that can't be matched by more durable, modern finishes. The soft sheen and tactile quality of a waxed surface just begs to be touched. Not only does a waxed surface look good and feel good, but it also helps protect the finish underneath.

Besides being a final coat on finished wood, wax has a number of other uses. It can serve as a minimal finish to maintain a wood's natural beauty, or it can give a just-made piece an antique look. Colored waxes can create special effects. Best of all, the tools are simple and the techniques are easy. Whatever your furniture-making ability, your projects will look and feel better after a proper waxing.

Wax polish finishes a finish

The most common use for wax is to apply it as the final layer of finish. It can go on top of any type of finish, from an in-the-wood couple of coats of oil to high-gloss,



CHOOSE ONE MADE FOR FURNITURE

In general, if the first use mentioned on the can is polishing wood floors, don't use the wax on furniture. It is likely to contain a high percentage of carnauba wax and is designed to be buffed with a mechanical floor buffer. You'll have a hard time buffing it by hand. Butcher's Bowling Alley Wax and Minwax finishing wax fall into this category. However, these hard paste waxes can be used as a clear base for custom-coloring. In general, waxes designed for furniture are easier to use. They usually are softer in consistency (what I call a semi-paste wax) due to their higher percentage of solvent, which makes them easier to apply. I've had good results with Antiquax; Fiddes dries fast and has a low odor; Liberon's Black Bison goes on very smoothly but has a strong odor; Goddard's has a pleasant lemon verbena scent.

Step one is understanding the ingredients

CLEAR-WAX BASICS

Although brands of wax vary greatly in price, they all draw from the same limited number of raw waxes and solvents.

The best-known wax is beeswax. After the honeycomb has been melted and refined, it can be left dark or placed in the sun and bleached. Medium-soft, beeswax produces a medium-gloss finish.

The cheapest component is paraffin wax, derived from refining crude oil. Relatively soft and colorless, it serves as the base for many wax blends. Also obtained from petroleum is microcrystalline wax, a highly refined and expensive wax that has excellent resistance to water. It is favored by museums because of its neutral pH.

To offset paraffin wax's softness, manufacturers add harder waxes: Carnauba, obtained from scraping the leaves of a Brazilian palm tree, produces a very high shine but is also very hard to buff out when used alone; candelilla, obtained from the



Raw waxes. Shown from left are beeswax, paraffin, and carnauba flakes.

leaves of a Mexican plant, is much like carnauba, but somewhat softer.

The speed at which a solvent evaporates will determine how long you have to wait before you can buff the wax. Traditionally, turpentine was used to dissolve beeswax, but its relative expense means this medium-paced solvent is rarely used in commercial waxes.

Mineral spirits is the most common solvent and can be formulated for slow or medium-paced evaporation. Faster-evaporating solvents include naphtha and toluene. I avoid toluene waxes such as Briwax (below) for a number of reasons. First, I dislike their strong odor; second, toluene is most likely to damage a finish that is not fully cured; third, I find they harden very fast, making them somewhat difficult to work with.

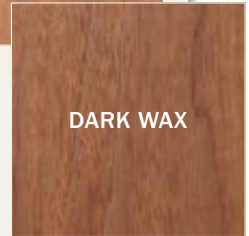
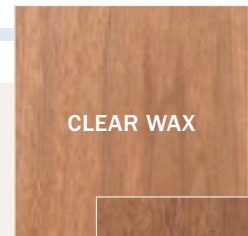


COLORED WAX

If you do one thing after reading this article, I hope you'll try using a dark wax. As this piece of walnut shows, a clear wax on a dark, open-pored wood can leave white residue in the pores. Even if the pores are filled, the clear wax can leave a slight haze on a dark surface.

Conversely, wax the same color or darker than the wood can enhance the appearance. See p. 59 for more detail and to learn how dark wax can be used to give an aged look.

You can buy wax in a range of wood tones, or you can take clear paste wax and color it yourself. You must first melt the wax, but because wax is flammable, never heat it over an open flame. Instead, place it in a container over heated water, a device known as a double boiler. Add artist's oils or universal colorants and mix them in thoroughly. Let the wax solidify before use.



Buy the right color. Find one that matches the wood and it won't show in pores and recesses.



Or color your own. If you need only a small amount of colored wax or you want an unusual color, melt some clear paste wax in a container over hot water, and then mix in artist's oil colors.

Finish a finish with wax

GLOSS LOOK



Create a wax applicator. Place some wax in the center of a double thickness of cheesecloth, gather the edges of the cloth together, and twist them closed.

rubbed-out shellac. The wax helps to even out the sheen and adds a measure of protection that can be renewed easily. However, don't be in a rush to apply it: Almost all waxes contain solvents, which can damage a film finish that isn't fully cured. For most finishes, this means waiting a week; but wait at least a month before applying a paste wax to solvent-based lacquer.

For best results, use an applicator—Using widely available but hard paste waxes, beginners tend to put on too much, then wonder why the surface smears when they try to buff it. The answer is to make a wax applicator.

Take some good, dense cheesecloth and fold it over. Place a small amount of wax on the middle of this pad. Gather up the edges and twist them to form a small knob that encloses the wax. As soon as you rub the surface, the wax will start coming through the cloth evenly and thinly. Although you can use softer semi-paste wax this way, you gain the most benefit when using harder paste waxes. For closed-pore, light-colored woods such as maple, I use a clear wax, but for open-pore woods such as oak or mahogany and darker closed-pore woods like cherry, I use a colored wax.

When you rub the surface, you will apply a very thin film of wax. The applicator prevents you from applying too much. I begin by applying the wax in circles, forcing it into any open pores, and then I give it a once-over with the grain to straighten everything out. If you run out of wax, don't apply more to the outside of the applicator; just unwrap it and replenish the inside. When



1



2



3

A thin coat is critical. The cheesecloth applicator allows an even amount of wax to reach the wood. Apply the wax in a circular motion (1). Follow up by giving some light strokes with the grain (2). Before buffing, wipe the surface with a white non-abrasive pad; the open weave picks up any residue (3). Don't use a colored pad; many contain abrasives. To raise the shine (4), you can do the final buffing with a cotton cloth or a paper towel. Turn it frequently to keep removing surplus wax.



4

finished, you can store the applicator inside the can of wax.

To get the best results, you must wait for the solvent to evaporate before you remove the excess wax and buff the surface. If you do this too soon, you'll either remove the wax or just move it around. If you wait too long, it becomes progressively harder to remove the surplus. Although the wax won't get hazy like car polish, it will change from glossy to dull. The time this takes varies by brand and atmospheric conditions, but 20 minutes is average.

Although using the applicator should prevent excess wax, I still rub the dried wax with a white nylon nonabrasive pad (www.woodworker.com). The open weave picks up any thicker patches or small lumps of wax. The final step is to buff the surface with a soft cloth like terrycloth, an old T-shirt, or even a paper towel. Rub the surface vigorously and turn the cloth frequently so that you burnish the wax rather than just redistribute it.

At this stage, if you find you simply can't get the surface to shine, you probably put on too much wax or let it harden for too long. Rub the surface with a cloth dampened with mineral spirits to remove most of the wax. Wait an hour for the solvent to evaporate, and then reapply the wax more carefully.

Rub out the surface with wax—If you prefer a medium luster, an option when waxing a cured finish such as shellac, varnish, or lacquer is to apply the wax with

FineWoodworking.com

Peter Gedrys mixes up a batch of wax and finishes a piece.

0000 steel wool or a gray abrasive pad. This will reduce the sheen and soften the look. To better lubricate the steel wool, I use a softer semi-paste wax. To avoid cross-grain scratches, apply the wax with the grain only. It is easy to apply too

much wax with this method, so you'll probably need to go over the wax once it has dried with clean steel wool or a white abrasive pad. When the wax has cured, buff the surface in the same way as previously described.

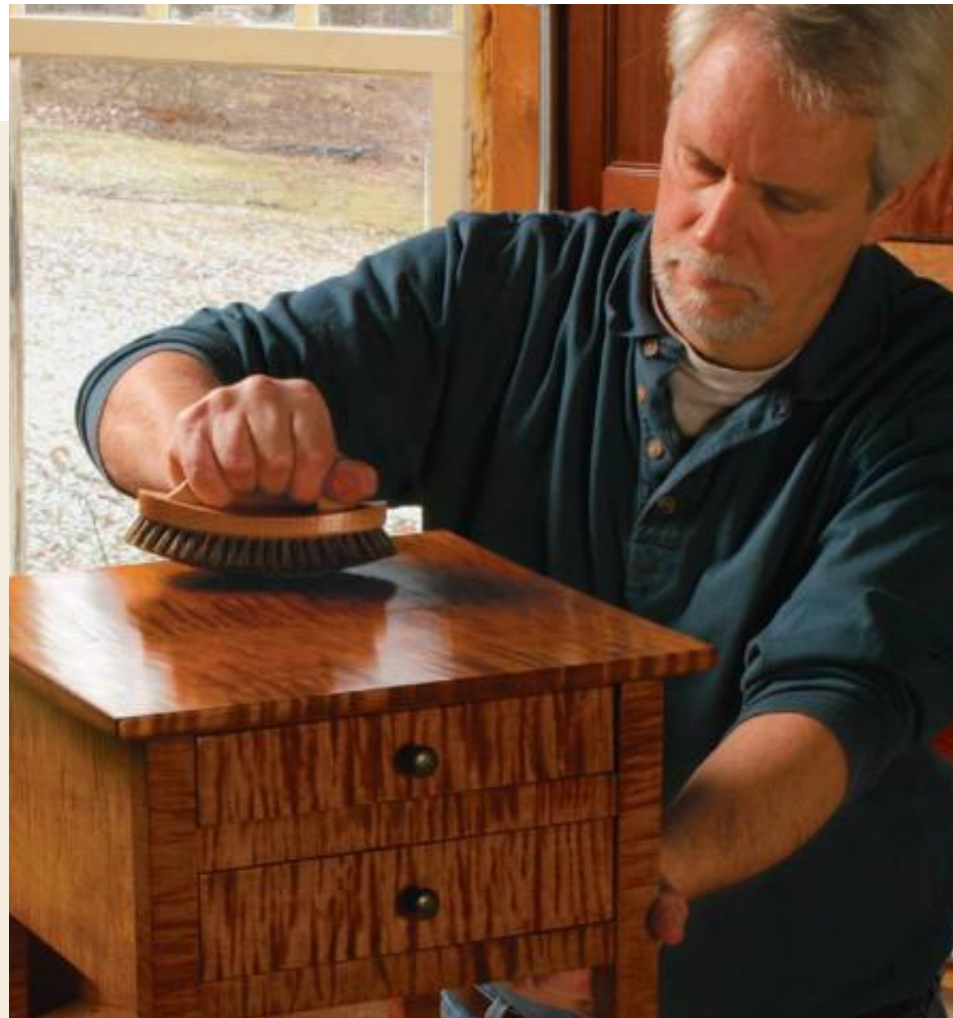
Waxing intricate shapes and carvings—By highlighting areas that are proud and leaving recesses dull, wax can give carvings and moldings a more three-dimensional appearance. The softer the wax, the easier it is to work into the corners using either a cloth or a small stiff brush. When dry, a vigorous buffing with a dry and moderately stiff-bristle brush will yield good results.

Renewing a waxed surface—When a waxed surface begins to look dull, try buffing to renew the sheen. If this doesn't do the trick, simply apply and buff another layer of wax in the same way as described earlier. When done correctly, the layers of wax are so thin you need have no concern about wax buildup.

If the surface becomes worn or dirty, wax can be removed with mineral spirits or one of the proprietary wax washes. If it is very

SATIN SHEEN

Steel wool and wax. You can combine rubbing out the finish and waxing it by using steel wool to apply the wax. Liberon's 0000 steel wool gives the most even scratch pattern (right). To avoid cross-grain scratches, rub the steel wool with the wax in the direction of the grain only (below).



Not just for shoes. You can buff wax with a brush. This works well in carved areas and produces a slightly lower shine than a cloth.

As a minimal finish



Simple steps. For objects rarely touched and that don't need a protective finish, wipe on a single coat of shellac, sand when dry, and then wax and buff.

grimy, use either 0000 steel wool or a gray abrasive pad with solvent to loosen the wax. Wipe well with paper towels, and then re wax the surface.

Wax bare wood for a natural look

Wax also can be used on its own as a finish. It has the advantage of barely changing the natural color of the wood, just giving the surface a slightly higher sheen. The downside is that it gives minimal protection, but this is not a problem for objects such as picture frames that are subject to infrequent handling. As with waxing a finish, you need to match the wax color to the wood.

A variation on this is one of my favorite finishes.

I seal the bare wood with a coat or two of a 1- to 2-lb. cut of shellac, lightly sand it when dry, and then apply the wax. I've used it with great success on lightly used furniture and on architectural components such as paneling. The thin barrier of shellac barely changes the wood's appearance yet makes it smoother and less porous, allowing a more even luster. It also allows me to easily remove the wax at a later date, if required.

Colored wax gives a range of looks

Wax comes in a range of colors, from wood tones to specialty colors such as black and white. These colored waxes can be used either for decorative finishing or for replicating antiques.

A limed finish on white oak is the most famous decorative wax finish. First, open up the pores with a brass brush or a slightly stiffer bronze brush, then vacuum and blow out the pores thoroughly. Seal the surface with a thin coat of shellac, and then rub white wax well into the pores. Wipe off the excess and apply

Pop the pores with colored wax



Prepare the wood. Open the pores by brushing the wood with a bronze or brass brush. After removing the dust with a vacuum or compressed air, apply a single coat of shellac.



A limed finish. Fill the pores with white liming wax, and then remove the surplus. Later add a coat of clear wax, or for a higher gloss, a coat of shellac.



Color wax with powders. You can color clear wax by adding dry pigments or mica powders. Afterward, topcoat with either clear wax or shellac.

Wax can give an aged appearance

CREATE INSTANT DUST



Dirt in the crevices. Apply softened paste wax into the nooks and crannies of carvings. Then tap in some rotten-stone with a stiff-bristled brush (top). When the wax has dried, rub the area with crumpled newspaper to remove the bulk of the rotten-stone, and then burnish the high points with a cloth (right). This leaves a line of gray similar to that found on antiques.



either a couple of coats of paste wax or, for a higher sheen, a coat of shellac. Other applications include adding colored pigments or mica powders to clear wax to color the pores.

If your taste runs more toward period than contemporary, wax can give furniture an aged appearance. Using wax a shade or two darker than the wood will add accent lines around moldings and carvings. There are brown and black waxes sold as patinating waxes, but you can make your own or use dry pigment powders on top of a clear wax.

Don't use shoe polish. Many include silicone, which will play havoc with any film finish that you apply afterward. □

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ADD YEARS OF POLISH



Simulate wax buildup. To replicate the dark recesses found on antiques, use dark wax in these areas (above), or apply dry pigments to freshly applied clear wax (center). When the wax is dry, burnish the high points with a cloth or a brush (below).

