

# Finishing Your Wooden Deck

Success depends on often overlooked essentials

*Surface prep and informed product choice key to peel-free results*



Beautiful decks, gazebos and other outdoor wood structures don't stay that way automatically. Just look around. Aren't many decks grey and old-looking? Enduringly beautiful outdoor wood is rare enough that it attracts attention. It also begs a question: how come

manufacturers can't deliver the same level of long-lasting reliability when it comes to exterior wood finishes as we've come to expect in other areas of consumer life?

To answer this question, you need to understand a few hidden facts. →

## What You Get

This report spells out exactly what's required to achieve the longest-lasting finish on your new or old wooden deck.

I've developed these techniques over the past 20 years with research, hands-on experience and by closely watching how various deck finishes age.

I'll share the pros and cons of the different categories of deck finishes on the market today, offering specific, unbiased product recommendations based on actual field experience.

Even a small deck costs a lot of money to build. This guide gives you today's best information for keeping your new deck looking its very best.

As with all my *Best Practices* guides, I offer a personal guarantee. If you're not completely satisfied, please let me know. I want the information I provide to work for you.

-Steve Maxwell

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## NEW DECK FINISHING IN A NUTSHELL

**Step#1:** Make sure new lumber is drier than 14% moisture content. If you can't check it with a moisture meter, let your newly-completed deck sit for three to six weeks before finishing.

**Step#2:** Prep the surface. Either sand all surfaces with a 60- or 80-grit abrasive or pressure wash, then sand.

**Step#3:** Select a verified finishing product. Many products perform poorly, even when you prep and apply correctly. Use only proven formulations.

**Step#4:** Apply your finish properly. Heat and sunlight can degrade finishing liquids as they go on. Choose moderate temperatures (65F to 70F or 18C to 24C) and overcast days whenever possible.

## TWO REASONS FOR TROUBLE

Don't fool yourself into believing that every brand name deck finishing product automatically delivers long-lasting results. They don't, at least not without help.

Although product selection is vitally important (more on this later), the best outdoor wood finishes in the world will fail for sure if you simply brush them on and hope. Long-lasting, beautiful outdoor wood finishing is as much about effort as it is of chemistry. There are two reasons why.

### Reason #1: Newly milled lumber isn't thirsty

The planer knives that transformed rough lumber into the smooth boards on your deck left behind a legacy of crushed, burnished fibres that prevent finishing liquids from penetrating deeply enough to gain a durable hold. This surface condition, called "mill glaze", causes more premature finish failures than anything else.



### Reason #2: Grey wood has weak fibers

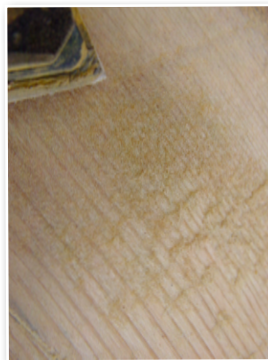
When new lumber goes grey, even a little, it signals surface deterioration caused by sunlight and microbes. The cellulose is breaking down under ultra-violet attack and beginning to detach from the underlying wood. Look closely and you'll see how weathered wood is often fuzzy. Although this surface is certainly absorbent, it's not physically strong. This means that even though finishing products can soak into old wood, the grip they gain on loose fibers is too weak. The finish layer ends up coming off, along with the wood fibers underneath.

All this is why your new deck needs some work before you brush on any kind of finish. Exactly how you tackle this work depends on the size of deck you have, how particular you are about the way it looks, and what kind of finish you plan to apply. ↓

## SURFACE PREP THAT MAKES A DIFFERENCE

A five-year field trial held across North America by Akzo Nobel Coatings -- the world's largest finish manufacturer -- set out to determine exactly which surface preparation technique maximized the all-important stain absorbency of outdoor wood. Chemical deck washes and mill-glaze removers were pitted against pressure-washing regimes using plain water and water-plus-cleaning agents. The results of sanding were analyzed, too.

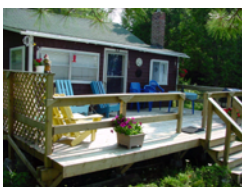
Results showed that surfaces sanded with a 60-grit abrasive developed the greatest absorbency and most durable final deck finish.



The only problem with sanding is how you tackle the job practically over something as large as a deck.

To make this work easier, you need the right equipment. A walk-behind, vibrating floor sander makes quick work of large, flat deck surfaces, but it's no good in corners and on railings. For these areas a 6" random-orbit sander is the tool of choice. This is a hand-held power tool that's useful for lots of other jobs, too. For a close look at the model I prefer, see "Choosing a Sander" on page 3.

Note: Even though today's pressure-treated lumber doesn't contain arsenic, be sure to wear a dust mask while sanding.



### IS A DECK FINISH REALLY NECESSARY AT ALL?

This all depends on you. Deck finishes are largely about looks. They actually do very little to preserve the physical strength or working life of wood. And while it's true that a barn-board deck looks pretty grim to some folks, it's better than a peeling finish you can't keep up with.

## MORE ON SURFACE PREP

Sanding outdoor wood isn't something most people do before they finish a new deck, because it seems like so much work. And it is.

Pre-application pressure-washing is much more common, though there are drawbacks. The main one is the creation of surface fuzz on the wood. Pressure-washers typically deliver a stream of water at 1500 to 4000 psi -- more than enough to loosen surface fibres, especially with soft deck woods such as cedar and pressure-treated pine. Remember how I told you old, grey wood is absorbent but surface fibers are weak? The same goes for fuzziness created by pressure-washing. That's why it's best combined with sanding in a way that can also save you time and effort.



By beginning your prep campaign by pressure washing, you'll remove a lot of mill glaze from your deck quickly. Be sure to blast into all nooks and crannies, though keep the wand tip far enough away to avoid tearing up the wood. Let the deck dry for a couple of warm days, then run your sander quickly over the surface to remove fuzz like you see below. The wood will then be in good shape to accept a finish.



## CHOOSING A SANDER FOR DECK DUTY



Is your deck large? Start by renting a walk-behind, vibrating floor sander to tackle the bulk of the work. This is the kind of machine designed for sanding interior floors.

You'll also need a hand-held random-orbit sander. You'll use it for sanding corners, railings, steps -- and even main deck areas if you'd rather not rent the big machine.

My favourite model of random-orbit sander for deck duty is the Porter-Cable 7336. That's it on the left. This tool's got a 6-inch diameter disc, lots of power and is durable. After 15 years of hard use, mine's still going strong. Typical street price is less than \$150. It used to cost \$200 when I bought mine in 1992. Wear a dust mask while sanding, especially if your deck is made of pressure-treated wood

## DO YOU REALLY WANT A WOODEN DECK AT ALL?

Wood is beautiful, but maintaining it outdoors requires ongoing effort. There's no way around it. Even the most durable deck-finishing products require reapplication every 36 to 48 months. Some transparent formulations demand a new coat every spring.

The desire for convenience is why more and more homeowners are opting for finish-free composite deck materials instead of wood. Most brands are made from a blend of recycled wood fibers and plastic, and they require nothing more than a regular hose-down.

If you haven't built your deck yet, and like the idea of minimizing your maintenance obligations, composites are a green option that are worth a look.

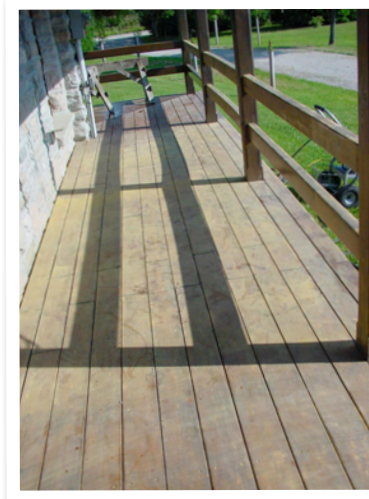


## NEW LIFE FOR AN OLD DECK

Refinishing an old deck is similar to finishing a new one, though there are differences you need to recognize before settling on a strategy. The first is the condition of your existing finish. How bad is it? Depending on your answer, you'll want to follow one of the two following courses of action.

### Scenario#1: Finish just starting to fail.

If your deck is only beginning to peel, and the finish has lasted well over the last two years, then there's no need to strip back to bare wood. In this case, save yourself lots of time and simply sand the surface lightly in preparation for a new top coat. A 120- or 180-grit abrasive in a random-orbit sander works well. Don't sand through the finish, just scuff the surface so it accepts and holds a new finish (I've scuffed the deck in the photo on the right). In those small areas where the surface has peeled down to bare wood (usually around knots), sand off any loose frazzles of finish. Use a workshop vac to remove dust, then recoat once or twice with the same product you used originally.



### Scenario#2: Complete finish failure.

This is what most deck owners face by the time they get serious about refinishing. Making your deck look good again depends on removing all traces of the old finish and grey wood. After that, follow my finishing instructions for dealing with new lumber.

Exactly how you strip depends on the size of the deck and the equipment you have available. You could simply sand, but the fastest approach involves a water-soluble chemical stripper brushed or rolled on, then cleaned off with a pressure washer. Use a deck brightener if the grey color persists.

## A FEW WORDS ABOUT PRESSURE WASHERS



A pressure washer is nice to have for finishing a new deck, but it's virtually mandatory for stripping an old deck finish. Gas-powered versions speed up the work considerably because they deliver a greater volume of water

at considerably higher pressures. You'll find that models putting out at least 2,000 pounds per square inch (psi) of pressure work best. Just be careful. Pressure washers can damage your deck if you let the tip come too close to the wood. That's what caused the splintering of the deck board you see to the right.

Start by connecting your garden hose to the pressure washer, turn on the water, then pull the trigger on the wand while the motor is not running. When

all air has escaped from the system, start the engine and begin work. Waft the wand back and forth about 18 inches away from your deck, then move closer as you gain a feel for the job.



### ONE-TIME DECK FINISH

If you've finished and refinished your deck a few times, you might be getting tired of the routine. One non-toxic alternative is called Eco Wood Treatment ([www.ecowoodtreatment.com](http://www.ecowoodtreatment.com)). It's a powder you mix with water, then apply to wood. It imparts an even, weathered grey tone (like barn board) that never fades.

## CHOOSE YOUR FINISHING PRODUCT WISELY

Product selection is where many homeowners mess up. They go to the store and choose whatever product has the most compelling label, hoping things will turn out well. Unfortunately they often don't.

Fact is, you can wear out your knees doing all the right prep work, but if you choose a weak finishing product, your deck will look bad in a year. I know because I've seen it happen many times.

You need to understand something fundamental right up front. All else being equal, finish life is directly proportional to how opaque a coating is. Many people would love to maintain the "new wood look" on their decks, so they favor clear, film-free water repellents. Trouble is, even the best of these need to be reapplied at least every year. And even then, weathering of the wood will eventually take away that bright new look. At the other end of the spectrum are the deck finishes that look like paint. They completely hide wood grain (which isn't what most of us want), though the best formulations are still looking pretty good after three years exposure to the elements.

In 1990 I began to monitor samples of wood finished with the best products of that time, and I've

been watching ever since. I also monitor an excellent, ongoing deck finish trial that's been conducted by Consumers Union for the last decade to round out my recommendations. Summarizing these sources of info, this is the current list of the best deck finishes:

### **Opaque Class (longest lasting of all):**

Cabot Decking Stain. This opaque, solvent-based product is considerably more durable than Cabot's latex cousin, Cabot Solid Color.

### **Translucent Class (moderate working life):**

Sikkens Cetol SRD. This tints wood, while letting grain show through. Applying first coat in "dark oak" and subsequent maintenance coats in "cedar" color yields a stunning cinnamon-brown shade. Cetol DEK Finish is also excellent.

### **Transparent Class (shortest life):**

Olympic Wood Protector Clear Waterproofing Sealant. Like sunscreen for your deck, this product does better than other clear repellents. Requires more frequent re-coating than opaque and translucent products, yet it retains bright, new look (at least for a while).

## APPLICATION MATTERS, TOO!



It's not just what you put on your deck that matters, it's how you put it on. There are three crucial things to keep in mind: temperature, sunlight and application technique.

For maximum life, you need to apply a finish as close to normal room

temperature as possible. Anything colder than about 55F or 12C prevents proper drying. Temps hotter than 80F or 27C boil off volatile ingredients before the finish has cured. For similar reasons, direct sunlight is a problem, too. It can heat deck surfaces far beyond air

temperature. Work in shady times of the day or cloudy weather whenever possible. Also, if you're applying any sort of finish that forms a surface film, be sure to keep the leading edge of your work area wet, to avoid forming lap marks.



## LET ME KNOW HOW IT GOES!

I'd love to hear your comments on this "Best Practices" guide, and how your deck-finishing job went. Please send comments to me directly at [steve@steve-maxwell.ca](mailto:steve@steve-maxwell.ca). Thanks for reading this report. I hope it helps you make your home a better place to live!