

# KEEPING THE “NATURAL LOOK” ON WOOD SIDING

— BY AL RUBIN —

## WITH THE RIGHT PRODUCT AND GOOD TECHNIQUE, A NATURAL FINISH CAN LAST UP TO FIVE YEARS

In siding as in much else, the “natural look” is in vogue these days, with many customers wanting to leave their cedar or redwood siding unpainted and unstained. Most customers, however, want their houses to retain this natural look, with all its honey-toned brightness, and without the natural graying that untreated wood sidings take on when exposed to sun and weather. In days past, heartwood from cedar and redwood had enough natural preservatives to discourage, or at least slow, this aging process. But quality wood is increasingly rare.

Today, keeping the natural look requires some rather unnatural finishes to block or slow the action of moisture and sun. These products have become an increasingly important part of the paint and stain market. Though no clear or lightly-tinted finish will last as long as a heavily pigmented stain or paint, the best of them preserve that new-wood look for up to five years if applied correctly on good wood. The wrong finish applied poorly, however, is little better than no finish at all.

Wood turns gray because of two factors: the degradation by sun and water of the outermost layer of wood cells, which turn gray as their natural oils dry out; and the growth of tiny mildew spores on the wood's surface. Preventing this graying while retaining a natural look is the job of the current generation of clear and natural-tone tinted finishes. These coatings are formulated to protect the wood from graying with a combination of replenishing oils (which are essentially the same as in any other oil-based stain) and what the industry calls “UV blockers.”

pigment, attempt to block the sun's effect solely with UV blockers. These come in two basic types, either or both of which might be present in a given clear finish. (Manufacturers are fairly secretive about their formulas.) One type is an inorganic “reflector,” made of transparent iron-oxide pigments that let visible light through, but which block UV light.

The other type is the “absorber,” composed of organic chemicals that protect the wood by absorbing UV rays.

These UV blockers are similar to skin sunscreens: They block and/or absorb the sun's UV rays, but only for a while. Given exposure to sun and water, they eventually wear off (in the case of the “reflecting” clear pig-

ments) or wear out (in the case of UV absorbers). This usually happens within a year or two. At that point, they must be replenished if the skin of the building is to remain protected. If they're not, the siding gets its version of sunburn — it turns gray.

A tinted finish — that is, one lightly pigmented to a wood tone such as cedar or redwood — is, by definition, not the same thing as a clear finish. Yet many times, a house spec'd for a clear finish might be better treated with a cedar-tinted or redwood-tinted finish. Most of the time, a clear finish is spec'd when a client or builder wants to preserve and enhance the natural tones of new cedar or redwood siding; that is, they want the siding to retain its original honey or reddish tone and not turn gray. But I usually recommend a tinted finish because, while a tinted finish won't substantially change the appearance of the wood (other than heightening the grain and deepening the tones), its pigments will protect the wood longer than a clear finish will — perhaps for three to five years instead of one to two. For these reasons I usually recommend a tinted finish over a clear finish when the owner wants to retain that new-wood look.

However, there are cases where a clear finish is called for: When the client wants already-weathered siding to retain its gray or pewter tones or when an owner has new siding treated to turn the wood gray, for a weathered appearance. In some cases, the siding will have taken on some other color tone, either through age or previous stain, that the owner likes and wants to preserve.

In all these cases, a clear finish can preserve the wood's appearance while helping to



*“Natural-look” clear and tinted finishes look easy. But careful product selection and application can make the difference between a first-year callback and a fifth-year repeat customer.*

### Clear Vs. Tinted

Clear finishes, having no

protect it from further weathering or degradation. But it will need to be reapplied every year or two to remain effective.

### Finding a Good Product

Whether you want clear or tinted, you'll find many finishes to choose from. Over the last 20 years, I've used many of the available products. I've found quite a few clear finishes that would protect siding for a year or so, and many tinted finishes that would work for two to three years. But over the years I've settled on two products that roughly double these figures and outperform anything else I've tried: Amteco's Total Wood Preservative (TWP), and Flood's Clear Wood Finish, or CWF.

These products have several important similarities and a few differences. They are both oil-based products with paraffin added for water protection. Both come in clear and wood-tone tinted versions. In both cases, the clear finishes will turn wood slightly darker on application; but that will lighten up in a few days or weeks to return to the original new-wood tone. In the tinted versions, the pigments add depth and color to the grain of the wood, and they may even out variations in the natural wood's tone. But they won't change the wood's basic color.

In general, I prefer Amteco's products. I've used them heavily for 12 years now, and I like their easy application, consistency, and longevity. However, I have used Flood's from time to time, and have found they work well too, though in my experience they haven't lasted quite as long as Amteco's products. But they are close competitors, so I think it's appropriate to describe both here.

### Amteco

Amteco's clear and tinted products are known in the trade as TWP — the clear finishes as TWP 100, the tinted versions (redwood and cedar) as TWP 101 (Amteco Inc., 815 Cass Ave., St. Louis, MO 63106; 800/969-4811). TWP stands for different things in the older, non-VOC-compliant and newer, compliant versions. The non-compliant version — still available in places without VOC regulations — is known as Total Wood Preservative. The compliant version, available mainly in regulated areas, is called Total Wood Protectant.

I've been using the older, non-VOC-compliant formulas for 12 years. In the past year and a half, I've switched mainly to the new compliant versions. These have a higher solids content than the older formula (about 90%) and so take longer to dry. But since they soak into the wood, this doesn't pose a serious problem; if anything, it gives you a little more leeway when trying to get a wet-on-wet application.

Obviously I can't say for certain that the new versions will last as long

## Making Old Wood Look New

Siding restoration jobs are of three kinds:

- a homeowner wants his old, gray siding to have that "new-wood" look (which he'll then preserve with a clear or tinted finish)
- the older, weathered siding on an existing home needs to be restored so it can match the new siding on an addition or section of replaced siding
- clear-finished siding has been left to weather too long between coats, and needs to be reconditioned before refinishing

In any of these cases, the task is the same: restore the weathered siding to an even, "new-wood" appearance so that it can then be protected with a clear or tinted finish. This involves cleaning the mildew, algae, fungus, and dirt off the siding. You might also need to replace a few pieces of far-gone siding or trim here and there.

### Match the Cure to the Disease

In most cases, the best way to clean mildew and dirt from siding is with a solution of sodium hypochlorite (bleach) in water. Some sources recommend equal parts bleach,

water, and trisodium phosphate, but I never found that TSP added anything.

Because I use large quantities, I buy my sodium hypochlorite in commercial tubs and dilute it in my sprayer tanks. But for smaller jobs, household bleach works fine. (We used to use it, until we found ourselves cleaning out stores' entire stocks — several grocery carts full of bleach.) Depending on the job, you might use anywhere from 1 part bleach to 8 parts water (2 cups for every gallon) to 1 part bleach to 1 part water. Occasionally you might need to use straight bleach, which is about a 4% sodium hypochlorite solution.

How concentrated a solution you need will depend on how much mildew you're dealing with. This, in turn, will depend on how much sun and (especially) moisture the siding has been exposed to, and for how long. I've had to hit ten-year-old, exposed, untreated wood in Baton Rouge, La., with three coats of straight bleach, while in Chicago I usually find a 1:2 solution handles the toughest jobs.

To find out what's necessary on a given job, experiment with a few

different concentrations. One coat will do its work in 10 to 15 minutes, after which you can see whether you need a stronger solution or another coat. For environmental and health reasons, I like to use the lowest concentration possible.

Use plastic containers for mixing the solution, since sodium hypochlorite corrodes metal. And always wear gloves, long sleeves, goggles, and masks when spraying bleach solution.

If the wood has algae along with mildew, we've found a 10% solution of calcium hypochlorite works better than sodium hypochlorite. Sodium hypochlorite remains active for only about 10 minutes, whereas calcium hypochlorite works for 24 hours. Calcium hypochlorite, commonly known as HTH, is a 70% granular chlorine available at most pool chemical companies.

### Applying The Cleaner

Rate of delivery isn't as crucial with cleaner as with finishes, so you can spray with anything from a pump-up garden sprayer to a gas-driven pump. Smaller sprayers with aluminum parts, however, will be destroyed by the bleach. Don't spray at over 1,500 psi, or you may gouge the wood.

Start at the gables or fascia, and let the water cascade down the siding as you work your way down. The solution itself should kill and clean the mildew. If a second application doesn't wash the mildew and dirt off, you may want to hit it with a long-handled scrub brush while the solution is still fresh.

### Watch Those Plants

You'll need to protect any plants below your work. To do so, saturate the ground around the roots and soak all the leaves with water. Then cover the plants with woven poly tarps; these will shed the bleach solution, but let the plants "breathe" more than ordinary plastic will. You should also cover any brass, copper, or aluminum fixtures so they're not corroded by the bleach, and any stained or painted wood, such as window frames, casing, or other trim, that you don't want to bleach.

When you're done, rinse everything (including the windows and woodwork) thoroughly with water, and uncover the plants so they don't overheat under the tarps. Replace any rotten or damaged siding with fresh stock, let everything dry a couple of days, and you're ready to apply the clear finish.

— A. R.



*Before:* Unfinished siding exposed to sun and rain eventually darkens as the surface degrades, turning gray and providing a habitat for mildew.



*After:* Cleaning with a bleach solution, however, can remove the mildew and brighten the wood to close to its original tone. It can then be protected with a clear or tinted finish.



Large painting contractors require a large tank and a heavy-duty airless pump. For smaller operations, rented pumps and small buckets or tanks will suffice.

as the old versions — up to two years for the clear finishes, four to five for the tinted. But I've used a similar Amteco product — Shake and Shingle Sealant — in a VOC-compliant version for about four years, and it has performed quite well. In addition, accelerated aging tests at the University of Texas' Forest Products Lab in Lufkin, Texas, suggest that Amteco's compliant TWP products should last as long as their others. And the jobs I've done so far have performed well. I expect these compliant versions to retain the same quality the earlier versions have.

Amteco's clear TWP 100 lasts as long as any clear finish I've used. With a single coat on most surfaces and a double coat on southern or southwestern surfaces, it can last up to two years before graying starts. (Amteco's basic recommendation is for one coat; but with all these products, we've found a second coat increases longevity.) After that, exposed wood will begin to gray, turning completely gray by the end of the third year. Like other Amteco products, TWP 100 applies easily and doesn't tend to "lap" — that is, reasonable variations in spraying thickness don't produce uneven tones.

Amteco's tinted finishes have this same forgiving character. Several years ago, a sudden rainstorm forced one of my crews to abruptly stop work while coating the gable end of a two-story building with TWP 101 Cedartone. This left both horizontal and vertical lines between the raw wood and the treated section. When the crew resumed work several days later, they overlapped the new work slightly into the old, finished the gable end, and crossed their fingers. When the new work dried, you couldn't find the division between the new and the old.

We've found Amteco's tinted products to be highly durable. Generally, TWP 101 applied at 150 square feet per gallon (one coat on most surfaces, two on southern

exposures) will last about 36 to 40 months; sometime in the fourth year, the wood will begin to turn brownish. At this point, a cleaning with a bleach solution (see "Making Old Wood Look New") will remove mildew and dirt, and another coat of TWP will reestablish that new-wood look for another three to four years.

TWP's tinted products, by the way, can also be used for roof and deck surfaces, on which it will generally last for about two to three years. We experimented on a cedar shake roof here in St. Louis. (With hot summers and cold winters, St. Louis roof and siding jobs take a beating.) We applied a double coat of TWP 101, with each coat sprayed at a heavy rate of 100 square feet per gallon. That finish job lasted eight years before turning really gray, and helped to extend the life of the shake roof.

### Flood's

Flood's CWF (P.O. Box 399, Hudson, OH 44236-0399; 800/321-3444) also comes in both VOC-compliant and non-VOC-compliant versions; the compliant version, out for about a year and a half now, is labeled CWF/UV. I've found that CWF's tinted finishes wear out about a year earlier than Amteco's — lasting about three to four years. But they, too, are easy to recoat, requiring little prep as long as the client doesn't wait too long. You can tell it's time to recoat when the siding shows the usual graying. With Flood's you might also see some light flakes on the surface that can easily be rubbed off with your hand.

You can clean the siding of both mildew and the CWF flakes by spraying with a bleach solution. At that point you can repeat your original application, except that, as mentioned above, you probably need only one coat (at 150 sq.ft./gal) rather than the two coats Flood's recommends for a first application. You would, however, need to apply two coats if the siding has turned com-

pletely gray.

If you're applying only one coat of CWF, you must take care to produce an even coating; if you lap the brush or spray strokes too heavily, you can produce the uneven tone called "lapping." If this happens, however, a second coat will usually make it disappear.

### Application Fundamentals

Most general contractors sub out their finishes. But for those who do their own, or who do the occasional small job, a few application basics will help the job go smoothly — or help you keep tabs on the sub.

**Open the grain.** Any penetrating finish works best if it's applied to wood that is relatively free of moisture and excess oils and extractives, so that the finish can soak in. Old wood is almost always this way, but new wood often needs help. One approach is to let new wood siding age in the sun and rain. But that degrades the wood's outer layer and grays it.

A quicker way, and one that doesn't degrade the wood, is to spray the new siding with a solution of household bleach — one cup to a gallon of water — and then power rinse. The bleach removes any surface oil, extractives, and mill glaze, and the wetting and drying helps to open the wood's grain. Make sure you wait at least two days after rinsing (or any rain) before applying the finish so the wood can dry. Sun or wind, of course, can accelerate this schedule a bit.

No discussion of opening grain would be complete without a reference to the perennial question of whether the siding should be rough-side out or smooth-side out. Like any penetrating finish, a clear or tinted finish works best if applied to the rough side of siding. The more open grain of the rough side absorbs more of the finish, giving the siding more protection. Smooth sides should be reserved for paint jobs.

**What to spray it with.** The easiest way to apply these finishes is with sprayers. I use sprayers from the Wagner 8000 to 8500 series (Wagner Spray Tech, 1770 Fernbrook Ln., Plymouth, MN 55447-4663; 612/553-0759). These are gas-powered, airless, diaphragm-type sprayers capable of delivering constant pressure up to 2,500 pounds per square inch. We tend to spray around 800 psi, which delivers at a good rate but prevents overspraying.

These Wagner sprayers can pump from 1/2 to 1 1/2 gallons per minute, supplying up to three hoses. We generally leave the pump on a trailer pulling either a 200-gallon or 500-gallon tank, and run long hoses from there. We use about 200 feet of hose per gun. Each gun has a Graco Reverse-A-Clean IV 517 nozzle, which has a .017-inch opening and a 10-inch fan to spread the finish.

This, of course, is expensive equipment, appropriate only for big operations like ours. Wagner (and other companies) also sell smaller, electric airless units, complete with guns and one- to five-gallon hoppers, for under \$500. You might consider buying or renting one. (Bleach will destroy these pumps, however, so on a small job just use a garden-type pump sprayer for bleach.)

**How many times to spray?** On most jobs, I apply one coat on the whole house and add a second coat to southern and southwestern exposures.

We generally let any side we're going to recoat soak up the first coat for an hour or two before hitting it with the second. My feeling is that you might get a little extra wear if you waited until the next day for the second coat. But those extra few months aren't worth the considerable cost of setting up and taking down everything a second time.

Sometimes more coats are appropriate. For instance, in sun-intensive places, where wood takes an extra beating, a second coat all over, and a third on the most exposed areas, can significantly increase the value of the job, particularly if you can do them all in one day, as is often possible.

You can also add a third coat to the southern exposure when the budget is a little loose; for the extra money, the owners buy some extra time — usually a couple of years — before they must again have their property invaded by a spray crew.

**How to spray.** For the first coat, we generally spray clear and tinted finishes at a rate of 150 square feet per gallon. On the second coat, we go slightly lighter, at 200 square feet per gallon. If a budget is extra tight, we might make our second southern-exposure coat just a mist coat to save materials.

Spray starting at the top of the wall, and work your way down in long side-to-side sweeps. Spray just enough to saturate the wall — enough, in other words, so that the preservative slightly runs down the wall, or "curtains," as the trade calls it.

You can also pace yourself if you know the delivery rate of your sprayer and the area of the walls you're covering: If you're spraying a gallon a minute, for instance, you'll want to take about one minute to cover a 15-foot stretch of 10-foot-high wall.

In general, you want to spray from about a foot away, making horizontal passes with the tip turned vertically to the siding. A 3-foot pole is the best general-use extension pole; it will keep you out of the spray but still reach the eaves. Some pros use a 6-foot pole, which can be a little unwieldy and takes some practice. ■

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