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Bark siding is the ultimate green-building material

By Chris McCurry as told to Nan Chase on 03/16/2006

Applying bark house shingles (photo by Todd Bush).

When my husband, Marty, and I first harvested bark from poplar trees 12 years ago, we felt like pioneers. With help from old-timers in the mountains, we learned to use the same tools harvesters used more than a century earlier, before bark siding disappeared from the scene: bark spuds, peaveys, axes and hatchets, all hand-powered.

After a chestnut blight 100 years ago wiped out the trees used for bark siding, Marty and I have rediscovered the outstanding characteristics of bark, this time from abundant poplar trees in Southern forests. It took a lot of research, sweat and dedication, but bark is back. You may not have heard of bark siding, or shingles, but we find that for mountain vernacular, this is the most durable and attractive building material for exterior cladding. Ultimately, bark is the most economical of any such product, with the least environmental impact.

We have a green-building company, Highland Craftsmen, in Blowing Rock. For us, it's important to manufacture the shingles and other rustic forest products we supply in ways that don't use chemicals, so no chemicals can leach into soil or ground water. Besides poplar bark, which comes from trees already cut for use in the furniture and plywood industries, our product lines include large support posts, porch and stairway railings and sheets and panels of various barks for interior and exterior use. These come from clearing understory growth that prevents the natural regeneration of indigenous, large timber species. Poplar bark would have been discarded as debris at the logging site or mulched at sawmills. By using low-impact methods of bark reclamation, we can save tons of a valuable building material from that fate every year.

We especially love bark siding because it connects buildings to the earth in a beautiful, natural way. It feels rich and deeply textural, with a color that minimizes the visual impact of a building on the land. As a forest product, poplar bark brings unique design integrity to mountain structures. Bark siding can last 75 to 100 years without any painting or sealant. The siding traditionally was used on churches and inns,

and now it’s on resort homes and even commercial buildings. Without paint or stain, there’s no chemical runoff ever.

Because we kiln-dry the bark once it is removed from trees, it is heat-sterilized against fungal spores and insect larvae, without pesticides or other potentially harmful chemicals. When you buy bark siding, be sure to check that it’s kiln-dried, not only for your safety but to ensure that it doesn’t warp or shrink on installation.

Bark siding is not difficult to install, but careful preparation yields the best results.

Here are some installation suggestions:

Specs:

Depending on the grade — standard or premium — bark-siding shingles will be 3/4-inch to 1-1/2-inches thick. Individual bark shingles are 18 inches or 26 inches long, and the random widths range from 4 inches to 4 feet. Shingles may be cut lengthwise for different looks, and the amount of lap changes the look.

Wall prep

Wood sheathing, at a minimum of a 5/8-inch, is necessary as a substrate, and house wrap is applied. We prefer an adhesive-backed, ice dam membrane to seal the edges of the trim to the house wrap. After shingles are applied, trim away any exposed excess. So the bark doesn’t extend beyond window and door trim, these should be extra deep, at least 1-5/8 inches deep for standard-grade bark or 2-1/2 inches for premium or back-banded to that same depth. Paint or stain all trim before installing bark siding to avoid unsightly drips.

Applying bark

Begin with a 3/4-inch rot-resistant wood kicker strip to give the first row the proper tilt. Apply a roofing membrane equal to the height of bark shingles over the strip, and begin installing the shingles. Make sure the shingles don’t have contact with the ground. Elevate the bark siding at least 1-1/2 inches above any roofing or decking, and use flashing. After chalking off the next course, apply a roofing membrane to the next lap line and proceed. We recommend a 2-inch lap for shingles, but adjust this to coordinate visually to the row lines of trim or other siding materials.

Nailing

Bark is attached with coated framing nails. If you use hand-driven nails, nongalvanized sinkers are best. With nail guns, use full-head chisel point, spiral shank bright gun nails. Standard-grade bark siding requires at least a 2-1/2-inch nail; premium grade needs at least a 3-inch nail. Nail heads will eventually rust and blend into the field, and because poplar bark is not highly acidic there’s no nail decomposition.

For the best pattern, each shingle should be nailed an inch from the bottom, no more than an inch from lateral edges and at a spacing not more than three inches across the field. For vertical exposures more than 14 inches, a second row of nails should be applied halfway up the exposure. Ensure the nail placement is on the bark's ridges and that nails are not countersunk, to prevent lateral separation and curl. If mechanicals are roughed in before bark installation, be sure nails do not penetrate the sheathing and puncture components.

Corner treatments

Both inside corners and outside corners require careful application of individual bark shingles to ensure an attractive, weather-tight finish. That can take two forms. Inside and outside corners alike can be finished with milled corner trim. Just choose a style that complements the building's main "look," and butt the bark to it. Remember to paint or stain the trim before application. For a truly rustic, old-fashioned look, though, consider wrapping corners using bark only. For an inside corner, that means going tightly into the corner from one side then nailing a shingle a random width on the adjacent side and using a slightly larger piece of shingle as a wedge for this open space. The result is a tight fit. On the next course, approach from the opposite side, and repeat the process. On an outside corner, "wrap" the building's edge by picking a shingle slightly wider than the distance to the corner. Hold the shingle in place, and mark an oblique line from the sheathing line on top to the outside of the shingle it laps over on the bottom. Nail this shingle in place, and work the other side to the corner. Again, pick a shingle wider than needed to complete the corner, and repeat the process.

Highland Craftsmen offers on-site instruction for all aspects of bark-shingle installation as well as design service for builders and architects.

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