Hardboard is taking its share of knockdowns lately. Recent figures show that its share of the siding market, almost 30% as recently as 1983, had slipped to 20% by 1987 (the last year for which figures are available). Vinyl siding in particular has bitten into hardboard’s market niche-over the last decade, winning over homeowners with its promise of low maintenance. Plywood and cedar are gaining, too, while new processed wood products such as Louisiana-Pacific’s OSB-based Inner Seals are adding to the competitive pressure. What are these dropouts? We asked a number of builders, distributors, researchers, building consultants, and industry representatives from around the country. Some said that problems with moisture absorption, poor paint adhesion, and poor support from manufacturers are turning off some builders and homeowners. Others blame the contractors who install hardboard and the homeowners who fail to maintain it properly. The reality appears to lie somewhere in between.

What is Hardboard?

Hardboard is defined as compressed fiberboard with a density of at least 31 pounds per cubic foot. To make hardboard, wood fibers are formed under pressure and heat into panels or boards using either a “wet” or “dry” process. In the wet process, the fibers are bound together by lignin, a natural resin in the wood; in the dry process, the lignin gets help from a phenolic resin that is added during the manufacture. In either case, manufacturers might include different additives to increase the product’s stability and reduce its rate of moisture absorption.

A few days after being pressed, the hardboard is dried in kilns, and then run through humidifiers to bring the moisture content up to a standard level, usually between 4% and 9%. Finally, most hardboard siding these days is either primed or prefinished before it leaves the factory. This provides protection from moisture and speeds or eliminates finishing in the field.

Your Choice

Hardboard comes in forms imitating almost any other siding material you can think of. But most hardboard falls into two basic categories—lap and panel siding.

Lap and multilap. Lap and multilap siding, designed to look like cedar, redwood, or fir clapboards, accounts for 60% of hardboard sales. It comes in sizes from 4-inch to 16-inch boards, and it is available in multilap versions that take care of several “rows” of siding at once to speed installation. Most lap siding is face-nailed. Lap siding is especially prominent in the East, Midwest, and parts of the South—wherever clapboards are popular.

Panel siding. Hardboard siding also comes in 2x6-foot, 4x6-foot, and 4x9-foot panels. The panels imitate everything from board-and-batten construction and vertical rabbeted laps to stone and stucco. The large panels install quickly. Panels are popular where the materials they imitate are common (stucco sells well in the Southwest, for instance) or where cutting costs is important, as in low-end mobile homes.

Different grades and thicknesses. Hardboard comes in five different grades and two basic thicknesses. The better quality sidings are of “standard” or “tempered” grade. Tempered siding is impregnated with additives and/or heat treated to make it stiffer, harder, and more resistant to water and abrasion. Siding comes in 7/16-inch and 1/2-inch thicknesses. Several of the builders and distributors I talked to said the 1/2-inch product performed significantly better than the thinner versions.

Unprimed, primed, or prefinished. Unprimed hardboard siding is a rarity these days, because most installers want to reduce finishing time. Primed siding, which accounts for most of the market, comes ready to paint or stain. Most manufacturer warranties require finishing within 30 to 90 days of installation. Two coats of an acrylic latex paint or acrylic stain are recommended for hardboard.

Prefinished sidings are taking a steadily increasing share of the market—10% and growing, according to the American Hardboard Association (AHA). Though more expensive, prefinished siding offers the advantage of quicker job completion. Both manufacturers and distributors say the extra cost is usually less than that of paying someone to paint primed siding. Most finish warranties are for five years. But a few newer lap products that have blind nailing (nails hidden under the lap above) offer warranties up to 15 years.

A Few Bones to Pick

Hardboard promises a lot: the look, solidity, and insulating qualities of natural wood; a wide variety of types and patterns; resistance to impact; and a reasonable price. But does it deliver on these promises?

I found opinions on this divided pretty evenly among the builders, distributors, researchers, and construction consultants I spoke to. Some say hardboard falls woefully short of its promises and suffers poor manufacturer support. Others say that if applied properly, its advantages outweigh its drawbacks.

All agree, however, on what factors are critical to hardboard performance. Moisture absorption topped the list, followed by quality of installation, paint performance, and manufacturer support.
Hardboard’s New Rivals

Over the last few years, a few new manufactured wood products have appeared to compete with top-of-the-line hardboard and natural wood sidings. Manufacturers of these products claim they shrink less, have longer finishes, and look better than hardboard, while preventing the variations in quality found in natural wood.

Making the biggest splash is Louisiana-Pacific’s Inner-Seal, which made its debut in 1986 (Louisiana-Pacific, 3011 Tuscan Dr., Woodland, CA 95695; 916/661-3200). Inner-Seal is made from oriented-strand board (OSB) covered with an overlay of kraft paper; the whole affair is sealed together with a liquid resin. The kraft paper is textured to look like cedar, and must be finished with stain or paint. Blind-nailing keeps the appearance clean and reduces the chance of moisture infiltration.

Inner-Seal costs a bit more than the best hardboard but looks like cedar, says Louisiana-Pacific sales rep Ken Fara. The product comes primed, but Louisiana-Pacific doesn’t offer a preprimed version. However, says Fara, Louisiana-Pacific sells the bare plastic to distributors who will prefinish the batch for an extra fee.

That’s the route Montana distributor Tim Melgren takes with many of his Inner-Seal sales. A finisher in his region paints or stains siding batches with OSB products for about $250 per thousand board feet. That works out to about $750 for a typical house, which, Melgren points out, is generally less than the cost to paint on site. Olympic will guarantee this finish (if done by an authorized Olympic finisher) for 25 years—one of the longest finish warranties in the processed-wood siding industry. Louisiana-Pacific warrants the substrate for 25 years.

Melgren initially had doubts about the durability of the overlay, so he left a piece of Inner-Seal in a bucket of water for three weeks. Even after that time, he said, “you couldn’t tell where the overlay started and the OSB began.” In the five years he’s been selling it, he has had no callbacks.

Neither has M issoula, Mont., builder Steve Loken, who has been using Inner-Seal on many of his residential and light commercial projects for five years. “It’s tough-cookie stuff,” he says. “It looks clean because it blind-nails, and it nails a lot nicer than hardboard because it’s softer.” Loken’s only concern is how the product would fare in high winds, since it is blind-nailed, leaving the bottom edge of the siding dependent only on the product’s stiffness to stay snug to the house. However, he has had no problems yet from the high alpine winds that sometimes blast Missoula.

A new product taking root at the hardboard market is PlyLap, from Ply-Lap Industries (1462-D Tanforan Ave., Woodland, CA 95695; 916/661-0812). PlyLap is face-nailed plywood lap siding with a real wood overlay. It comes covered with several different face woods, including Douglas fir, western red cedar, Spanish cedar, and redwood. You can also get a medium-density-overlay version with a smooth finish, and fir and cedar “shakelap” made to imitate shakes. PlyLap is available unfinished, preprimed, prestained, or prefinished. Widths range from 5 to 12 inches, and thicknesses from ¾ to 1 ½. A together, says PlyLap marketing vice-president Kathryn Upton, “there are 61 different ways you can get the product.” In all versions, a self-alignment notch along the bottom edge of each lap aligns it with the one below. Upton says this speeds installation by avoiding the need to pop chalk lines, and makes the product sturdier by tying each course to the one below. To install, you butt the 8-foot lengths flush against each other, caulking the seam, and nail two rows of nails, one near the bottom and one near the top of each course, into the studs.

The hidden plies behind the face layer protrude slightly short so that those courses can expand without buckling the board. Upton says that these hidden expansion joints along with the relatively short 8-foot lengths prevent expansion problems, while the tight joints maintain a choice finish appearance.

PlyLap does lack blind nailing, which seems to be a popular feature in processed wood sidings. On the other hand, the notches, along with the face-nails high and low on each course, would seem to make it a good choice for windy sites.

PlyLap comes with a lifetime guarantee against delamination. Prepaint­ed versions come with a five-year finish warranty; the stains are not warranted at all—D.D.
**Hardboard Do's and Don'ts**

Always follow the manufacturer’s recommendations for the specific hardboard product you use. Not to do so risks product failure and voiding the warranty. Most manufacturers’ guidelines are similar and are described here, which are compiled from The American Hardboard Association (AHA), manufacturers’ instructions, and conversations with builders, suppliers, and researchers. If the product does not come with instructions, call the manufacturer (see “Hardboard Siding Manufacturers”) and have them send you a copy.

### Pre-application

Hardboard performs best if you take a few extra precautions before planning to install it. Always cut it correctly. A long cut into the face of the board: that’s where boards face up when using a hand saw, face down when using a circular saw. Use a warm-side vapor barrier. The hardboard industry recommends a warm-side vapor barrier. If the product doesn’t come with one, ask for it. Some manufacturers recommend using it primarily because it required the warranty. Most manufacturers’ guidelines recommend using it to promote our four prefinished products address this issue, offering longer maintenance needs, however, are a real drawback today. MacMillan-Bloedel products offer blind-nailed “Colorlock” with a 15-year warranty. MacMillan-Bloedel product and refers to use anything else. “We've never had a problem with the finish, and we've never had a warranty claim,” says DeLuca.

Given the success of MacMillan-Bloedel’s product and the competition hardboard industry is getting, AHA expects the hardboard industry will likely move toward more low-maintenance products in the next few years. Peter A. Mastro of MacMillan-Bloedel, “We were asked for a prefinished system with as little maintenance as possible. So we're trying to promote our four prefinished products, all with lap siding, hid...
den nailing, longer warranties, and less maintenance.”

Such products might ase many of the industry’s problems. According to Armstrong, blind-nailing makes the product both more durable and more attractive. In face-nailed sidings, nail holes usually offer moisture its first entry; hiding the nail holes under the lap above removes this entryway. The absence of visible nails also gives the siding a much cleaner look.

A Question of Support

One final area of contention is warranty support. That’s where some hardboard installers and distributors have found their biggest frustration. Minneapolis siding distributor Bennis says, “All the hardboard manufacturers are quite difficult to deal with, whereas that’s not the case with vinyl, aluminum, or steel manufacturers, who will bend over backwards.”

When there’s a problem with hardboard, says Bennis, the manufacturers “push the blame back onto the distributor or the installer.” Bennis said he has never had a hardboard manufacturer offer to do more than replace defective materials, even though materials make up only a fraction of the cost of removing and replacing bad siding.

Tim Melgren, the Montana distributor, found the same thing. “Usually [the manufacturers] just want to replace materials and the contractor eats the labor for replacing it. The builders aren’t real crazy about that, because they feel the problem should be taken care of. And you have to follow the installation instructions to the letter. You use the wrong nail or what they don’t consider a good vapor barrier, and you can forget it.”

The level of support seems to vary within the industry and even among service reps for individual manufacturers. One manufacturer, for instance, was dropped by distributor Bennis because the company was “not willing to adjust any of the problems [it] had.” But another service rep for the same manufacturer won the good will of builder Harold Burkemper by covering all the cost, including labor, of replacing some siding that had finish problems. Said Burkemper, “They covered everything, lock, stock, and barrel.”

So What’s a Builder to Do?

To some builders, hardboard’s tendency to swell with moisture is sufficient reason to avoid it. Other builders, however, say it’s a good product if used properly and with limited expectations. There’s no magic formula you can use to determine whether it’s worth using. It seems clear that with proper application, reasonable expectations (especially about maintenance), and a little luck, the better brands and grades of hardboard will perform well. It also seems clear that it’s a very unforgiving product—any error in application may not only lead to big problems, but will likely void the warranty as well. And even if the warranty does kick in, you’ll probably have to eat the labor.

Given all that, each contractor must juggle the pros and cons and decide for him or herself. Asking yourself a few questions, however, can help you account for the most important variables.

• Is the client willing to pay for a good grade—near the top of the line?
• Do you have enough control over the siding’s application and finishing to be confident it will be installed correctly?
• Is your client willing to live with the product’s maintenance requirements?
• Are you willing to take your chances, given all the other factors, on having to bear the labor cost of replacing the siding if it fails?

Finally, you should talk to distributors and other builders in your area who have used hardboard siding. See if they’ve had problems and, if so, how the manufacturers responded.

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