

JOB-SITE REPORT:

WORKING WITH TREX LUMBER

by Harold Chapdelaine

This new wood-polymer composite won't crack, splinter, shrink, or rot

In the southeastern corner of Massachusetts where I live, most residential decks are built with pressure-treated southern pine or vertical-grain Douglas fir decking. Neither is ideal. A lot of my customers worry about the chemicals in pressure-treated wood, and if fir doesn't get regularly treated with preservative, it starts rotting after a few years. There was a time when the naturally durable red cedar and redwood were also popular for decking, but they've become too expensive for most of my customers. I've spent a long time wishing for an alternative deck material but with no luck. That was until I found Trex wood-polymer composite.

Searching for Alternatives

It happened two years ago. We were asked to build a 4-foot-wide by 92-foot-long elevated walkway from a client's beach house across a coastal salt marsh on to the dunes. Since people would be walking barefoot from the house to the beach, the ideal material could take direct sun and heavy moisture without splintering.

And splintering wasn't the only problem. The town considered the marsh an environmentally sensitive area, so they asked us to use materials that didn't contain chemicals. Though recent studies have shown that treated wood leaches only a small amount of chemicals into soil and water, the authorities remained skeptical. Fir would have been okay if it stayed

untreated, but the town feared that the owners would eventually self-treat the wood. Not only might the preservative eventually leach out, but some of it could spill into the water during treatment.

Then someone from a local environmental outfit told me that the Cape Cod National Seashore was now using a plastic-based product for its walkways and other landscape projects. They wanted something that was chemical-free but that didn't split and check in the summer sun. When I gave them a call, they told me about Trex.

Trex is manufactured by the Mobil Chemical Company (Composite Products Division, 800 Connecticut Ave., P.O. Box 5445, Norwalk, CT 06856; 800/846-2739). It's been around for several years under the names Timbrex and Rivenite and has been used in municipal projects like playgrounds and beachfront boardwalks. It's made from recycled plastic grocery bags, industrial stretch film, sawdust from furniture factories, and used wooden pallets. These materials are broken down to their basic components, mixed together, then extruded into standard lumber dimensions. Trex boards come in 2x4, 2x6, 2x8, and 5/4x6 dimensions. Though not rated or approved for struc-



Trex provides a splinter-free alternative to wood decking. The wood-plastic composite can be nailed close to its edge without splitting.

tural use, they make an excellent decking. (Our walkway consisted of pressure-treated girders on locust posts, which the town considered an acceptable compromise.) Its only drawback is that it's not as strong as lumber: A Trex 2x will only span 20 inches, as opposed to 24 inches for pressure-treated. (However, a 5/4x6 Trex deckboard will span 16 inches, which is also typical for 5/4 pressure-treated southern pine.)

Pricing

Our first concern was price — exotic new products tend to be budget-busters. We were happy to find that Trex cost only slightly more than treated lumber. (Current prices in my area are \$1.80 per board foot for 2x6, \$1.94 for 2x8, and \$2.50 for 5/4x6.) That made it an easy sell to the customer. The biggest problem was our lack of a

CAROLYN BATES



Trex cuts as easily as wood with a circular saw. It can also be drilled, sanded, and powerplaned like wood.



Unlike wood, Trex (at right) is completely uniform — no checks or knots.

local supplier. Mobil had yet to take over the product; it was being manufactured by a small concern with limited ability to service a growing market. This meant that we had to arrange our own delivery. The stuff is about twice as heavy as treated lumber (an 8-foot 2x6 weighs about 30 pounds), which made delivery costs more than those of conventional lumber.

Handling

Weight would also become an issue at the site. I can carry six 8-foot-long pressure-treated 2x6s with no trouble; three pieces of Trex were about all I could manage. This would raise the time needed to handle the stuff and boost labor costs. Although many jobs require extra handling, as when you're building a second-floor deck around the back of a house, the walkway was

unusual in that we had to hand carry the boards 100 yards from the truck to the site. As far as labor goes, if it takes you an hour to carry a regular load, figure on two hours to carry an equal amount of Trex.

Be aware, too, that if not stored correctly Trex can sag and warp under its own weight. To prevent this, Mobil says to stack it on supports spaced no more than 2 feet apart.

Workability

Before committing to the job, we asked the company to send us a few samples. We brought these into the shop for a thorough test drive, which included cutting, drilling, powerplaning, and sanding. We were impressed by the material's consistency and workability. We found no voids that might trap water, and working with Trex was more like working with wood than plastic. It cut as easy as pressure-treated lumber and put no more wear on the carbide blade we used. It also didn't splinter. All that was left after the cut was a little fuzz along the edge. When planed or sanded, it yielded a smooth, consistent surface. We could plane in any direction without having to follow the grain. And the sawdust, though relatively fine, was no worse than conventional sawdust. Our test convinced us that it was worth a try, especially if it got us a building permit and the customer was willing to take a chance on a new product.

When we got our main delivery (680 feet of 2x6 and 120 feet of 2x8), we were struck with Trex's dimensional consistency: Every piece was exactly the same size. And because Trex boards don't swell or shrink, we were able to space them with a 12d nail. (We don't gap pressure-treated decking at all, because it shrinks so much; in fact, every piece shrinks at a different rate, which creates an inconsistent spacing.) Trex also has no knotholes. And there was no split or checked end-grain — a common problem with many woods.

We fastened most of the Trex boards to our 4x6 structural joists with 16d common galvanized nails. Though it takes a bit more force to nail into Trex than into most woods, there's no need to drill pilot holes.

We drove our spikes as close as 1 inch from the end of the boards, and not once did we have any splitting. Unfortunately, we also found that Trex chips more easily than wood. If you miss a nail and hit the edge with a hammer, a small piece is likely to break off.

Drilling and screwing were also easy. The walkway's design called for some of the deck boards to be removable, so we attached these with bugle-head galvanized deck screws. After drilling a pilot hole and driving the screw, the screw heads sunk into the Trex and sat flush with the surface.

Weathering

It's been two years since we completed our walkway. It's been submerged beneath high water, pelleted with heavy rain, blasted by salt spray and hurricane-force wind, covered with snow and ice, and baked in direct sunlight. The customer didn't like the reddish brown hue Trex has when new, but once installed it quickly weathered to a pleasing silver-gray, a color that many people try to find in a stain. In fact, it looks almost like aged treated wood but without the checks, splinters, or mildew. (Trex will also accept stain or paint, but Mobil says to wait until after the fading process is complete.) There has been no distortion of the material — no warping, no twisting, no cupping, and no loosening of fasteners. It doesn't heat up in the sun as do some plastic products, and there has been no change in the gap between the installed pieces. We even submerged a few pieces of Trex in the water beneath the walkway to see how they would hold up. Two years later, they look as good as the decking nailed to the top of the structure.

Would I use Trex again? The answer is definitely yes, especially now that Mobil has contracted with a regional lumber supplier. I now offer Trex to my residential deck customers as an alternative to the chemicals in treated lumber and the maintenance associated with fir and other woods. ■

Harold Chapdelaine owns Lamberts Cove Associates Inc., a building company in West Tisbury, Mass.