



Nails-a-Poppin'

Click in the top of this page for an updated version of this article online at InspectAPedia.com

How to keep wood siding from wriggling over foam sheathing.

Rigid foam sheathing owes its popularity to two facts: one, it requires few changes in conventional construction practices and two, the cost of added insulation can be partly offset by eliminating the structural sheathing and instead using diagonal bracing. At first glance, wood and hardboard sidings seem natural partners to this wall system. But look a little deeper and you'll find a king-sized can of worms. Let's see why.

Whose problem?

In 1979 the Pacific Lumber Company (Palco), a major West Coast manufacturer of redwood sidings, warned its distributors that its products would fail if applied over foam sheathings. Other siding producers got wind of this and noted that they too were hearing complaints. Foam-sheathing manufacturers were understandably alarmed, since their products were held to blame.

In early 1982, the National Forest Products Association and the Society of the Plastics Industry—representing siding manufacturers and foam-sheathing industries, respectively—joined forces to confront the problem. Based on field observations, existing research, and a modest research project of their own, the St. Charles study, the Joint Industry Committee on Wood Siding and Foam Sheathing issued recommendations in the fall of 1983. The report acknowledges the problem and makes many useful suggestions. It falls short of identifying the cause since this is still unknown. Palco and others no longer explicitly blame foam for the siding failures; rather, they caution that applications over foam are "less forgiving."

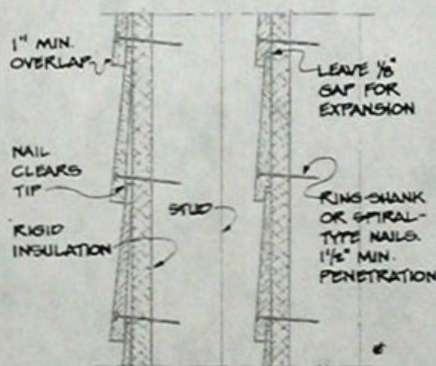
How serious?

The siding failures involve one or more of the following: cupping, nail popping, separating and misaligning at butt joints, and splitting. The frequency of the problem is not known, but wholesalers and trade associations report a steady trickle of complaints.

The California Redwood Association (CRA) and Western Wood Products each receive no more than a handful of com-

plaints a year. Mid-America Cedar, a major midwest wholesaler, says it fields about a dozen serious claims a year out of about 400 jobs sold. The National Forest Products Association had several complaints a month last year, but few this year—a decline perhaps attributable to better installation.

With hardboard sidings, the problems are a little different—primarily waviness or dimpling caused by overnailing. If hardboard siding gets wet on the back face, it will buckle lengthwise rather than cup like natural wood sidings.



Improper nailing is the most frequently cited cause for wood siding failures over foam sheathing. Use long enough nails but don't nail so hard as to cup the siding.

Siding producers emphasize that this is a serious concern and that many cases probably go unreported. Foam suppliers point out that there are siding failures over conventional sheathings as well and claim that the foam is not at fault.

The cause

Where scientific data are scant, theories abound. Here, they involve three critical issues: the quality of the siding, how it is installed, and the presence of the foam.

Cupping occurs when the inside face of the siding absorbs water and expands or the outer face gets sun-baked and shrinks. Cupping is more common in flat-sawn stock, which has twice the cross-grain movement of vertical-sawn. Regrettably, no one knows where the moisture is coming from—the inside or the outside. The St. Charles study showed no moisture was getting in from the outside. But this was inconclusive since the

Steve Bliss is an associate editor at Solar Age.