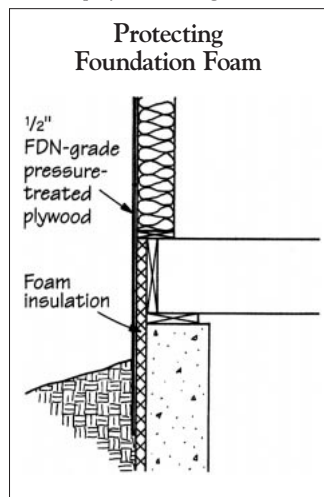


Foundation Foam Cover-Up

by Henry Spies

Protecting Exterior Foundation Insulation

Q. What is the best way to protect exterior foundation foam insulation where it projects above grade?



To protect above-grade exterior foundation insulation, install 1/2-inch FDN-grade pressure-treated plywood in line with the wall sheathing.

A. While there are a number of trowel-on or paint-on coatings on the market, I have found that most of these coatings chip easily. My choice is a strip of 1/2-inch foundation-grade (FDN) pressure-treated plywood (see illustration). It can take a lot of abuse and can be painted or stained any color.

Galvanized Nails for Pneumatic Guns

Q. Are all zinc-coated nails for pneumatic nailers created equal?

A. There are several types of zinc-coated fasteners and they are definitely not all equal. At the low-end of the quality scale are electrogalvanized fasteners. On these, a thin layer of zinc is electroplated onto the fastener. This offers only minimal resistance to corrosion. Collated fasteners for power drivers are typically coated this way.

On the other end are hot-dipped fasteners, which offer better resistance to corrosion. The nail may be dipped once or twice. The double-dipped variety, of course, has a much thicker coating that lasts longer. At least one major manufacturer, the W. H. Maze Company (Peru, IL 61354;

815/223-8290), promises collated double-dipped nails for use in nail guns within a year.

Storm Windows Over Insulated Glass

Q. Is there any advantage to installing storm windows over low-e, gas-filled windows?

A. The storm window will always add to the insulating value, but it may be difficult to justify economically. Heat loss is inversely proportional to R-value. Each additional R-value is worth less than the preceding one. Installing a storm window over a single glazed window will raise the R-value from about 1 to 2, cutting heat loss by 50%. If the prime window already has R-4 insulated glass, however, raising the R-value to 5 will only save 20% of the heat lost through it. If the prime window has a center-of-glass R-value of 8, which seems to be the best available today, the gain would only be 12%. If the storm window is installed properly, it should reduce infiltration, as well. Here again, if you install the new window over a leaky, old sash you'll get more of an improvement than if you install it over a new, well-sealed window.

Cedar Siding Over Foam Insulation

Q. We have recently completed a residing job in which we installed cedar clapboards over 1-inch foil-faced foam. The clapboards have since cracked on all sides of the building, both at the ends and along the length of the clapboards. How can this be prevented in the future?

A. Cedar gains and loses moisture readily, resulting in board swelling and shrinkage. The high initial moisture content of some of the currently available cedar may contribute to this problem.

Because of this tendency, proper nailing, with just one nail per clapboard at each stud, is essential, whether or not the siding is installed over foam insulation. The nail must not penetrate the board below it. Instead, the clapboard above must hold the top of the clapboard below it with friction. If there is more than one nail across the width of the clapboard, the drying shrinkage will

cause splitting. Back-priming the clapboards and sealing the ends will help reduce cupping and splitting.

Since the foil behind the siding is impermeable, daily moisture movement through the wood, due to temperature changes, causes moisture to collect on the back of the siding. This increases the cyclical wetting and drying and can cause additional warping and splitting. Many builders install a layer of #15 roofing felt between the siding and the foil. This serves as a blotter, temporarily storing moisture driven through the clapboards by the sun during the day.

It also works well to vent the back of the siding by installing furring strips over the insulation and nailing the clapboards to them. The top and bottom of the cavity created must be screened to keep insects out.

Purlins vs. Plywood

Q. For shake roofs, can I substitute purlins for plywood roof sheathing? Does the plywood serve as a diaphragm on a sloped roof?

A. In my view, purlins are the best choice for a shake roof. Shakes last much longer when installed on purlins or skip sheathing, because they can dry from the back as well as from the top. Plywood is used more often these days because it is faster to install.

Plywood roof sheathing on a sloped roof (particularly on low-slope roofs) can provide some diaphragm action if the roof framing is rigidly attached to the wall plates. However, since this is seldom the case, most light-frame structures are designed to be strong enough without relying on a roof diaphragm.

Wall vs. Ceiling Vapor Retarders

Q. Will a vapor retarder be effective on the walls if there is no retarder in the ceiling?

A. A vapor retarder and air barrier will keep the moisture in the living area from being pushed into the wall cavities. While it would be better if there was a vapor retarder in the ceiling as well, it is much easier to ventilate the attic to avoid moisture problems than to remove moisture from the wall cavities. ■

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