On the House

by Henry Spies Small Homes Council-Building Research Council University of Illinois



Buckling Floors

Q. Several months ago we installed a wood parquet floor in the living room as part of a remodeling job. Recently we were called back by the client because the 12-inch-square pieces of wood had started to buckle. In fact, a ridge had formed between the living room and the dining room that's almost half an inch in height.

We've talked with our lumber dealer, and he says that the parquet flooring was probably installed without enough leeway for expansion (it was very humid here late this summer) but that it should go down when the heating season begins. Well it hasn't. Now what?

A. The lumber dealer was right in laying the blame on high humidity. The solution, however, requires more aggressive action than merely waiting for the coming of the heating season.

You didn't indicate what kind of subfloor exists under the parquet. While the manufacturers indicate that parquet can be laid over concrete, problems like this often develop if there is inadequate under-slab waterproofing.

One of the most severe cases that we have encountered was in a house built with a crawl space in which the earth in the crawl space was not covered with a solid layer of polyethylene film. Our examination showed beads of moisture hanging on the steel floor joists in the house, indicating that the air in the crawl space was saturated (that is, with relative humidity at 100 percent). Everything in the crawl space was damp and clammy, to the touch.

In this case, we suggested the immediate covering of the ground with a 6-mil. -thick polyethylene sheet from wall to wall, then the installation of a temporary fan to ventilate the crawl space. This was done in the fall, and it took many weeks before the underside of the floor was dried out. Several months later, the pieces of parquet flooring subsided and could be pushed into place.

I would look for the moisture source first and eliminate it before starting the long drying process. Don't force the parquet pieces into place when they are saturated.

Laying Deck Lumber

Q. What is the proper way to lay lumber for decks? I have been following the "heart side up" motto, but I have recently seen recommendations that it be laid heart side down.

A. The old motto is correct. If the decking is laid heart side up, the cupping that will occur due to drying of the wood will face down, which means the board will shed water rather than retain it. If the deck is laid too close to the ground, with inadequate air circulation below it, there may be some circumstances where the moisture will rise from below, which would cause cupping in the top of the deck regardless of the lumber's orientation.

Poly and Pollution

Q. What effect, if any, does the poly vapor barrier have on indoor air pollution relative to its static charge (positive, I believe) in cold, dry weather? Would it cause pollution particles to stay in suspension?

A. Since the poly is behind the interior finish, which is an electrical insulator, the effect of its static charge (assuming there is a source causing one to accumulate) is so weak at the surface of the wall that I am sure it has no effect

Delaminating Siding

Q. We are having trouble with delamination of Texture 1-11 exterior siding, rough-sawn fir with grooves 8" o.c. This has happened twice in the past six months. One house will require replacement of 24 sheets. Has this happened elsewhere? Are there any shortcuts in removing the panels?

A. You are not alone. There have been occasional problems with exterior plywood delaminating throughout the country, but few cases have been so extensive as to require the replacement of 24 sheets.

At a minimum, the manufacturer of the plywood should back the product to the extent of replacing the materials—and probably should make a labor allowance as well. If not, the company would be liable for a productiability suit, since it represents the material as being suitable for exterior siding. This assumes that you have installed the proper flashing, nailed according to the recommended schedule, etc.

The problem seems to be with the adhesive and the proper curing of it. There is no easy way to get the panels off; a wrecking bar or flat bar still is the only way to do it.

I am reminded of a situation that happened about 20 years ago concerning the manufacture of lauan siding panels. I had one house where the plies of the siding were flapping in the breeze like bedsheets on a line. It turned out that there were four different species of trees that were classified as lauan, and they could be identified only by their leaves. Once the log was cut, they all looked alike. The adhesive being used worked fine with three of the species, but there was something in the sap of the fourth that kept the glue from setting properly. That flasco cost a major plywood producer millions of dollars in replacement costs.