



# Painting Over Water Repellents

by Hank Spies

**Q.** *Is it a good idea to treat exterior wood with a clear water-repellent preservative before painting or staining? I have heard that it helps protect the wood, but that it can cause bonding problems with the paint.*

**A.** There are two types of water-repellent preservatives—paintable and non-paintable—and they should be identified as such by their manufacturers. In general, products containing more than 2 percent wax will be non-paintable. The use of a water-repellent preservative will extend the life of the wood, particularly if the wood is dipped, coating the backs and ends as well as the exposed face. There will probably be fewer problems with paint adhesion over the preservative if an oil-based paint or stain is used.

## Frosty Attic Cure

**Q.** *A house I built last summer had excessive frost build-up in the attic on the gable ends, despite the fact that I used several soffit vents (some on each side) and a continuous ridge vent. When the frost melted, it stained the walls and ceilings. How can I prevent this from recurring?*

**A.** Obviously, there was inadequate attic ventilation for the amount of water vapor present. Continuous soffit vents should help, but the source of the moisture vapor should also be considered. I suspect you may be among those who do not believe in vapor retarders in the ceiling. A continuous retarder will reduce the moisture in the attic considerably. You did not indicate whether the house was on a basement or crawl space. I suspect part of the problem could be arising from a moisture problem in one or the other.

## Tyvek vs. Building Paper

**Q.** *Do Tyvek and other similar "house wraps" really do a better job than standard building papers when installed and perforated by thousands of nails? Is it worth the much greater cost?*

**A.** A lot depends upon your building technique. The purpose of a housewrap is to reduce air infiltration. If the sheathing has no unrepaired holes and has joints only over solid backing, a housewrap will do little good. However, if the sheathing has seams at the floor level rather than extending to the sill, and has holes in it, then the housewrap has a function. Since nails are only driven into solid backing (we hope), the air leakage around the nails should be minimal.

## Building on Rock

**Q.** *We are planning to build on a site that is solid ledge about 2 feet down, under the entire site. The ledge seems fairly flat, and we would like to anchor the foundation walls directly to the ledge.*

*Is this feasible, and, if so, how should it be done?*

**A.** If the ledge is indeed flat, just cleaning it enough to obtain a bond with the concrete should be adequate. A high-pressure washer would help. If it slopes slightly, drilling and grouting a few vertical rebars would provide a better anchor. A professional engineer should be contacted if there is a significant slope to the ledge.

## One-Piece Joists

**Q.** *How much is the bending moment and deflection of a joist reduced by using continuous-span joists?*

**A.** With continuous-span joists, the controlling condition is with one side loaded and the other side not, rather than assuming a uniform load on both spans. In that instance, the moment and deflection are reduced about 10 percent.

## Flooring on a Slab

**Q.** *We have been asked to lay hardwood floors in a condo project built on a slab. What is the best way to install the floor?*

**A.** The best way is to install pressure-treated sleepers (preferably 2x4s) over the concrete slab using continuous strips of asphalt-based mastic. A 4-mil polyethylene vapor retarder is laid over the sleepers, and the subfloor nailed through the plastic to the sleepers. The wood floor is then installed over the subfloor. The sleeper spacing will depend upon the subfloor used.

## Corrosion and FRT Wood

**Q.** *We are beginning to stock fire-retardant-treated lumber. Please compare a hot-dipped galvanized nail with a stainless steel nail for fastening FRT lumber.*

**A.** There has been no specific research on the corrosion effects on nails by FRT lumber because there are several proprietary formulas for the treatment chemicals, and each might react differently. The manufacturers regard their formulas as trade secrets. However, we have done some research on galvanized and stainless-steel truss plates, and have found that the galvanized plates had considerable corrosion problems when used with FRT wood. Much depends upon the relative humidity to which the material will be subjected. Relative humidity greater than 80 percent will probably cause corrosion of any connectors which are not stainless steel. ■

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