



Starting From Scratch

Remodeling & New Construction Tips

Undoubtedly, the best way to protect exterior wood structures and prevent potential problems is to start the project from scratch. While not always an option with older homes and decks, new construction techniques and thorough surface preparation can virtually eliminate coating failure and provide nearly maintenance-free protection for years.

This Technical Bulletin addresses issues pertaining to remodeling and new construction in order to provide a foundation for methodical and effective project management. As a rule of thumb, the longevity of any coating is a direct result of the time and quality invested in project preparation and execution. Consider these important issues when approaching your next remodeling or construction projects. Taking the time now to ensure the best results will certainly reward your efforts in the coming years.

Starting Out

- Hire professionals with good references. Insist on quality installations and quality products.
- Siding selection is important. You get the most value from buying 'clear-all heart-vertical grain siding.' This wood is usually hung smooth side out, and it will accept solid color stains and paints well. The next grade is 'Aye or better' which may contain one to two tight knots and could contain up to 10-15% flat-grained siding. Rustic grades are generally graded for the rough side of the lumber. This siding could contain a few tight knots, is generally hung rough side out, and contains flat-grain lumber.
- Wood types available are redwood, western red cedar, cypress, eastern white cedar, incense cedar, pine and, more recently, mahogany and other imported hardwood species. Wood in today's marketplace may be second- and third-growth lumber. It is fast grown, may have knots and does not have the rot resistance of virgin-growth lumber.
- Siding styles or patterns are important. Among the more popular siding styles are bevel cut, shiplap, tongue and groove, and channel rustic. And, of course, there are many styles of shingles available.
- The open end-grain of siding is the main entrance point for water intrusion. This is the path tree cells use to transport water and nutrients and is most often the path for water transport which will cause problems for paints and stains. **It is important to seal the ends of all boards.**

Installation

- After choosing the siding, the next consideration is hanging it. First, the wood delivered to the site must be dry. Store the wood indoors if possible or store it off the ground on blocks. Protect the wood from rain with a protective, loose cover so the wood can breathe. Allow the wood to acclimate to the site conditions, i.e., temperature and humidity. Example: Tongue-and-groove (T&G) siding should not be hung with a moisture content of 20% or higher. Wet wood will shrink, and with T&G siding, this creates potential sites for water to enter the V-channel between two adjacent boards and cause problems. It is highly recommended to pre-prime the tongue-and-groove. To reduce the risk of rusting, use stainless steel nails.
- Plywood siding delivered to the job site must also be dry. While the siding is still stacked on the ground, take the time to prime the edges to protect the wood from swelling by water absorption. The same is true of hardboard siding. To reduce water infiltration, re-prime all cut edges before installation.

(Continued on back)

Starting From Scratch *(Continued from front)*

- Trim boards also come in vertical-grain, flat-grain and finger-jointed versions. Pine trim boards may have a smooth, resinous pitch on the surface due to the planing operation or inadequate kiln drying. Lightly scratch-sand new trim boards to obtain a better bite for the primer or stain.
- Caulk all joints with a quality 100% acrylic compound, a paintable, siliconized acrylic blend, or where required to fill larger joints, use a high-elongation, polyurethane sealant.
- Replace loose or missing caulking. Don't overlook the roof-siding joint. Water running down the roof will find its way into the adjacent dormer siding. This is one area often plagued by peeling paint and mildew.
- Use flashing over all windows and doors. Exterior T1-11 plywood and hardboard panels require a special flashing between the panels.
- Provide good ventilation in all crawl and attic spaces as well as the living spaces. Interior moisture can create paint failures if it reaches the sheathing and siding. Dehumidify humid basements. Maintain the interior humidity levels at 40-45% or lower. (See Technical Bulletin #7.)

Decks and Outdoor Furniture

- Horizontal surfaces require more maintenance than vertical surfaces.
- Construction: When possible, Cabot recommends drying the wood thoroughly and staining all six sides prior to assembly.
- Pressure-treated wood should season no more than three weeks prior to staining. This wood tends to be more moisture sensitive than other species and should be stained sooner.
- Properly-built decks should be 18 inches off the ground or higher. Decks built too close to the ground can fail prematurely. Good air circulation is required.
- Wood types used in decking include redwood, red cedar, Alaskan yellow cedar, Port Orford cedar, treated pine, fir, and recently, mahogany.
- The open end-grain of railing systems, furniture legs and/or other structures which come in contact with the ground must be saturated with stain. This is a principal point of water infiltration.

Note: Careful attention to all the above-listed construction practices will provide a more stable substrate to eventually be stained or painted. These steps are essential in providing a longer-lasting coating on your home or deck.



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