

and then contraction, either due to extreme heat or excessive moisture in the wood, causes eventual separation between the soft earlywood and hard latewood structures of the wood, which is referred to as surface checking. These separations or splits, microscopic at first, cause a surface coating to crack. The cracks that develop in the coating will allow more moisture to enter the wood and propagate further failure.

How does the moisture enter the wood?

Moisture has two avenues of access - interior and exterior sources. Interior sources include people, humidifiers, showers, hot tubs, cooking, laundry, heaters, steam cleaning rugs, fresh plaster, wet basements and crawl spaces, leaking pipes, plants and animals. Exterior sources include faulty construction, lack of flashing over windows and doors, flashing at roof/siding and roof/chimney interfaces, loose shingles and siding. In addition, there are other sources, which include lack of caulking or caulking that is no longer functional, leaking roofs, winter ice dams, under-applied coatings, lack of gutters and downspouts to direct water away from the siding and house, vegetation too close to the house, landscaping mulch next to the house, siding boards too close to the ground and lawn sprinklers.

Warm interior air can hold more moisture vapor than the cooler in-wall or outside air. Wanting to be at a lower energy state, the warm, moist air migrates through the interior walls, around separations in vapor retarders, then condenses on the back of the sheathing due to the cooler air temperature. Wall insulation may become saturated. Eventually, the moisture will migrate into the siding and cause the wood to swell. As the siding warms, internal pressure (referred to as hydrostatic pressure) is generated which forces moisture toward the lower outside pressure. The moisture may be blocked from reaching the outside due to the paint or coating. The moisture causes some swelling within the coating and definite swelling in the wood. The internal pressure created forces a blister to form, which eventually peels. As a result, homeowners who apply paint or stains in the late summer and fall may see it peel the following spring on the south, west or east walls of the home. This is the "classic" pattern for interior moisture problems.

Exterior sources of moisture can affect peeling in a similar manner by entering behind the wood through cracks, open joints or curled shingles. Wind-driven rain or water running down the siding can find its way behind the siding and trim through the tiniest cracks or holes. Areas particularly prone to peeling problems are the roof/siding interface, railing systems where the balusters meet the bottom rail, the pickets on a stockade-style fence where the pickets are fastened to the top and bottom rails, decks which are too close to the ground, the open-end grain on decking boards, the legs of lawn furniture and gym sets in direct contact with the soil and any other joint openings between two adjacent wooden members.

What's the next step?

Before applying the new product, consideration must be given to eliminating the sources of moisture infiltration and correcting the areas that are peeling. When the wood is dry, tape-pull tests in areas not apparently affected would be beneficial in determining the full extent of the peeling. Simply press adhesive tape on the painted surface with thumb pressure, then with a jerking motion remove the tape. If the coating(s) is removed with the tape, the peeling is more extensive than just the areas that are obvious. This test should be performed in several locations on the siding, deck or other affected structures.

Assuming the peeling is isolated, the next step is to remove all loose paint or stain. Several methods are available including stripping, scraping and sanding, power washing, etc. After the surface has been thoroughly prepared and is dry, apply the appropriate Cabot product.



Cabot®

Newburyport, MA 01950

Tel.: 800-US-STAIN

Fax: 1-800-998-3299

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