

A “Reclaimed” Floor

A fix was required for this bubbling wood floor

By Brett Wheeler

The Problem

Calls from contractors about finish dry times are common, but this one was extraordinary—six months after the job was complete, the finish still wasn't dry. The oil-modified polyurethane finish had dried on the surface, but over a period of months, it continuously bubbled up along the board edges across the entire floor. What came up was sticky and wet, far from a sufficient dry that was expected after a few days to a week, let alone many months later.

The Procedure

During the design process, reclaimed lumber fence posts full of color and character were specified to be milled and installed to add the final touch to the home's rich, rustic décor. The contractor used NWFA-recommended installation and sanding procedures, and then he applied the first coat of oil-modified polyurethane. He followed the manufacturer's recommended procedures, and the first coat looked great, with excellent build and finish patina. With continued attention to detail, the second and third coats were applied, giving the floor the unique appearance originally intended. The finish then was allowed to cure sufficiently, and the floor was put into service.

After a couple of months, however, the finish seemed to be bubbling up to the surface along the board edges. The face of the wood looked great, with good adhesion, color and grain definition. But why, after all of the care and attention to correct procedures, would the finish be bubbling?

Thinking the job site or application conditions might be the culprit, it was recommended to wipe off the residual material in the affected areas with mineral spirits and allow for further drying. This seemed to work temporarily, but even after six months, some areas had what appeared to be wet finish bubbling up to the surface.

The Cause

Every aspect of the job was brought into review: climatic conditions, job site temperature and humidity, application and installation methods, finish properties and characteristics, the contractor's expertise, the condition and nature of the tools that were used, the origin and use of the wood, possible mineral or chemical contamination, milling equipment and procedures and the species' properties and characteristics.

After ruling out each possible cause or a combination thereof, the problem centered specifically

on the type of wood used, its origin and innate characteristics. This reclaimed wood was not only full of color and character, it was also full of sap and pitch! What seemed to be the finish bubbling up actually turned out to be sap and pitch leeching out of the freshly milled, reclaimed wood and eventually migrating to the surface of the floor along the sides of the boards.

How to Fix the Floor

Because the owners had gone through the trouble and expense of milling and installing the reclaimed wood, it was determined that a cost-effective solution would be to re-sand the floor. After confirming that the majority of sap and pitch had already seeped out of the wood, the floor was re-sanded. Following a mineral spirit wipe-down to remove residual sap/pitch from the bare wood, it was sealed with a low-viscosity, quick-dry oil-modified sealer. Continuing to follow the recommendations of NWFA and the finish manufacturer, the floor was coated with two coats of the original oil-modified poly to “reclaim” the reclaimed floor.

In the Future

If certain non-traditional woods are specified for floors, it is vital to review the properties of the wood itself. This is especially important considering the great variety of species, especially exotic and reclaimed woods, used in the wood flooring market today. As with this floor, sap or pitch can seep out of the wood, and they they also can prevent adhesion of the finish to the face of the wood itself. Additionally, with some reclaimed woods, certain mineral or chemical deposits embedded in wood cells over time can wreak havoc, especially with respect to finish performance. Special installation and/or application procedures may need to be established for a successful result. This could include a solvent wipe-down prior to finish application, extended acclimation of the wood, the use of specially engineered fillers and sealers, and, finally, sealing the floor as soon as possible. Critical observance of job details is vital.

In every case involving special woods, it is advisable to review the job specifications and material recommendations with the manufacturers of all products to be used on the job. This should eliminate the need to reclaim a reclaimed or exotic floor so you can get on to claiming the final check! ♣

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TROUBLESHOOTING