

# NIGHTMARE ON ELM STREET?

**Callbacks may give contractors the chills, but following proper surface prep practices will keep problems at bay**

*By Karen Gaspers*

**H**alloween may be just around the corner, but for painting contractors, there's something more dreaded than Frankenstein or Freddie, more draining than Dracula or a night with the living dead. It's the callback.

"The callback is a killer," confirmed Tim O'Reilly, business manager for primers and clear finishes at Zinsser, Somerset, N.J. "Time is money. Callbacks are what put contractors in a non-profitable situation."

Avoiding callbacks means doing the job right the first time. And that means contractors have to face another unpleasant task: preparing surfaces for coatings.

Surface prep is that time-consuming, tedious and often messy part of the job that all contractors have to slog their way through if they want to achieve a beautiful end result.

All the same, painting contractors know the steps of the process by heart – clean, sand, fill holes and cracks, apply coating – and they know that skipping one of those steps or turning in a halfhearted effort at any point along the way can potentially cause adhesion failure or, at the least, result in a final finish that is less than desirable. So although they don't enjoy it, they know it has to be done.

"It's one of those steps that you have to take the time to do properly," said Paul Krupa, senior product and marketing manager at Saint-Gobain Abrasives, Worcester, Mass. "It creates dust, debris; it's an extra step in the process. However, proper surface

prep enhances the adhesion of coatings and enhances the quality of the final work because it gives you a smooth, uniform surface to apply the coating to."

Bob Clemence, director of sales for Hyde Tools in Southbridge, Mass., concurred. "It's all about the amount of work you put into developing that surface. The quality you put into that prep will show in the quality of the finish," he said.

Proper surface prep is particularly important when working with wood surfaces. For starters, most wood products, such as wood trim and moldings, are produced in mills using molding knives. When a piece of wood comes off the molding equipment, it may look fine to the naked eye, but a closer inspection will tell a different story. The cutting path of the knife will be visible.

"If you apply a stain or coating to the wood, it will magnify this 'washboard' pattern on the surface," Krupa explained. "That molding really needs to be sanded prior to the application of any type of clear or paint coating. Anything that you put on bare wood that's just been run through a molder will enhance that washboard appearance."

Just as surface imperfections will show

through in the end, so will the scratch pattern created by sanding, especially when staining and/or clear coating. If the wood is not sanded properly with the right grit sequence, the wrong scratch pattern will result, and it will pop in the final finish as if a spotlight were being shined on it.

A third issue is knots. Knots contain pitch that can bleed through a finish. And it may not happen right away, but take six months. "That's what's so irritating about them," O'Reilly said. "You'll suddenly look around and realize you're standing in a speckled room." This is an expensive callback, he added. Properly sealing wood as part of the prep process prevents the problem.

Finally, not taking the time to prep wood carefully can introduce new problems. Trying to rush the scraping or sanding step by hurrying, not using the proper tools or not using the tools as they were designed to be used can create gouges or degrade the wood fibers. In either case, it'll only take a contractor that much longer to arrive at the desirable smooth, uniform surface for coating application.

These are only a few of the reasons proper surface prep matters even more when

*continued on page 22*

working with wood. “It’s why it’s worth spending the extra time making sure you’ve done everything right on the front end,” O’Reilly said. “It’s all about your reputation; don’t put it in jeopardy over what can’t amount to much work at the moment.”

Here is a rundown of tips and techniques for doing it right.

## CLEAN

According to O’Reilly, a major reason for adhesion failure on pre-finished wood is the failure to thoroughly clean the surface. Fingerprints in a kid’s room, oil in the kitchen or hairspray in a bath are examples of substances that will cause a coating to peel or flake if not completely removed. Luckily, there’s an easy solution. Surface clean the wood well with an ammonia-and-water solution or a TSP substitute. “We like ammonia and water because it doesn’t leave any residue and it’s a great cleaner,” O’Reilly said. “But a TSP substitute works well too.”

Cleaning wood also means contractors must remove any loose or flaking paint. “Depending on the wood you want to clean, wood scrapers are great for preparing rough surfaces or dealing with difficult paint,” Clemence said. In the case of a painted wood surface that a client wants to take to a bare wood look, cleaning requires contractors to completely strip the wood down to its true surface. Again, wood scrapers and wire brushes are ideal for removing material softened by strippers or other chemicals.

Wood scrapers work best on flat or large surfaces. For intricate moldings, multi-surface items or tight corners, Clemence recommended a wire brush. In fact, a recent survey conducted by Hyde found that painting contractors are using wire brushes more often than wood scrapers because, in many cases, they find them to be faster and easier to use.

## SAND

Sanding is the “most disdained piece of preparation,” Krupa said. The key is to spend as little time sanding as possible while still ensuring you create the best possible job.

To that end, contractors should always remember to start with a test piece of wood to ensure that the process they use will give them the result they want. “It allows you to develop the grit sequence you need to get the stain color or smoothness you want

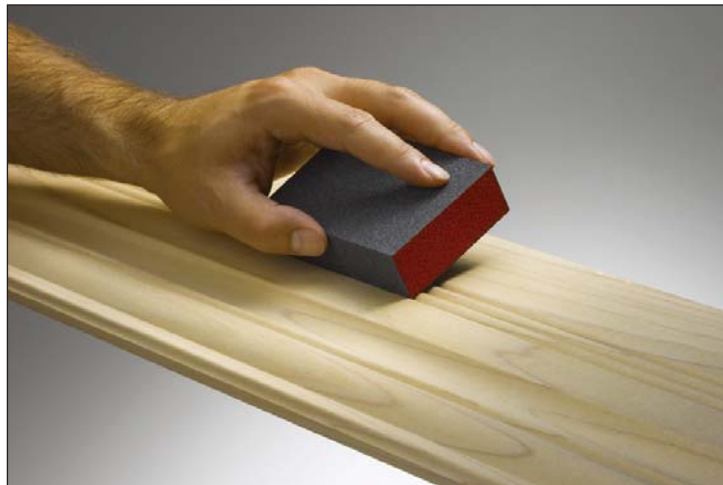
too fine, however, and the amount of work it will take to get the job done can become excessive, Krupa cautioned.

And never skip more than two grit sizes between grits, Krupa said. For example, a contractor may determine he or she will finish with 180-grit sandpaper, but will need to start with 50 grit to remove stock or planer marks. Starting with a 50 grit means the next grit size used in the sequence can be no finer than 80 grit. After 80, he or she can’t use anything finer than 120 grit.

“If you skip more than two grit sizes, the ability of that next finest grit to remove that 80-grit scratch is almost impossible,” Krupa explained. “And if you leave a coarse-grit scratch in the surface, even though visually it looks like you’ve removed it with that finer grit size, once you apply the stain or clear coat, you will see the coarser grit scratches showing themselves underneath.”

In the end, sanding is a “series of steps to get the job done in the most efficient manner,” Krupa noted.

Sanding product manufacturers such as Norton and 3M have come out in the past few years with lines of premium performance products, both for hand and power tool applications. These products use premium abrasive grains that are harder and sharper than the traditional garnet or aluminum oxide. The newer grains are actually



rather than trying to do it on the finished pieces that are already installed,” Krupa said.

Developing a grit sequence usually involves two or three grit sizes. Saint-Gobain recommends contractors start with as fine a grit as possible. This ensures that the least amount of material necessary is removed to achieve the best end result. Remember, sandpaper and other sanding tools are cutting instruments that can change the dimensions of the wood – and once removed, there’s no going back. Start

crushed to create a shape that gives them the ability to cut under much less pressure. The premium sandpapers also use high-performance paper backings that have a higher tear strength to allow them to resist breakdown for a longer period of time. Comparing a premium product and a standard product under the same sanding pressure, Krupa contended the premium product could do three to four times more work because cutting would be easier and it would last longer before it eventually failed.

Finally, Krupa reminded contractors to refrain from touching the wood with their bare hands after their finish sanding. The oils in the human hand can contaminate the surface, creating a barrier that hinders the coating from bonding with the wood.

### APPLY

After all this preparation, it might seem as if it's finally time to apply the stain or coating. Not quite. There are still several wood-prepping steps to consider.

If the wood is porous and a stain is to be applied, it's a good idea to first apply a stain controller, O'Reilly said. A thin coat of shellac or other stain controller will keep the wood from unevenly absorbing the color. A stain controller or sealer also is a good idea if the wood will receive a clear coat. As noted earlier, this is particularly important for controlling the pitch associated with knots.

When finishing new wood for paint, contractors need to remember to first prime the wood to seal the surface and prevent uneven absorption of paint, O'Reilly said. "Primers

are resin rich while paint is pigment rich, so primers really get into the wood and lock everything up," he explained.

He added that most contractors prefer an oil-based primer or lacquer for wood because it doesn't raise the grain. That way they don't have to go back over it once the primer has dried to "knock off" the higher wood fibers.

O'Reilly also recommended an oil-based primer for sealing pre-primed wood products such as finger joints. These joints contain glues that can bleed through the final coating.

Once the wood is sealed and primed, it can be painted. This is usually a three-coat process. "If guys are trying to skip anything, they are trying to skip a topcoat," O'Reilly noted. But most contractors know "it's just not worth it. You don't get the depth, the richness of the finish," he said. "Most people don't skip because it makes finishing the wood not worth doing in the first place."

To avoid wrinkling or blushing the finish, it's important to remember to have good dry conditions – the right tempera-

ture and humidity – and to allow for proper dry time. Clear finishes are a particularly long process, and sometimes contractors will try to rush the coats. "You can move pretty quickly with modern coatings," O'Reilly said. "Our primers dry within an hour, but you have to give it that hour."

O'Reilly also stressed the importance of remembering to allow enough dry time when applying multiple coats, particularly two or three coats in a day. "If the product says two or three hours dry time, you have to realize that's for that coat. If piling on multiple coats and have the bottom coat still curing...bottom line is, you have things going on for weeks. If you don't give it enough dry time between coats, you'll end up with a soft coat."

So this year, enjoy Halloween and may Freddie, not callbacks, be the only bump in the night giving you nightmares. **APC**

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