What’s the best way to remove fireproofing from beams and columns in order to attach the top track for steel framing?

—F.E., New Hampshire

Ideally, spray-applied fire-resistant material, or SFRM, is applied after hangers, clips, top-track for steel framing, and other objects are attached to the structural member. The Guide Specification section on the technical data sheets in Isolatek’s product manual states in Part 3 - Execution: “Clips, hangers, supports, sleeves and other attachments to the substrate are to be placed by others prior to the application of spray-applied fire-resistant materials.”

I happen to know a few fireproofing contractors, so I ran this question by one of them for more a “real world” approach—having written my share of technical data sheets, I am aware that the author may be somewhat removed from the actual hands-on part of the job. The fireproofing contractor explained that the preferred method is for the steel framing contractor to attach “Z” clips before the application of the SFRM. The top track of the steel framing is attached with minimal scraping of and damage to the SFRM.

The second choice is for the top-track to be installed to the structural member prior to the spraying. However, before the track is installed, the legs are sprayed with a non-stick cooking oil or silicon lubricant that facilitates removal of the SFRM where necessary to attach board, studs and other materials. (This should be done prior to attaching to the structural member to prevent adhesion failure of the SFRM to that member, thus resulting in a “thermal short.”)

This brings us to the final option, though not one I would volunteer for. The contractor recommended using a utility knife to score the dried SFRM along the edges where the top track is intended to go, and then scraping the SFRM away from the surface. Once the framing is installed, then the top track must be recoated (probably by hand) with the SFRM. Keep in mind that the bond strength of some of these materials has been tested to be somewhere between 100 and 1,000 pounds per square foot, so bring plenty of elbow grease.

Is there a standard rule about sanding between coats of paint, or painting procedures stating how one should prime the walls, lightly sand then apply first coat, etc.?

—D.C., via e-mail

That is going to vary from product to product. Generally, most paints have an “open time,” during which one can re-coat without sanding; however, as the gloss level goes up, the narrower that window becomes. One of the problems is that latex enamels should be sanded between coats, but are easily damaged if sanded too early. The paint needs to harden sufficiently before it can be sanded, but most jobs do not have enough time in the schedule to allow for such drying time. Any re-coating should be done once the paint has bonded to the substrate so that it doesn’t come off with the application of another coat. This can prove to be quite a challenge with latex products, because they cure from the outside in; by the time the paint has properly bonded, the surface is very likely to be hard enough to require sanding.

But there is so much chemistry involved, not to mention drying conditions, that one can’t make a blanket statement like “allow 48 hours drying time, scuff sand with 150 grit, remove dust, and recoat”—although that’s about as close as you’re likely to get on such an instruction.

When in doubt, consult the product label or the technical data sheet for recoat instructions.

About the Author

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