

Whose Job Is It?

Surface preparation approval as it relates to horizontal concrete repairs and/or overlays

By William “Bud” Earley

Consider this scenario. There’s an existing exterior concrete slab. Actually, it’s a roof deck. Additional floors are being added to the structure, so the roof deck will become a floor. All of the roofing materials will be removed and a leveling material installed at approximately 1" to 2" thick. The specification called for surface preparation according to manufacturer’s recommendations. The manufacturer’s technical data sheet calls for preparation by mechanical means providing a fractured aggregate profile. The contractor used shotblasting as the method of preparation.

Upon completion of the surface preparation, the contractor asks the local representative to come to the job and inspect the preparation prior to the installation of the leveling material. (Ten years ago this was common practice.) The sales rep arrives, examines the area presented to him, and says, “It looks good, guys. Proceed with the overlay.” When asked for a letter approving the preparation, it was done without hesitation. After all, it looked good.

About a week or so into the placing of the overlay, some cracking began to show. Around the cracks it began to sound hollow. The overlay was losing bond. Of course, the contractor called the manufacturer to let him know his product was failing and that he needed to come down to the project and make the problem go away. Samples were taken and the product was shown to be consistent with the data published in the technical data sheet. The manufacturer said it wasn’t their problem. On the recommendation of the manufacturer, the contractor used a low viscosity epoxy resin to glue it all back down. Initially it seemed to do the trick. Outside of a week, the hollow sounds and more cracks were back. Nearly 10,000 square feet of material had been placed; it was all coming up.

Although the contractor completely removed all of the roofing materials, the concrete was contaminated with hydrocarbons. A clear, oily residue remained deep in the pores of the concrete. No one knew this could be a potential problem because no bond test was conducted. The manufacturer was blamed because of the surface preparation approval letter. The manufacturer paid out a lot of money.

I still see statements like this: “Manufacturer’s representative must inspect and approve surfaces to receive materials prior to the start of work.” Why are these statements still appearing in specifications? What exactly are we asking the manufacturer to do? If the manufacturer’s rep approves the surface preparation for the contractor, then the manufacturer just bought the job if something goes wrong.

What exactly are the responsibilities of the parties involved? First, there’s the manufacturer of the material. The manufacturer has more responsibility than just the making of the product. The manufacturer’s representatives must be educated on the materials they sell. They must be familiar with the product limitations and must be able to instruct a contractor on proper

methods of application. They also must be familiar with what method of surface preparation his/her company recommends for a successful application. It’s simply not enough for a representative to claim, “We just make the stuff.”

The key is to determine the type of surface required for a successful application.

When it comes to product selection, the specifier depends on his experience and the information provided from the manufacturer. Surface preparation will always require a clean, sound surface, free from all materials that will inhibit the bond of product “X.” This statement is clear. If it is included in the specification, the specifier is also clear of any liability. “Provide a surface free of any contaminants that may inhibit the bond of the repair material.” If specified, it becomes the contractor’s responsibility.

The contractor just applies the product in a manner outlined by the manufacturer and/or as specified by the architect or engineer. However, he/she becomes the responsible party for the surface preparation because of the specification—not the manufacturer, and not the specifier. There’s a recommended method and even a recommended surface profile. Even if these two criteria have been met, it does not assure you of a successful application. Sorry, guys, but you need to check for hidden problems.

Getting in the habit of conducting a **bond test** or simply putting water on the substrate to see if it soaks in can sometimes be the best way of protecting yourself. A simple water test can usually detect an invisible contaminant. If water doesn’t soak in, you probably won’t have good adhesion.

The important thing to remember is that this entire process should be a team effort. Work together to come up with the best possible results.

The manufacturer should ask for it. The specifier should specify it. The contractor should do it. So..., Whose Job Is It?



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