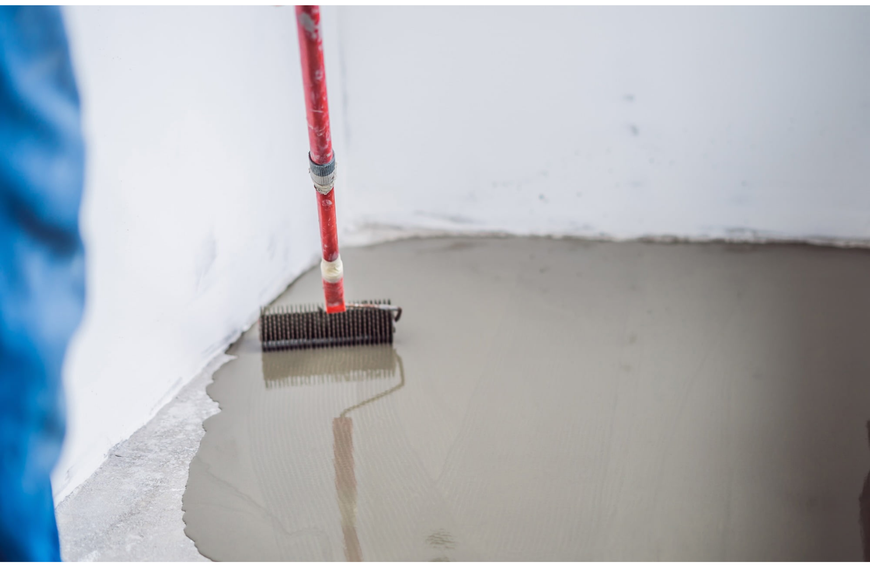
3 Steps to Successful Surface Prep

by John Hoover



// There are three basic steps that are necessary to remediate a concrete substrate. Photo by Galitskaya via Getty Images.

Successful flooring installations often depend on the flooring installation contractor identifying any issues with the concrete substrate and properly using the right products to address them. Typically, there are three basic steps that are necessary to remediate a concrete substrate. They are:

1. Determining moisture levels in the substrate
2. Ensuring that there are no bond breakers on the substrate surface
3. Selecting the right products to address any issues with the substrate.

Properly Testing for Moisture

Moisture is a significant issue because much of today's flooring is less forgiving with respect to moisture than flooring products of the past. In addition, many of today's adhesives are more sensitive to moisture than their predecessors.

As a result, most flooring and adhesive manufacturers require stringent pre-installation moisture testing, not only on the surface, but also 40% down into the depth of the slab. For example, with a six-inch slab, the moisture testing probes should be set at a depth of 2.5 inches. Tolerance of moisture differs from one flooring product to another, so documenting test results and sharing them with manufacturers is essential.

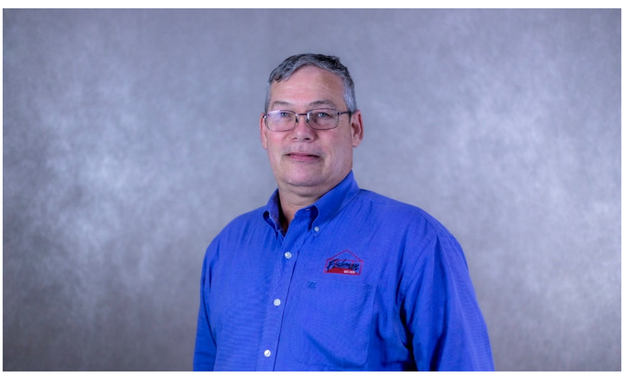
New moisture testing technology was recently introduced that consolidates many concrete moisture testing tasks and simplifies the moisture testing process. The same system is also capable of storing more than 500 time-stamped measurements, so it is possible to recover historical data years after the original moisture testing took place. That can be valuable information for retailers, specifiers, installers and others in today's litigious society

Properly Cleaning the Substrate Surface

Successful flooring installations require a clean, structurally-sound, properly prepared concrete substrate with no bond breakers on the surface. This is true for both new and old slabs.

Substrate surfaces must be flat, with no cracks or depressions, free of surface dirt, such as sheetrock mud, curing compounds, sealers, wax and any other contaminants that may de-bond the concrete substrate from the underlayment. In most cases, these bond breakers can be removed using a scarifying disc attached to a low-speed buffer. The disc's carbon-tipped blades will remove most bond breakers from the surface of the concrete, leaving it contaminant free. In situations where the epoxy is too thick or hard for this removal method, bead blasting may be necessary.

Rubbing the subfloor by hand or with a scraper can determine whether there is loose debris or sur-face breakage. Another way to determine whether a concrete substrate is clean is to put a piece of duct tape on it and then peel it off. If it peels off easily or there is dirt on the tape's adhesive, it signals that the slab has not been properly cleaned.



// John Hoover, Territory business manager, Fishman Flooring Solutions' Mid-Atlantic Region.

Selecting the Right Products for the Substrate and Its Issues

There are floor prep underlayment products available to meet every possible need. In one of countless examples, the type of subfloor will dictate what underlayment products to use. A concrete subfloor requires a Portland-based underlayment, which is gray in color. A gypsum-based product, which is typically white, is used on gypcrete substrates.

Selecting the right underlayment products and using them properly can be challenging for even the most experienced flooring installation contractors. A complicating factor for installers is keep-ing pace with the steady stream of newer, more advanced underlayment technologies being introduced into the marketplace.