

KENTWOOD™ PRO-TIPS

HELP & HINTS FOR FLOORING PROFESSIONALS



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Topic: Sticking It to Gypsum Concrete

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Most of the time when we talk about concrete subfloors we're referring to full-on poured slabs. But we're often working with its lighter weight cousin, gypsum concrete.

This material (often called Gyp-Crete, which is actually the trademarked name of a particular brand) performs a variety of tasks when used as an underlayment over an existing wood or concrete subfloor. It increases fire resistance and sound reduction of the floor assembly and is particularly useful as a leveling medium. It weighs less than regular concrete and is quicker and easier to work with.

Properly applied, gypsum concrete makes an excellent substrate on which to do a full glue down installation of wood or luxury vinyl flooring. However, in this imperfect world, installations of gypsum concrete are not always properly applied. Incorrect mixing, mis-proportioned ingredients or a variety of other factors can result in a surface that is porous or dusty and chalky.

These conditions may not always be that obvious in a basic visual inspection, but can be sufficient to compromise the installation. A porous surface is both weak and absorbent, which can lead to the adhesive setting up too quickly (water in the glue is absorbed by the concrete rather than drying naturally), making for a poor bond. A chalky, dusty surface is also a problem as it will impede the glue making good contact with the actual concrete surface.

So while a gypsum concrete surface needs to meet all the usual subfloor requirements (flat, sound, clean & dry) it's also good practice to do bond and porosity tests. They're quick, easy, and good insurance.

For a quick and easy bond test, you need nothing more complicated than a broom and a roll of duct tape. Sweep or vacuum an area of the floor, then apply a strip of duct tape about 8" long directly to the substrate. Roll it with a hand roller to ensure good adhesion, then peel back

the tape slowly at a low angle, close to the floor. The tape should peel cleanly off the surface, with no dust or debris attached. If the tape doesn't stick, or comes away with a film of dust, or with chunks of the subfloor attached, then you have an issue.


Porosity tests are as simple as pouring a small amount of water (1" to 2" diameter) on to the substrate and observing how long it takes to absorb into the concrete. The faster it absorbs the more porous the substrate, and the more porous the substrate, the quicker your glue will dry.

If you're trying to remedy any of the above conditions, a good method is to apply a floor primer like APAC 20. This product will help seal and prime the surface, allowing more working time, and help enhance the bond of the flooring to the concrete. Apply according to the manufacturer's instructions, allow to dry completely, then repeat the duct tape test.

While the duct tape test gives a good 'snapshot' of the conditions, I like to do a more formal assessment before proceeding with the full installation. A more thorough bond test will give me a better idea of what kind of working time and what kind of bond strength I can expect on the project. (These vary from job to job, due to any number of factors.)

Work in a corner of the room and spread adhesive over an area roughly two feet square using the appropriate trowel and spread rate. Measure how much time passes before the adhesive will not transfer to a finger when pressed into the adhesive; that's a good indication of how much working time (or 'open time') you will have during the installation.

Then, install a piece of the actual flooring material onto the adhesive and roll with the appropriate weight roller. Allow to cure fully and then check the quality of the bond. If it's good, you can proceed with the install, knowing that you've done your homework.

Tip of the Month: Bond tests are a good idea on any glue down installation. The more you can do to verify that your flooring system is going to work before you install it, the better chance of success. 

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