

THE COMMERCIAL FLOORING REPORT

JANUARY 2012

If the last quarter of 2011 is any indication of the direction business will go we should all be encouraged and optimistic. There's only so long any commercial facility can go without some cosmetic refreshing and floor covering is an easy way to accomplish that. As people feel more optimistic and the business climate improves, even a little, and we all become more frustrated with negativity, an uptick in business will almost be a forced issue, in my opinion.

Here are some of the things we're seeing as being continuing and increasing issues in the industry.



SUBSTRATE ISSUES:



The topic of moisture in substrates may seem like beating a dead horse but I can assure you this horse is far from dead. As a matter of fact it would be better to think of this horse as a thoroughbred making a run at the Triple Crown. This issue is actually escalating in nature and becoming more complex. Not only is moisture in concrete relevant for all the usual reasons such as fast track construction, increased use of highly hydrated lightweight concrete, wet earth below slabs without moisture barriers, existing slabs with moisture issues and complexities beneath the slabs (such as broken drain pipes or water migrating beneath the slab from an outside source) but continue to figure in the

focus on Green buildings and the effect that has on a substrate. That would be acclimating the space with the HVAC system at the end of the construction phase, or very close to it – waiting until the last minute, and in the process affecting all the building materials in the space as they adjust to the operational environment. Cycling the air handling system once the HVAC system is operational will also cause movement of moisture in and out of a slab which will have an effect on the flooring material and other building materials.

People promoting curing and sealing compounds, topically applied or as additives that can thwart the installation of floor covering materials aren't doing you any favors. This issue is growing exponentially with architects, specifiers and general contractors who are being sold a bill of goods on chemistry that has no established track record, no realistic warranties and no financial backing should a problem arise. These products are being specified and used based on what they are believed to be and it's an uphill battle trying to get them removed if specified. Please understand that words don't change the laws of physics or science.

We've been saying for the last couple of years that if something sounds too good to be true it probably is. There is no magic potion yet to fix moisture in concrete substrates and if you believe there is you're potentially in for a very rude and costly awakening (more on this issue soon). Even if the moisture issue is diminished the effects of the current chemistry used to accomplish that can very often cause an installation failure. In 2011 we began to see the results of the use of these agents with extremely large flooring installation failures.

Flooring materials have been de-bonding from the substrate and everyone is trying to blame the installation contractor or the adhesive. Vehement arguments and finger pointed with legal action being commenced, creates extraordinarily expensive and exhaustive efforts to resolve these issues that will drag on for months or years. Physical inspection of the failure and the site followed up with scientific analysis, testing, evaluation and determination, proves the use of a curing compound/sealing agent, when it has been used, was the cause for the failed installation. Any time there is an installation failure the cause can always be determined and what we usually find is someone did something they shouldn't have or didn't do something they should have or failed to do research that would have prevented the problem. Very often this has to do with being oblivious to the obvious.



Vinyl Planks Curling and Shrinking



Flooring Patch De-Bonding from Substrate

Highly burnished substrates will also impede the ability of flooring materials to be adhered to them. The use of mechanical means to finish concrete will actually impede the successful installation of flooring materials when using adhesives.

Adhesives being touted as resistant to high moisture and alkalinity from moisture in concrete are gaining traction and use. Very often these products can be overwhelmed and as a result fail. With moisture and alkalinity being such a big issue, there is a rush to jump on the bandwagon with products that are marketed as being a cure. Don't believe everything you hear.

Another issue we'll continue to see is the use of solvents on substrates being used to remove old flooring materials with asphaltic based adhesives either

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during an abatement process of a replacement program or during refurbishment to remove the flooring. If solvent has been used on a substrate it too has to go and getting rid of it can be a very costly and invasive procedure.



Old Black Cut-Back Asphaltic Based Adhesive

Hard surface flooring being installed over existing hard surface flooring continues. An old VCT (Vinyl Composition Tile) down for years without the hint of a problem gets covered with new non-permeable flooring, such as sheet vinyl or large rubber tiles, and all the flooring starts coming up. Moisture was allowed to pass through the space around the individual tiles originally but once the escape route is blocked by the new flooring the moisture is trapped and literally “blows” both materials off the floor. At this point everything has to come up, mitigation done and new flooring installed.

Last but not least in this category is the human factor of disbelief; the disbelief that anything but the installation of the new flooring material has caused the failure. “It couldn’t be something that was there before or else we’d have experienced a problem long before this” syndrome - Re-read the previous paragraph for starters. Just because you think it can’t be an issue, whatever it is, doesn’t mean it won’t.

CURLING CARPET TILES:

Every manufacturer that makes carpet tiles has had curling issues in the last several years. The reason is simply the efforts to adapt to the use of recycled content in the backings, to be Green and struggling with trying to find the right balance to prevent the material from reacting. We are still on the learning curve with the technology and curling continues to be an issue. Manufacturers have, as a result, specified extremely aggressive adhesives to hold the tiles down, to no avail. What this has done is made

carpet tiles virtually impossible to remove, almost to the point of them being more firmly affixed than any other flooring material. We'll continue to battle this issue. Remember this, out of the box carpet tile is supposed to be flat, square and stable. Anything less or more than that and the carpet tile has an inherent problem that has not been caused by the installation or the substrate. This too shall pass.

ADHESIVES AND INSTALLATION SYSTEMS:

The question often arises as to the change from solvent based to water based adhesives having an impact on installation failures. Is there in fact a correlation? Solvent based adhesives were more resistant to substrate issues, which is one of the reasons we didn't see installation failures to the extent we do today. Water based adhesives actually work better but they are less resistant to compromising conditions. The Green movement is also having an effect on adhesives that come out of a bucket or box. Architects and designers are concerned about odors, VOC's (volatile organic compounds) and other issues, real or perceived, that present concerns about their use. As a result of this and in an effort to be able to achieve a successful installation of any flooring material, there are several new technologies that will eliminate installation failure from compromising influences – substrate or environmental; or installation compromises; caused by installers and installation issues in emerging markets where flooring materials may not have even been seen, much less installed. Some of the systems are extraordinarily fantastic and others are "we got one too" systems; that are more sizzle than steak.

Three of the most effective installation systems are EnviroSTIX, a poly acrylic adhesive that can be applied to any hard backed flooring product whether carpet tile, sheet goods, plank or hard surface tile; It is not affected by moisture or alkalinity. This is actually a peel and stick system. Velcro hook squares which can be used with any synthetic type; needle punched or fleece type backing and new developments to the system which will allow it to be used on any carpet tile backing. This is a mechanical method of hook and loop installation

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U.S. Patent 7,231,815. Additional patents pending

which takes the substrate completely out of play. FreeLay, which is an acrylic polymer applied to cushion backing on broadloom carpet or carpet tile, followed by an application to the substrate of an acrylic polymer creating a mutual attraction. This system is marketed by Bentley Prince Street as Contact Release. In addition there is Tandus Power Bond, Interface Tactiles and Shaw's Loc Dots.

One of the things our substrate experts have touted is to take the substrate out of play to eliminate flooring installation failures. The other factor is to take the installation system out of play as a component that can be compromised by a substrate problem. That done, we can effectively eliminate installation failures without the cost or use of compromising chemistry to the concrete or substrate.

In addition there are many new backings on flooring material that will continue to make inroads that aren't reactive to environmental conditions but that will have to be installed with some of the new installation systems. And further, we'll see more click type installation systems as well.

Some products to be cautious of as flooring materials in commercial applications are Bamboo and cork. This is not to say these are not good products, they are and they have one of the best green stories, but bamboo can be extremely reactive to moisture conditions and cork can present curling issues on the floor if not stabilized and installed properly.

What this all boils down to is know what to use where, how to use it and what will affect the performance of the product and the installation. There is a lot to know and you can't be expected to know it all or know the latest technologies or changes taking place. That's why you can rely on us to help you and keep you informed. If in this coming New Year you have a question or need clarification of information, contact us. We'll help keep you out of trouble or help you get out of it in the least painful way possible.

We're excited also about the development of new technology that will prevent installation failures from all the problems mentioned in this issue. We'll keep you informed as the development progresses.

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Systems like EnviroSTIX for hard surface and hard backed flooring materials and Bentley Prince Street Contact Release for carpet are systems that will help prevent the failure of flooring installations. There is more technology coming, most of which we are involved with. We'll keep you informed to help you. In the meantime understand that moisture, temperature and humidity have a profound effect on flooring materials and the integrity of their installation.

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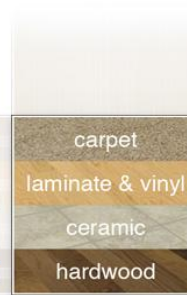
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