

CFR The Commercial Flooring Report

For the Commercial Floor Covering Industry

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FLAT, LEVEL, FLOATING

Floating vinyl plank and tile flooring has no business being installed on a commercial project, in my opinion. Before we elaborate on this let's look at the original floating flooring material used on commercial flooring projects – carpet tile.

When carpet tile became popular for use in commercial installations, the installation method was typically to lay it down and glue it along the perimeters. Understand that carpet tile back then, referring to it in the 1970's, was fairly heavy and would lay flat in place as long as it was stable. It was mostly secured at the outside edges of the space it was installed in. That lasted for a while until installing carpet tile changed to the grid method which offered much more stability to the installation. The grid method of installation involved the application of pressure sensitive adhesive around the perimeter of the space and then a grid – think of window panes – of adhesive to secure the carpet tile in place. Remember, the whole principal of carpet tile is easy installation, shipping, handling, storing and replacement. The less adhesive tenacity the glue has, the easier the replacement process is. Think a sticky note type adhesion. So, in the beginning less was more so that the carpet tiles could be easily taken up.

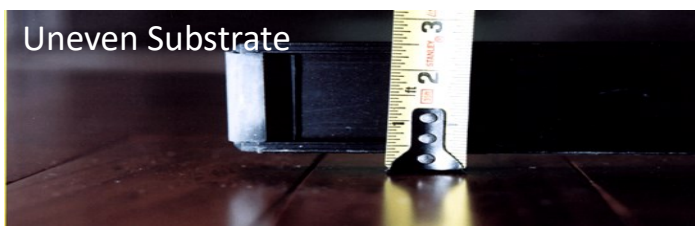


Fast forward to today and we see carpet tiles installed with full spread pressure sensitive adhesive, peel and stick or tabs used in the corners. With lighter weight tiles the full spread adhesive application is most appropriate since it will better hold the tiles in place and keep them from moving. As long as the carpet tiles are flat, square and stable they'll stay where they're put and won't move when adhered. Carpet tiles are a layered modular flooring material. The face yarns are tufted into a primary backing, a layer of precoat is applied, and then a polymer coat, fiberglass stabilizer, another thermoplastic compound and the final baking which can be vinyl, polyester, polyolefin, or cushion. This process and layering can include different materials and variations but is essentially some form of what's been explained. Carpet tile is the most technologically advanced soft floor covering material for commercial use. But I use this as an example of the evolution of a modular flooring product for commercial application that was once floating but has become affixed to the substrate to offer greater stability.

How about broadloom carpet? For as much as it's used today commercially, and it certainly is still an important category in soft surface commercial flooring, broadloom carpet is always affixed in place either with tackstrip, double stick or directly glued to the substrate. It is never floating. It should always be flat and stable lest there be aesthetic issues with wrinkles or, more importantly, patrons falling over them.

Hard surface tile of various kinds and sizes are installed into thin set or mud bed adhesive. They are permanently affixed to the substrate. VCT, vinyl composition tiles, are always glued to the substrate. Wood flooring, in a commercial application can be glued down and nailed, just nailed, or just glued, depending on the location of installation and substrate. For a commercial application it should never be loose laid with a tongue and groove locking system. The common denominator for all of these flooring materials used in commercial projects, is that they all get affixed to the substrate. They're fastened to keep them stable and to allow them to perform. And, yes, I know, this is the way they're supposed to be installed.

Now, along comes luxury vinyl tile and plank making inroads into the commercial market. This product too should be glued in place on a commercial project. However, that's not always done. It is believed that time and money can be saved by installing these flooring materials by not using adhesive and "minimizing" installation labor and time by installing them floating with locking systems that hold them together. What could be wrong with that? First off, for a commercial project, the substrate must be perfectly flat. Any deviation in the flatness of the substrate that will allow any type of flexing can and will compromise the engagement system. Since these type products have a solid core that is brittle, and most of what would be installed let's assume would be SPC, whose largest component is calcium carbonate – ground up stone – it won't hold up well or at all to any flexing. The joints can break and there goes your stability. Now take into consideration that commercial environments will normally have more traffic, rolling chairs, rolling loads and point loads from heavy furniture and you have a recipe for failure. Regardless of what any salesperson may tell you about how good the quality or integrity of the product is, the laws of physics have other ideas that eclipse simple words. What is it that I always tell you? Words do not change science, chemistry or physics – never going to happen.



THE COMMERCIAL FLOORING REPORT

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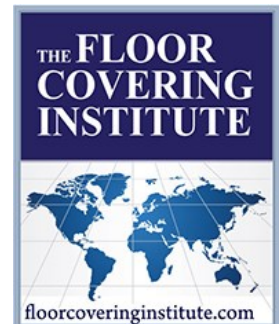
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Another concern is the stability of the product itself, particularly the planar stability – that is to lay flat. It is not unusual for these products to cup or have raised ends or edges. When that happens, the product becomes a liability posing the potential for trips and falls. In addition, the engagement system cracks and breaks. If subjected to rolling traffic, engagement system breaking is inevitable. And using these types of floors in a wide open office space is noisy, even if they have an attached cushion. Hard surfaces, of any kind, reflect sound waves, unlike soft surfaces that absorb them. So hard surface flooring will always be noisier than soft surface flooring.

Another thing to know. There is no industry standard in the US for the strength of the tongue or engagement system on floating vinyl plank and tile floors. So, when the engagement system breaks, you'll be on your own. In the claim denial, the manufacturer will site the substrate not being level, or inappropriate use or application of the product. To a legitimate manufacturer of these types of flooring credit, they will, or should, mention somewhere in their installation instructions, not to use these products where there will be heavy rolling loads, rolling traffic or heavy load points.

Most of what we've seen used, that there have been problems with, has been long planks and occasionally tiles that have cupped. It may be OK to use this type of product in a home, but I don't think they should be used on a commercial project. It's not something we would endorse or offer as a flooring to any of our consulting clients. Another thing I always tell you is, "get it in the door and keep it on the floor" and in this case, get it in the door and glue it to the floor, not float it.

Another thing to be aware of is that the material for the rigid cores on these products can vary and you'll have no way of knowing that. An SPC core can be a fine grind or coarse grind calcium carbonate this can affect the integrity of the product and its ability to be waterproof – for what that's worth. Raw materials can come from different sources or even vary from the same source so the product can vary. Not every production run is going to be the same. A free floating flooring used in a commercial application should make you paranoid. The last thing anyone needs on a commercial flooring project is to be afraid of the flooring material or installation failing.



What's all the Buzzzzz About on Page 5 ?

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Floating luxury vinyl tiles with edge lift on every tile in a wide open commercial space.

ON ANOTHER IMPORTANT SUBJECT:

Kudos are in order. In working on a project the other day for a client and reviewing installation instructions for a Shaw Forte Pro installation. The installation instructions specifically state not to install over crumb rubber. The exact wording, “Crumb rubber underlayments are not an acceptable option for use with resilient floor coverings due to performance issues resulting from chemical incompatibilities.”

We’ve been preaching this for some time now and continually have jobs coming in that have failed as a result vinyl flooring (PVC) being installed over crumb rubber underlayment (SBR). These two materials are incompatible and should never be used together. I compliment Shaw for recognizing this and stating it in their installation guidelines. Every manufacturer of vinyl tile and plank should follow suit and adopt the same wording so we can stop the failures and lawsuits of vinyl tile and plank flooring installations over crumb rubber underlayment. And this information needs to be conveyed to the Architects who spec the materials in Division 9 and to the General Contractors.



Luxury vinyl plank flooring installed over crumb rubber underlayment.

When in doubt about any questions you may have on a flooring products, installations, or substrates, contact us. We’re here to help you, and we have the experts who have the answers, always. Honest, independent, objective, and unbiased answers. This is all we do, every day.

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