

CFR THE COMMERCIAL FLOORING REPORT

100 TH ISSUE

FOR THE COMMERCIAL FLOOR COVERING INDUSTRY  TOTALLY GREEN PUBLICATION

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Welcome to the 100th edition of the Commercial Flooring Report. I thank all of you for the continued support over the years and your quest for knowledge of the industry.

I want to give you a brief walk in my shoes and why we occupy such a unique, one of a kind, position. It began in 1971 when I went to work for Rochester Linoleum and Carpet in Rochester, NY, my home town, after graduating college, yes I went to college. I was schlepping in the warehouse at first, sold on the floor and then managed one of their five stores selling carpet and hard surface flooring. Not one to be content and tied down I transitioned into the carpet cleaning business, joined two associations and from there took every class I could on flooring. One of these classes was the RBI Carpet Seminar instructed by Reg Burnett. He quickly became one of my mentors. Somewhere in the 90's Reg asked me to be the author of his newsletter, called the Commercial Carpet Digest. My writing career actually began with Floor Covering News with Al Wahnnon, another of my mentors, with my column The Claims File which I wrote for over 26 years.

Other columns and training programs followed. I do a radio show with Dave Foster and have for 25 years called "The Industry Troubleshooter" write a column for Kemp Harr's Floor Focus Magazine titled "Flooring Forensics" write various articles for different publications and conduct training and educational seminars at trade shows and associations. With all of this we still felt the industry deserved a monthly newsletter that delivered independent, objective and unbiased information on flooring products and flooring issues – the truth without the hype. And so began The Commercial Flooring Report.

We also consult with manufacturers of flooring and associated products, end users and help develop technology and business relationships. No one before or since has had a presence in the industry like that. After making Dalton my second home since the mid 70's, I moved here in 1999 and then, five years later to Chattanooga. Our offices are in Dalton, GA and we have interaction with almost every flooring manufacturer in the industry, domestic and foreign. Our staff and associates consist of the best and brightest in the industry. My passion and love for what we do here and the love of the industry and the people in it keeps the fire burning. After 46 years I have no intention of stopping or slowing down and helping all of you who have questions, problems or concerns. Look for a lot more to come from us in the near future. We're just getting started!

VINYL SHRINKAGE

By Lee Phillips, Lab Director, Professional Testing Laboratory, Dalton, GA

Not much is better than sitting with the warm glow of the sun beaming down as you sit on the white sandy beach. Nothing much worse than the wrinkles and aging that will result from the exposure to sun. The same thing can be true with our interior finishes. Many of the flooring and interior finish materials you sell, specify and install can be drastically affected when exposed to the sun over and over again. We've all seen the faded out look of carpet near sliding glass doors or



splotchy vinyl floors near sunlight filled French doors or upholstery and even wood finishes faded or damaged by constant and repeated exposure to the sun. All kinds of tests are conducted in the lab to try and predict the effect of what the sun and the exposure to it and the aging effect will produce on various interior or exterior finish materials.



One of the major concerns we have seen over the last couple of years is luxury vinyl planks and tile (LVP/LVT) showing dimensional change, with most of it being shrinkage. A common phone call is that, “we installed LVT and after 4 weeks, there are gaps and crevices between the individual planks.” The industry uses a heat based aging test ASTM F2199 to reveal dimensional change issues. This test does result in some shrinkage most of the time and may predict that a material is not likely to perform very well over time. The F2199 test utilizes a convection type heat chamber with an even heat applied around the entire sample. So, does the F2199 simulate the type exposure that would occur in an atrium with heavy sun exposure or near large windows? I don't think it does.

I was introduced to a European Norm while working a lawsuit several years ago and discovered this EN test uses a radiant heat exposure to measure shrinkage/dimensional changes. The problem with this method, in my opinion, is the sample size used which is very small and only involves the material and is not necessarily tested as installed (like including the locking mechanisms). I was also introduced to a Military method used to age materials for the government such as Personnel Carriers and Humvees. The test set up would remind you of a huge McDonalds French Fry area with the UV bulbs keeping the fries hot. So after some engineering and deliberation, I came up with the thought process of blending these methods together. By using a larger sampling of the actual material as intended to be installed and applying a radiant heat source that would mimic the heat from the top down sunlight exposure. I believed this test would show a more “real life” simulation of what is occurring in homes and businesses every day. The light bank covers an area approximately 4 x 5 feet so that we can install several planks in the area. We apply temperature probes across



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across the surface to insure the temperature is even across the test material. We mount gauges in the length and width of the material so that we can monitor the size changes in real time.



What we discovered was very enlightening. We initiated the heat on a sample (this particular sample was a complaint sample for gapping) and while ramping up the heat to 140 F surface temperature, we noticed our gauges were spinning like a second hand on a clock. The material was growing right before my eyes! This test sample grew a few percentage points before leveling out after a couple of hours. Once the heat was removed and the material started to cool, the gauges began to spin in reverse. The initial and final comparative measures showed a slight shrinkage from the exposure but that is not the reason for the failure that was the complaint. The material was growing during the actual exposure to sunlight and pushing against the fixed walls or transitions. This creates upward force and pressure that are creating the stress for the locking tongues to release, so when the material cooled, gaps resulted. The ASTM F2199 standard industry test didn't show the material as problematic. But my "in house" method seemed to reveal the source of the issue. I believe a method of this type needs to be considered by the U.S. resilient industry with some studies to see if my hypothesis would hold true.

Understand, not every resilient material would react this way as not every vinyl plank is made the same way or of the same quality of materials. This test could be used as a tool to show certain propensities and may help to avoid putting materials into commerce that would likely result in claims. Bottom line is sometime the sun beaming down doesn't always end up with us feeling good. Especially if it ruins a good floor that somebody has to pay to replace.

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Other LVT/LVP Information

The popularity of Luxury Vinyl Tile and Plank flooring has led to huge demands for the product and as happens in the industry when a product category is hot, everyone wants to jump on the bandwagon. This results in prices dropping and quality suffering which gives rise to a lot of disappointment from failing materials and installations. The more of this category of flooring is used and installed the more we see complaints on it. Complaints for shrinking, curling, cupping, indentation, wear layer issues, out of square material and poor performance abound. We can test these materials to insure they do indeed perform or find out why they failed. LGM is the Forensic Pathologists of the Flooring industry and PTL is their associated lab.

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U.S. Patent 7,231,815, 8,047,056 & 9,032,791. Additional patents pending