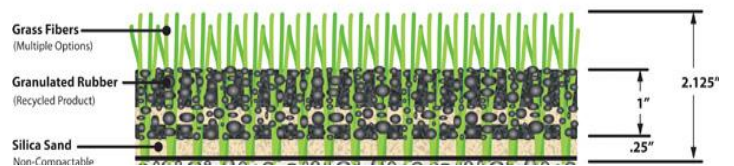


This article is by Lee Phillips who is the lab manager for Professional Testing Laboratories, the largest and most technologically advanced independent flooring testing lab in the flooring industry. PTL not only tests every type of flooring material and ancillary products but also does the testing for vacuum cleaners, cleaning agents and cleaning systems as well as other products. Lee works with manufacturers and a variety of clients and deals with all types of issues from testing new technologies to addressing product performance concerns from the field. <http://www.professionaltesting.us/>



WHAT IS GREENER?

Typically I refrain from writing opinionated articles, not because I have no opinion but because as an expert witness and scientist, I base my opinion on proven testing. However, I am compelled to offer some insight on a somewhat touchy subject as I believe some additional thought provoking information might open some minds. Recycling is defined in Wikipedia <http://en.wikipedia.org/wiki/Recycling>: as processing used materials (waste) into new products to prevent the waste of potentially useful materials, reduce the consumption of fresh raw materials, reduce energy usage, reduce air pollution (from incineration) and water pollution (from landfilling) by reducing the need for "conventional" waste disposal, and lower greenhouse gas emissions as compared to virgin production. In the strictest sense this would mean paper would always return to paper, bottles to bottles and carpet to carpet. However, this is impossible due to the degradation a product goes through during usage, reclamation and reprocessing. So in real life, recycling is really just extending the life cycle. A good example of this is rubber tires that are ground up and used as infill for athletic turf fields. It is reused one time until the field is changed then the rubber is frequently discarded. This is not true recycling but is just extending the life cycle of the rubber tire. Green really entails sustainability, reusability and life cycle meaning what is the total environmental foot print of a product.



The life cycle, simply defined for my purpose, is the length of time a material is used before it's taken out of service plus the costs (environmental costs) of maintaining the product during its usage. So in theory a product that lasts longer but has a high environmental cost of maintenance might not be the greenest solution. An example of that would be disposable diapers vs. cloth. I have friends that believe that cloth diapers do more to save the environment than disposable. So they hire a service to come pick up diapers, launder them and bring them back. So you expend fuel for a truck, electricity for a washer and dryer and then fuel to get them back not to mention the costs of production for the cloth diaper and water consumption and waste. It could be argued that disposable diapers treated with polymer additives to make them degrade in the landfill in under a month would be greener.

Another example is the use of Fluorochemical as a topical soil resist treatment for carpet. High levels of fluorochemicals are thought to cause all sorts of health issues and the government has taken steps to control levels put into use and into the environment. So in and of itself, no one would say that a fluorochemical is "green". However if you look at the result of its use, you may conclude differently. By using topical soil resist, the life cycle of a carpet is substantially improved due to the material being easier to keep clean for a longer period of time, resulting in the consumer or end user not wanting new carpet quite as quickly as they would without topical protection. So what is greener, not using the chemical and throwing millions of yards of carpet away sooner or using the non-green chemical in miniscule amounts (300 ppm) to keep from throwing away the carpet for an extra couple of years?



I even wonder if its "green" to offer recycling pick up. Is it really greener to drive a huge diesel truck 25 minutes from town to come and pick up a couple of pounds of cardboard and 12 plastic bottles from my front door? I realize I am not the only one in the neighborhood but averaging out the take from 50 houses in my neighborhood and what it takes to provide special buckets, pick up and sorting, fuel consumption, the truck itself, etc. I see no way it adds up to being worth it, environmentally and monetarily. Are we just doing things to make ourselves feel better or are we really trying to provide solutions?

In the world of flooring there is a rash of trying to be greener by adding materials into the matrix that are "recycled content". The problem I have with this is there have been millions of square feet of materials that have failed due to the unknown affect of the "recycled content" addition. So we have a substantially shorter life cycle and now millions of feet of flooring to have to throw away into the landfill, of which only a small portion was recycled content. Rest assured I am not speaking of one company or even one type of flooring. Would it not have been truly greener to have just put in a tried and true product that would have lasted for many years and performed well?



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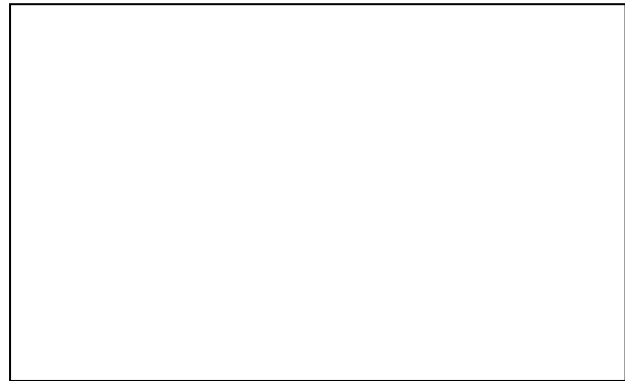
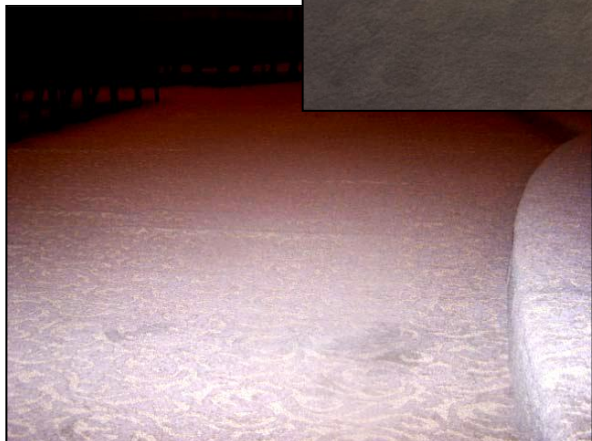
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The basis for this movement is LEED. I am not against being a steward of the environment but I am against making decisions based on a group of people thinking certain choices are better without any real scientific proof (I guess it depends on who funds the study as to the perception of real science, i.e. global warming). Perception becomes reality. There is a paragraph in the LEED document for new buildings that rewards the entity if they keep the HVAC sealed until occupation. So the end result would be saving energy and keeping the system and duct work clean during the messy building process. So let's think about this. Workers have to drag in fuel based, atmospheric contaminating, poison emitting portable heater systems into the building just to create a condition that is reasonable to work in, followed by the installation of textiles, wood, moldings and floor-coverings in an environment that is nowhere close to the environment they will be used in. I am quite positive that all of these products have the potential to shrink or expand due to temperature or humidity. So when the HVAC is turned on and the building acclimates, the doors expand and stick, the carpet relaxes and buckles and wrinkles.

BUCKLES AND WRINKLES IN CARPET



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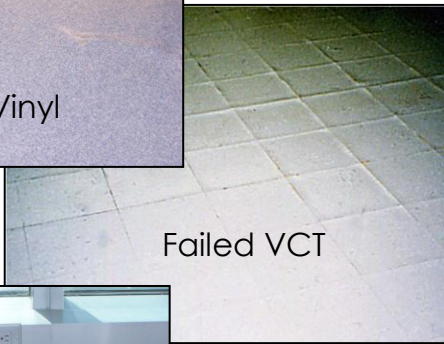
The wall coverings droop and loosen, the concrete subfloor starts spewing water vapor blowing the VCT, sheet vinyl, carpet tile and wood flooring off the floor, so do we then just throw the stuff away and start over? Or a reasonable solution would have been to just turn on the HVAC system, acclimate the building a month or so before occupation and save all the materials you would have or will destroy. What is greener?



Bubbled Sheet Vinyl



Failed Sheet Vinyl



Failed VCT



Buckled Wood

My advice is for manufacturers to think long and hard before just mixing recycled content into a matrix without fully understanding its impact on your product. LEED and other similar entities need to understand the relationship of installing products and the effect of non-acclimation, before ever suggesting that it is worthy of reward to keep a building unacclimated. I learned long ago in 7th grade that any action can have an equal and opposite reaction. Let's look at those reactions before requiring an action. Just my thoughts.

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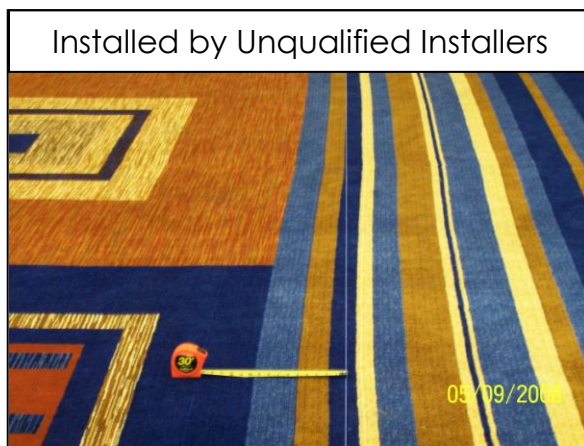
More on the Subject by Lew Migliore

Fielding thousands of calls and emails yearly and dealing with hundreds of cases of floor covering and substrate concerns, compromises and failures, it never ceases to amaze us that had someone been thinking right or asked for help and guidance at the onset of a project most of what we see that results in massive waste could have been prevented. That waste not only includes money and time but materials, energy and man power. A problem after the installation also includes business interruption, displaced personnel, breakdown of systems and communication lines, power sources and risk of liabilities by occupants of the space associated with the process. All of these costs far outweigh the initial investments of having done the job right with the correct products and mitigating any compromising conditions from the start. The equal and opposite actions and reactions Lee mentioned have a domino effect not only on flooring materials but other building materials and furnishings as well.

Architects are expected to know everything about the products in the specs and this isn't the case. Specs are written with materials in them, such as applied moisture mitigation systems that may work but in so doing will prevent flooring materials from being successfully applied to them necessitating a huge and costly mitigation. And flooring materials may be incorrectly or erroneously specified that can fail long before they have a chance to live out their expected life. The wrong color, style, construction, and installation method and unqualified installers can jinx a project right out of the gate.

General contractors are sometimes lead to believe new technology is tried, true and proven when it may not be and they, as well as architects and even manufacturers, are often skeptical of new technology that actually does work. How is one to know? Just because a supplier of a material or system posts a bond against failure doesn't mean there won't be a failure. That particular product or system may not fail but it could cause a catastrophic failure of an associated product the bond doesn't include. You'll be hung out to dry on that one. No one would want to suffer the ramifications of a situation like this and lawyers will have a field day litigating these cases. Get ready for the ambulance chasers of product liability and not merchantable for service cases. The end user or client you had will rightfully make life very painful for all parties if they're made to suffer.

Can you stay out of trouble and avoid wrongful waste? If something seems too good to be true it probably is unless someone independent can confirm or deny the claims for the product. There is a host of new technology in the flooring industry that really does work the way it's touted to but there's also a lot that doesn't. How are you to know the difference? You can't know all things about all flooring related products but we can and do – it's our job. From consulting at the inception of a project to guidance traversing the mine field of a failure or writing the specs, we can help, it's what we specialize in doing. Not only will our services allow you to be truly green they'll help you stay green by avoiding all facets of waste. So if you think you need our help contact us, we provide expert service on all flooring issues anywhere in the world.



The new **Velcro Brand Carpet Protector** is ready to go. This product takes the place of clear plastic coverings with pressure sensitive adhesive that have created a host of problems for the industry. The new **Velcro Brand Carpet Protector** is made for use on loop and cut and loop carpet; the vast majority of commercial carpet. Bentley Prince Street is the first carpet manufacturer to offer this unique product.



Systems like EnviroSTIX for hard surface and hard backed flooring materials and FreeLay 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.



Concrete Moisture Testing Technician Certification – Grade I

The International Concrete Repair Institute (ICRI) is pleased to introduce their Concrete Moisture Testing Technician Certification Program. The purpose of this program is to help improve the performance of concrete slab moisture testing in the U.S. to result in more consistent, accurate results that will help flooring manufacturers, architects, and contractors to make better decisions as to when a concrete floor is ready for a floor covering installation.

The certification program has 2 tiers. Tier 1 applicants are those who are not regularly engaged in moisture testing yet have an active interest in learning more about the tests, what the tests mean and how the tests should be performed. Tier 2 applicants are those who have applied for full certification. Both tiers require attendance at a 3 hour educational session followed by a written exam. Tier 2 full certification applicants will also be required to perform each of the 4 tests under the watchful eye of a qualified judge who will not provide any level of coaching. Prequalification for acceptance into full certification Tier 2 will be previous testing experience.

Tier 1 consists of a 3 hour educational session, a written exam and a training session. Those who complete the course and pass the exam will be issued an ICRI Letter of Education. Tier 2 consists of the same 3 hour educational session, the written exam and a field performance exam. By passing both the written and performance exams, an ICRI Concrete Moisture Testing Technician - Grade I certification will be issued to those who successfully demonstrate their knowledge and ability to properly perform and record the results of each of the four field moisture tests on hardened concrete. Those who pass both the written and performance exams will receive a certificate and wallet registration card.

Both the written exam and the field tests will be based on the following four (4) ASTM Standards, including all Annexes and Appendices:

F 710	Preparing Concrete Floors to Receive Resilient Flooring; Section 5.3 pH Testing
F 1869	Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
F2170	Determining Relative Humidity in Concrete Floor Slabs Using <i>in situ</i> Probes
F2420	Determining Relative Humidity on the Surface of Concrete Floor Slabs Using Relative Humidity Probe Measurement and Insulated Hood

ICRI Certification for Slab Moisture Testing Technician– Grade I shall be valid for a period of five [5] years from the date of completion of all applicable certification requirements.

The two day certification program begins on the first day with registration from 8 - 9 am, followed by the 3 hour educational session. There will be a provided lunch and study break from 12 – 1 pm followed by the written exam from 1-2 pm. Following the written exam Tier 1 students will attend a training session where they may receive or observe hands on training on how to properly perform each of the four tests.

For those registered for the Tier 2 Certification, day two begins at 8 am, and each applicant will be required to perform all 4 ASTM tests listed above.

Houston —
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(with ICRI Convention)

Tampa —
Wednesday/Thursday,
April 6/7
(with ACI Convention)

St. Louis —
Tuesday/Wednesday,
May 17/18

Cleveland —
Tuesday/Wednesday,
June 7/8

Denver —
Tuesday/Wednesday,
September 20/21

Baltimore/Washington
Tuesday/Wednesday,
October 25/26

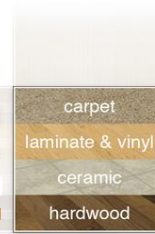
Seattle —
Tuesday/Wednesday,
November 8/9

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