

CFR The Commercial Flooring Report

For the Commercial Floor Covering Industry

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What is PVC – Free Resilient Flooring and Should You be Concerned

What is PVC-free resilient flooring, and is it truly what it's touted to be and is it the best choice for the health of those living atop it as well as the one least disruptive to the environment?

Most vinyl flooring contains plasticizers which make it flexible. Traditionally those plasticizers have been made from petroleum-based phthalates, though in recent years most suppliers to the U.S. market have come up with alternatives because phthalates migrate from vinyl and have been determined to be carcinogenic and otherwise unhealthy. U.S. vinyl producers have all developed alternatives. However, most vinyl flooring is imported from China other locations in Asia, and it can be hard to determine whether all these imports are phthalate free and what type of phthalates are used.

PVC-free flooring does not contain phthalates, and therefore eliminates the concerns associated with them. This is obviously considered a good thing. So, is PVC-free then the superior choice? The fact is that the issue is more complex than it may first seem.

THE FACTS:

As the largest single material used in the built environment, plastic surrounds us. It's in everything: from lining the inside of our cars to carrying the water we drink to, well, look around-plastic is in almost everything, even the credit cards in our pockets. To isolate plasticizer migration from flooring as a major concern is, then, to be somewhat naïve. It is my opinion, then, that considering the sea of plastic within which we dwell, PVC in flooring is not going to compromise the health of occupants in a space in which it's installed, unless there is a concern for a legitimate plasticizer migration event from a flooring material that is leaching. And plasticizer does leach from vinyl flooring especially if it is not stable. This happens because the plasticizer molecule does not bond to the PVC molecule, but kind of floats on its own in the molecular structure.

Across the entire luxury vinyl tile and plank market, development is moving at light speed. Much of the PVC-free flooring is in the early stages of development, and there are challenges in working with these alternative materials. Alternative materials to phthalate vinyl include: virgin PET; PET from recycled plastic bottles; polyolefin and polypropylene materials; acrylic polymers; ethylene-vinyl acetate; and polyurethane made from soy-based resins. Each of these PVC-free thermoplastics creates its own set of performance circumstances. These can be the same as with typical vinyl flooring, or they can be

unique. For instance, while some will have the ability to stick to the floor with commonly used adhesives, polypropylene is a challenge in this regard, as it is inherently hydrophobic, which means it repels water, and most flooring adhesives are water-based. Polyester is also water resistant; it is often used as a coating to other materials to impart water resistance. One sample of newly introduced PVC product we looked at has a back as slick as glass, is anything going to stick to it? We'll find out soon enough.

GREEN OR GREENWASH?

To improve materials while also adhering to the ideals of creating a truly green flooring chemistry, developers must design for degradation, design benign or less toxic compounds, and prevent the production of waste. Also, they should consider using renewable feedstocks and benign solvents as well as improving performance of the flooring material, yielding a longer lifecycle. Remember that when you use recycled content it is imperative to control your feedstock, if you don't then you can't control the product. As I was told by one of my industry mentors "if you don't control the product, the product controls you."

Bio-based PVC-free flooring ingredients are from plants, renewable resources or outside the common chemical stream of conventional chemicals currently used for vinyl flooring, which originate from petroleum. However, there are no guarantees that being bio-based makes them inherently safer or more environmentally friendly than non-renewable conventional PVC flooring.

PVC-free flooring can be made from a number of different processes that include the use of vegetable oils, cellulose, starches, acids and alcohols-there are hundreds of them. Contrary to what many believe, bioplastics and PVC-free materials are not necessarily completely green, and the characteristics of the finished flooring material can be different depending on how they're made. This can lead to performance challenges similar to what we see with standard vinyl flooring. The fact is, "green" plasticizers can still leach from the flooring material, and the flooring can still undergo dimensional or planar issues. It's a nice story but if the product fails and has to be replaced and winds up in a dump, it ain't that green.

Check Out the [IICRC](#) Program Information located on the Last Page of this the Report.



THE COMMERCIAL FLOORING REPORT

Lewis G. Migliore—President

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***"When No One Else has Answers,
We Do"***

*Just click the image below or search under
Lew Migliore and let's connect on LinkedIn!!*



Page Layout By: Anita S. Drennon

Biobased Plasticizers have some Disadvantages, including:

- Cost: Bioplastics are more expensive than synthetic plastics.
- Land use: The land used to grow crops for bioplastics could be used for food production.
- Disposal: Some bioplastics require special disposal procedures, such as industrial composting, which require advanced facilities and machines.
- Biodegradation: Bioplastics don't biodegrade in landfills.
- Mechanical properties: Biopolymers may have low mechanical properties, such as fragility, low thermal resistance, and vulnerability to degradation.

In two very recent cases of PVC-free flooring failures, LGM has found stability issues. In one case, the manufacturer brought in an expert to evaluate the problem. Every conceivable type of mitigation was tried and said to be the answer to the problem. When all was said and done, the product did exactly what it had done originally, despite every effort to prove otherwise. The problem was the product.

In another case, the flooring was lifting and cupping. It was also shrinking on the ends. In addition, the flooring emitted an odor of phthalate plasticizer or alcohol, when it was lifted off the substrate-phthalate plasticizer that was not supposed to be there was found, and the product was labeled as PVC-free.

Just remember, the hype about PVC-free flooring must be taken with a grain of salt, just like the hype about waterproof flooring. It's possible that these new products will have some inherent characteristics that could compromise their performance, and frequently the installation firm gets blamed when this occurs, though often it's the product that's the problem.

WHAT'S REALLY INSIDE?

How is a consumer or end user to know whether the product is actually what it is said to be? How can they know if something that they can't see is or isn't really there without sophisticated laboratory testing? LGM often tests to see whether wear layers are what they're supposed to be, and we frequently find them not to be. Why would content be any different?

The flooring industry trusts that the hard surface flooring product in the box is what it is said to be, but the majority of vinyl flooring products-well over 80% of PVC-based and over 90% of PVC-free-are sourced. Very often the company that is selling it did not make it, and, to compound the problem, the people selling these products often have little

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**Right Product in the Right Place: Get it in the Door;
Keep it on the Floor**

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"WHEN NO ONE ELSE HAS ANSWERS, WE DO"

Click Photo to view the LGM website.

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knowledge of what they are actually peddling. Never in the history of the industry has any product category upset the balance of traditional flooring like luxury tile and plank. As the category continues to evolve, the entire industry is on the learning curve. Hang on, because this ride is going to get wilder. Remember what I've said many times, and I've been at this a very long time and through the introduction and iteration of countless "new" products and technologies. Products are introduced to the market by the "Shoot, Ready, Aim" principle. Let's get it out there and we'll find out what it does later. And the product gets "chance shipped," a real term in the industry.

Our message to you is to be cautiously optimistic and very aware of what new PVC Free products are coming down the pike. And if the manufacturer or pseudo manufacturer of these products can't answer all your questions you need not be installing this stuff.

Remember, if you need help and you want the truth about what flooring issues you're experiencing or trying to avoid, contact us.

It's not what you don't know that gets you in trouble, it's what you know that ain't so.

LGM: Our team is seasoned, experienced, and highly knowledgeable, many of whom come from manufacturing. We have unlimited sources of information being headquartered in Dalton, Georgia - "The Flooring Capital of the World." We are not the guys you want sitting on the other side of the table.

FCEF exists to bring awareness to the opportunities in a flooring installation career, recruit new talent, aid in the funding of their education, and facilitate job placement into flooring industry careers.

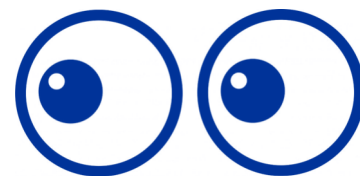
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customized and posted, email templates, customizable fliers, social video ads. Feel free to use any of the copy you see there – and download anything you like.



Lew is speaking at the [IICRC Program](#) and we have information for you on the on the Following Pages





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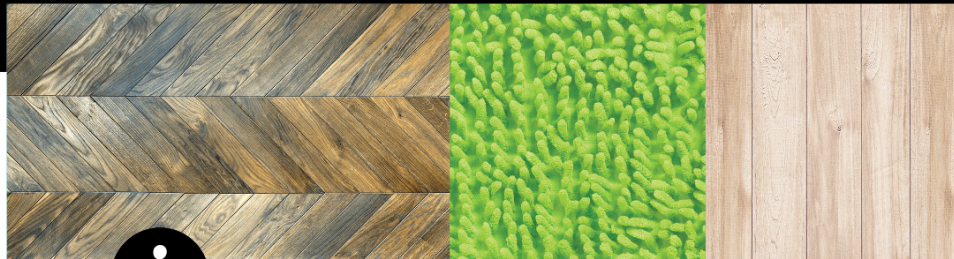
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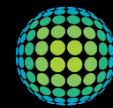
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TWO DAYS OF FLOORING EDUCATION

How IICRC Standards support the
manufacturers product warranty
for cleaning and maintenance.

SAVE THE DATE!

October 22-23, 2024 | 8-4 pm EST
Dalton Convention Center



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and Restoration Certification



RSVP HERE

PRESENTED BY



Lewis G. Migliore has been associated with the floor covering industry for over 53 years. He is considered to be the floor covering industries' most respected and competent analyst of flooring complaints, problems and performance issues. His services are rendered in an honest and impartial manner to determine existing problems and determining resolutions. He deals with a multitude of floor covering problems including manufacturing, specification, installation, performance, use and maintenance and substrate issues. Lew has written extensively to prevent or resolve claims for clients and end users, and is the author and publisher of "The Commercial Flooring Report". Lew and his team of flooring experts are considered to be the "Go To" guys in the flooring industry.

PRESENTED BY



Mark Violand has been in the floor covering industry since 1977. As a certified senior carpet inspector, Mark now operates an inspection, correction, and repair business which handles all types of floor coverings. He is credentialed to inspect carpet, vinyl, wood, laminate, ceramic, porcelain, and natural stone floors.

He currently teaches the Carpet Cleaning Technician and Carpet Repair and Reinstallation Technician classes as an approved instructor with The Institute of Inspection, Cleaning and Restoration Certification (IICRC). Mark enjoys teaching classes whether it is live-stream or in person. Mark's goal in every class he teaches is to make anyone involved in the flooring industry more effective in the work they perform and their job easier.

PRESENTED BY



John Carter is a Portland Oregon native who served for four years in the U.S. Army as a Green Beret. After earning a bachelor's degree at Portland State University, he started a small janitorial service with a budget of less than \$400.00, which quickly transformed itself into a professional carpet cleaning and restoration company. John developed the specialty skill of carpet color correction and became certified as a Senior Carpet Inspector. In October of 1993, he began a new business venture in the wholesale distribution trade called Cleaning and Restoration Supply, which has grown to be one of the largest suppliers of professional carpet and restoration equipment in the industry. Now he is focusing on teaching IICRC certification courses and teaches both live and live stream classes including, CCT, CRT, OCT, UFT, SCI and RRT.



IICRC[®]
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The Flooring Education Symposium

October 22-23, 2024

8am-5pm Eastern Time

Dalton Convention Center in Dalton, GA

MEETING AGENDA

DAY ONE: October 22

Welcome

Opening Remarks - MC - Mark Violand

7:00 AM - 8:00 AM

Registration and Breakfast

8:00 AM - 9:00 AM

Scott Humphrey - Wood Floor
Covering Association

9:00 AM - 10:00 AM

Carpet Care & Cleaning - S100 - Shawn Bisaillion

10:00 AM - 10:15 AM

Morning Break

10:15 AM - 10:45 AM

Resilient Floor Care & Cleaning - Jim Mannes

10:45 AM - 11:15 AM

Luxury Vinyl Tile Care & Cleaning - Bill Luallen

11:15 AM - 12:00 PM

Carpet Inspection - S800
John Carter & Mark Violand

12:00 PM - 1:00 PM

Lunch Break

1:00 PM - 2:00 PM

Hard Surface Inspection - S220
Bob Blochinger & Mark Violand

2:30 PM - 5:00 PM

Shaw Mill Tours - Self Transport

- Resilient Flooring Tour / Carpet
Manufacturing Tour / Technical Services Tour
- More Information to Come

DAY TWO: October 23

Welcome

Opening Remarks - MC - Mark Violand

7:00 AM - 8:00 AM

Registration and Breakfast

8:00 AM - 9:00 AM

Resilient Flooring Today

9:00 AM - 10:00 AM

Professional Inspection - Lew Migliore

10:00 AM - 10:15 AM

Morning Break

10:15 AM - 10:45 AM

Career Path - Instructor
Going from Cleaner to Inspector -
Bob Blochinger

10:45 AM - 11:15 AM

Building Moisture Inspection - Gabriel Belanger

11:15 AM - 12:00 PM

Effects Water Damage has on flooring - S500
Carey Vermeulen

12:00 PM - 1:00 PM

Lunch Break

1:00 PM - 2:00 PM

Hard Surface Restoration and Inspections -
Bob Blochinger

2:00 PM - 3:00 PM

Q&A

4:30 PM - 6:00 PM

Networking & Cocktails - Hilton Garden Inn
Closing Remarks