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SPECIALTY FLOORS AND MORE
INDUSTRY NEWS YOU CAN USE

AVOIDING FLOORING FAILURE USING MOISTURE SENSITIVE ADHESIVES

BY GUY CONDORELLI

Over the years, flooring failures in our industry have increased for several reasons. These reasons include changes in concrete mix, inaccurate testing procedures, and improper surface preparation to name a few. Perhaps, the most important change was the removal and or reduction in VOCs. As the VOCs (volatile organic compound) content in adhesives decreased, the risk of flooring failures increased. This is because VOCs in adhesives contributed to better adhesion and bonding with the flooring material. When the VOC content was reduced, the adhesives had lower bonding strength, resulting in a higher likelihood of flooring failure.



Years ago, changes in adhesives were made due to environmental concerns. In addition, the development of LEED and green initiatives required reformulation of many durable adhesives, which are used in the application of flooring materials. These government regulations reduced VOCs to specific grams per liter. VOC solvents were then replaced with water based solid adhesive formulations. As this transition occurred, flooring failures significantly increased. The inclusion of more water in adhesives made them inherently prone to failure when exposed to moisture.

Flooring failures manifested in various ways such as lifting, cracking or delaminating of the flooring material. These failures can occur shortly after installation, or overtime due to the weakening of the adhesive bond.





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However, there are cons when using VOCs which can contribute to health issues over long term exposure. Lowering VOCs can improve environmental conditions and can help support indoor air quality for everyone.

Keep in mind, the new adhesives that meet government and environmental regulations, require a thorough understanding of these new adhesive products. Installers must strictly follow manufacturer requirements and use only compatibility flooring materials. There is very little margin for error if these guidelines are not met.

Additionally, proper surface testing and preparation are critical with these new adhesives. If the concrete is not properly sealed or given ample drying time, moisture within the concrete substrate can break down, re-emulsify, and dissolve these moisture sensitive flooring adhesives.

In response to these issues, SRI has successfully addressed flooring failures by implementing effective measures such as precise moisture testing, thorough surface preparation, and the application of moisture mitigating primers. These adaptations have ensured the mitigation of potential issues and contributed to the longevity and durability of our Flooring solutions.

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- Exterior waterproof expansion joints
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- Interior floors, walls, and ceilings
- Exterior walls and roofs
- Rubber and foam seals and systems
- Split slab waterproofing
- Metal safety covers
- Cast-in-place systems
- Vertical seals
- Floor fire barrier systems
- Under-slab fire barrier systems
- Wall fire barrier systems

