SITE-RELATED SOLUTIONS (SRS)

NEW CONSTRUCTION

Milliken

Q: What *are* Site-Related Solutions? Is that even *relevant* with new construction?

A: Site-Related Solutions are a way to deal with whatever combination of site conditions a customer might encounter. And yes, it's relevant. For new construction, the key is moisture management. How well will the floor covering handle retained moisture in newly poured concrete? The better it handles moisture, the sooner your installation begins.

Installing on new concrete? Moisture is the X-factor.

When will new concrete be ready for flooring? That depends on how good the flooring is at dealing with moisture. For most manufacturers, the answer is: Not nearly as good as Milliken.

Let's have a quick science lesson about moisture vapor.

Moisture seeks equilibrium. Essentially, it just wants to evaporate. Concrete is filled with vertical capillaries and won't hinder the process. Water vapor will naturally rise through a concrete slab and vent through the top — *unless* something gets in the way. Like, hardback flooring. It blocks the natural escape route of water vapor and doesn't allow it to vent.

When you obstruct a natural process, you'll just end up creating *a different natural process.* In this case, condensation.

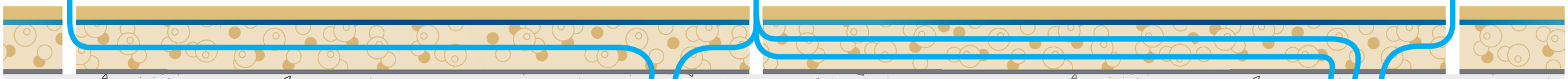
Rising moisture vapor is trying to escape. The worst thing to do is try and stop it.

If an impenetrable barrier (like hardback flooring) gets in the way of escaping water vapor, you get condensation. Water droplets begin to form along the bottom of the backing, eventually creating liquid water between the concrete and the floor covering.

Water under the carpet can trigger all kinds of problems. Adhesives could re-emulsify — turning your glue into jelly. Also, mold and mildew thrive in dark, wet spaces. Once established this can, in some cases, migrate to other building systems like HVAC, affecting indoor air quality and causing health concerns. That's how unseen problems turn into expensive, worst-case scenarios.

Zero

is how many moisture claims we've seen over the last 20+ years. Unlike hardback flooring, moisture vapor moves freely through our cushion — and evaporates naturally.



Milliken Modular Carpet

INDUSTRY-BEST MOISTURE MANAGEMENT

Vapor passes freely through Milliken's open-cell cushion backing. It will then be wicked to the seams and vent naturally.

Milliken manages moisture simply and effectively, by letting natural processes happen naturally.

Sometimes you're forced to choose between less-than-perfect options, such as: 1) Delay an installation to comply with the recommended concrete curing time and moisture levels, 2) Deciding to chance an early installation, or 3) Paying extra for concrete admixtures or third-party moisture-mitigation solutions.

But not with Milliken. Our cushion-backed modular carpet handles higher RH levels than just about any other product on the market. So, you can *install sooner* on newly poured concrete. In some cases, as early as *30 days after a completed pour, with no RH or pH limits* — which means no moisture testing required.

No Condensation, No Failures

Our carpet handles higher RHs than other products. The formation of liquid water is nearly impossible, so expensive moisture failures are virtually eliminated.

Limited (or no) Moisture Testing

We offer adhesive and adhesive-free options requiring *no moisture testing in any situation.* In addition, Milliken's *standard* adhesive solution does not require moisture testing beginning 60 days after concrete is poured.

Fully Warrantied

Milliken modular products are warrantied for life against adhesive breakdown due to moisture vapor emissions.

SRS Product Finder

This product finder will guide you through a few fast questions about your project. Start on the left, and work your way across to determine the SRS system that best meets your needs.

How quickly do you need to install?

Higher Concrete RH ← SHORTER | **Installation Timing** | LONGER → Lower Concrete RH

On-Grade[1] *and* Above-Grade

New Construction RH limits are the same for on-grade *and* above-grade scenarios.

DAYS AFTER POUR: 30-59 days

Mosaic Moisture XT - Spray

NO RH limit
NO testing required

For early installation, minumum 30 days after pour, or scenarios where very high moisture is a concern. NO moisture testing is required. There are NO RH or pH limits.

ADHESIVE

DAYS AFTER POUR: 60 days and above

Non-Reactive Standard

Works for ALL on-grade *and* above-grade scenarios, minimum 60 days after concrete has been poured. NO moisture testing is required. There are NO RH or pH limits.

ADHESIVE

DAYS AFTER POUR: 30-89 days

TractionBack® Plus

NO RH limit
NO testing required

For early installation, minumum 30 days after pour, or scenarios where very high moisture is a concern, and an adhesive-free solution is desired. NO moisture testing is required. There are NO RH or pH limits.

ADHESIVE - FREE

DAYS AFTER POUR: 90 days and above

TractionBack®

Works for ALL on-grade *and* above-grade scenarios where an adhesive-free solution is desired, minimum 90 days after concrete has been poured. NO moisture testing is required. There are NO RH or pH limits.

ADHESIVE - FREE

[1] For below-grade scenarios, on-grade recommendations generally apply. However, please contact the Milliken Technical Services team (1-800-528-8453, option 2) to discuss your specific site parameters. For more detailed information and specifications, please refer to the current versions of Milliken's installation instructions and warranties, available at **millikenfloors.com.**

FAQs SITE-RELATED SOLUTIONS / NEW CONSTRUCTION

1 Why has moisture become such an issue now?

Because of current trends that favor modular carpet over broadloom. Broadloom dealt with retained moisture in concrete similarly to the way Milliken cushion backing does — it let vapor pass through and evaporate naturally. But modular carpet needs a more stable backing than broadloom does in order to maintain its integrity. It turns out that hardback carpet tiles happen to be just about the perfect way to block water vapor from venting.

2 What's all this talk about alkalinity and pH?

Most carpet adhesives are rated for pHs of around 9 and everything works well as long as no liquid water is present. However, elevated pH becomes a major concern once liquid water enters the equation. Liquid water will activate the Alkaline salts, inherent in all cement, which will increase the pH level at the surface of a concrete slab. Flooring failures occur when the adhesive is exposed to sustained, moist, high-pH environments. This is why warranties often have language that will void them at higher pHs. Milliken cushion-backed modular carpet allows moisture vapor to evaporate at a very high rate, eliminating the formation of liquid water. No water, no problem. That's why we can eliminate the need for pH testing and limits.

3 What's the big deal about moisture testing, anyway?

It can be expensive, and there are limits to its accuracy. As to the expense issue, your final bill will depend on how many tests are required over how large an area. More importantly, a moisture test is only a snapshot in time. Moisture levels rise and fall naturally, in some cases wildly so. Though declared safe at installation — levels may no longer be safe after an issue occurs, and that's exactly when crucial warranty-related testing will be required. The big point: *Your warranty may be in jeopardy.* But not with Milliken.

4 What about this bond test? You said no testing.

That's a fair question. But here's the thing — adhesives have to stick to the subfloor. Moisture occasionally causes adhesion problems. More often, issues arise from chemical incompatibilities between adhesives and topical treatments or admixtures that may be present in the concrete — and these are invisible to the naked eye. A bond test confirms that adhesives will maintain their integrity. As long as the adhesive will work, you're good to go.

■ THERE ARE VERY FEW CONDITIONS — For Milliken installation solutions, we ask that a few conditions be met:

a) There is no visible water.

b) To use Milliken Non-Reactive Standard Adhesive or TractionBack® in an on-grade installation, an ASTM E-1745 vapor retarder (Class B minimum) must be in place in accordance with ACI 302-2001 and directly in contact with the concrete placement, or RH must be under 95%. For TractionBack®, RH must be under 85%.

c) Floor prep must be performed in accordance with ASTM F 710-11, except where explicitly allowed by this document and/or installation instructions.

d) Bond test required.

■ HYDROSTATIC PRESSURE (on-grade only) — We should note that Milliken does not warrant against hydrostatic pressure, instances where water is forcibly pushed into the slab and/or moisture events caused by broken pipes. In such cases the warranty will be voided. If you'd call that fine print, we won't argue — but we think you'll agree that's a pretty fair stipulation.

Milliken™

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