



# MOISTURE DEFENSE SYSTEM FOR CONCRETE WITH MOISTURE PROBLEMS

WHITE PAPER

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## 100% WATERPROOF SOLUTION

Laminin's comprehensive Moisture Defense System meets everyday challenges associated with sub-floor preparation and flooring installations in high moisture vapor emission (MVER) environments.



### Laminin Moisture Defense System includes:

- **COLOSSAL 117 - EPS PRIMER AND SEALER**
- **COLOSSAL 117 - USL URETHANE SELF-LEVELER**
- **COLOSSAL 117 - MJF MOVEMENT JOINT FILLER**
- **COLOSSAL 117 - HMA ADHESIVE FOR RESILIENT & SPORT FLOORING INSTALLATION**
- **COLOSSAL 117 - EMB EPOXY MOISTURE BARRIER**
- **COLOSSAL 117 - MRS MOISTURE RESISTANT SMOOTH SKIM**
- **COLOSSAL 117 - CSL CEMENTITIOUS SELF-LEVELER**

Together, these products provide a powerful defense against moisture, while also protecting concrete from chemicals, industrial, vehicular and environmental agents.

## SUB-FLOOR PREPARATION CHALLENGE

Proper sub-floor preparation is the KEY to an affirmative bond and successful installation. All pre-existing adhesives, sealers, paints, curing compounds, etc. MUST be completely removed from the surface. If the substrate is stained concrete or any nonporous surface, the area must be primed before installation. In order to apply the primer in an effective manner, the nonporous surface must be mechanically abraded to allow penetration into the capillaries. This process is often rendered by a mechanical grinding or scraping process – typically, the concrete surface profile should range between 2-3 depending on the surface conditions.

## MOISTURE DEFENSE SYSTEM SOLUTION

When sub-floor preparation is required after mechanical abrasion, Laminin has several methods to address irregularities in the sub-floor. Our process begins with applying **Colossal 117-EPS Primer and Sealer**, a two-part, water-based epoxy primer, that when applied, looks like milk and turns clear: indicating readiness within two hours. **Colossal 117-EPS** creates a strong bond for cementitious products to adhere as well as slow down the MVER in the slab; allowing the sub-floor preparation products to fully bond to the substrate.

If there are several spider cracks, small holes, or divots that need to be addressed, use **Colossal 117-MRS** or for Self-Leveling needs use **Colossal 117-CSL** to create a moisture-resistant preparation process before installing the flooring with **Colossal 117-HMA**.

If the cracks are dynamic such as expansion joints, use **Colossal 117-MJF Movement Joint Filler**, a two-part, polymer-based compound, which is moisture resistant and remains flexible to honor movement in the slab.

## BOND FAILURE CHALLENGE

Compromised or missing vapor barriers are the leading cause of bond failures as the MVER, when tested by an in situ probe, is often at maximum levels causing epoxy sealers to blister or conventional adhesives to emulsify. When moisture tolerances and pH levels are exceeded, this situation often leads to bond failure.

## MOISTURE DEFENSE SYSTEM SOLUTION

**Colossal 117-HMA** is a two-part, chemically reactive, urethane-based adhesive that has NO moisture limitations and is not pH sensitive. This innovative product maintains the bond indefinitely, allowing the MVER to escape to the atmosphere through the seams of the flooring.



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## WIDE-SPREAD MOISTURE CHALLENGE

In a large area, such as a re-purposed building with an old slab, a missing vapor barrier can cause a wide-spread issue.

## MOISTURE DEFENSE SYSTEM SOLUTION

To create a dependable moisture barrier, apply **Colossal 117-USL Urethane Self-Leveler**, a two-component urethane leveling compound capable of creating a moisture barrier of up to 100% RH with **Colossal 117-EPS Primer and Sealer**.

If the concrete slab is new, with an intact vapor barrier, **Colossal EMB Epoxy Moisture Barrier** can be used to mitigate moisture pressure from a humid sub-floor to an acceptable level before installing with **Colossal 117-HMA**.