

## Technical Bulletin #16-A Key Epocon SL Moisture Mitigation System

### 'Reservoir' Topping is Preferred Treatment vs. 'Block Out' Moisture Primers

Key Epocon SL is the preferred surface treatment for excessive moisture in concrete slabs due to superior performance as a "reservoir" system and the ability to tolerate unlimited moisture levels, whether testing with the calcium chloride test method (ASTM F1869-11) or relative humidity probe test method (ASTM F2170-11). Regardless of pre-installation moisture test data, moisture levels may increase in the future with concrete slabs on grade if there is a damaged or nonexistent moisture vapor retarder. Pre- installation moisture testing measures moisture levels at a particular point in time and cannot predict with absolute certainty what future moisture levels may be, however it is the best method currently available to the flooring industry. Key Epocon SL is a unique water-based epoxy topping that has microscopic porosity which serves as a buffer layer or reservoir to absorb and diffuse the moisture drive and resulting accumulation of soluble salts underneath the floor topping resin or floor covering adhesive. This eliminates the potential for osmotic cells to form underneath the flooring system. Osmotic cell reactions are generally considered by the flooring industry to be the leading cause of blisters in floor coverings and resin floor toppings/coatings.

Many concrete moisture mitigation epoxy primers are described as "block out" primers because they possess very low permeability. These products are effective at preventing ("blocking out") excess moisture from coming in contact with moisture sensitive floor resins and floor covering adhesives. They are also resistant to high alkaline conditions such as what occurs when moisture saturates the upper layer of concrete, and high alkalinity can degrade acrylic based adhesives resulting in loss of bond. However, most of these "block out" primers have limits on allowable moisture levels and performance exclusions for slabs containing "excess" soluble salts and un-reacted silicate gels--- which are the main driving mechanism for osmotic cells and eventual blisters to form. ***Key Epocon SL will provide protection against concrete slabs with "excess" soluble salts and unreacted silicate gels. Key Epocon SL has been used on many projects since its creation in 2001 with no reported failures.***

Please contact Key Resin Company for further information.

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