

TECHNICAL BULLETIN: #15-101



MIX DESIGN CONSIDERATIONS

MOXIE SHIELD 1500
PENETRATING CONCRETE SEALER

VAPOR BARRIERS, CORROSION INHIBITORS, CURING COMPOUNDS AND BONDBREAKERS

1. Vapor Barriers

A sand and visqueen vapor barrier is not necessary nor is it recommended with the use of MOXIE SHIELD 1500 Penetrating Concrete Sealer, in slab-on-grade construction. A vapor barrier will slow down the dehydration of concrete and extend the time for the final chemical process of Moxie Shield 1500 Penetrating Concrete Sealer. The time of dehydration may be three to six additional months before flooring can be installed, weather dependent.

2. Corrosion Inhibitors

Moxie Shield 1500 Penetrating Concrete Sealer is a corrosion inhibiting penetrating sealer. It forms a passive corrosion inhibiting barrier initially, and eventually forms a permanent, cementitious, corrosion inhibiting barrier. Furthermore, the impermeable nature of the concrete prevents the ingress of chloride ions. Calcium nitrite, the chemical category of a typical corrosion inhibiting admixture forms the same passive barrier around the reinforcing steel as does the Moxie Shield 1500 Penetrating Concrete Sealer. However, in order for calcium nitrite admixtures to achieve the same high level of corrosion resistance as Moxie Shield 1500 Penetrating Concrete Sealer, the dosage of calcium nitrite admixture would need to be substantially increased, making this type of corrosion inhibiting admixtures cost prohibitive. Additionally, the most important aspect is to completely restrict the penetration of any chloride ions. Continual leaching of soluble compounds, including chloride ions, weakens the concrete and in turn produces additional permeability which exacerbates the corrosion of reinforced concrete. The impermeable nature of the concrete, when treated with Moxie Shield 1500 Penetrating Concrete Sealer, does not allow any leaching of the concrete components when exposed to water or high humidity.

3. Curing Compounds

A curing compound is not recommended. Flooring manufacturers, as well as new architectural recommendations, prohibit the use of curing compounds due to the high incompatibility with the new VOC compliant adhesives. Moxie Shield 1500 Penetrating Concrete Sealer restricts the rapid loss of surface water, under the performance criteria of ASTM C309 - Specification for Membrane Forming Curing Compounds. Fog misting with water may be used in temperatures in excess of 90° F and in conditions where extreme evaporation exists, such as low humidity with high winds.

4. Bondbreakers

Bondbreakers which are CHEMICALLY REACTIVE are compatible with Moxie Shield 1500 Penetrating Concrete Sealer. MAXI TILT "E", Dayton JP-6 or equal are acceptable. Apply Moxie Shield 1500 Penetrating Concrete Sealer as a curing compound. Allow the Moxie Shield 1500 Penetrating Concrete Sealer approximately one to two weeks of cure time prior to application of bondbreaker. Apply primer coat of bondbreaker as per manufacturers instructions followed by a second coat of bondbreaker. Mist water onto the primed surface. The misted water should "bead up." If not, then apply another coat of bondbreaker. Bondbreaker may not stick to the surface of the slab and may need to be removed from the contact side of the cast tilt-up panel. Follow all manufacturer's instructions.