



## PROTECTING DECK REINFORCEMENT FROM CORROSION

Rebar corrosion can be a hidden danger. Undetected, corrosion quietly weakens what appears to be a durable concrete parking deck. Corrosion is caused by moisture coming into contact with untreated rebar. When the steel oxidizes or rusts, the original steel diameter can expand to almost three times its original size. This expansion is accelerated when the moisture contains salt. The expanding steel slowly pushes outward to the concrete and, in time, the concrete cracks. With cracking, moisture can easily gain access to the rebar, turning cracks into spells. Left untreated, the bond between the steel and concrete fails.

Keeping rebar free from moisture is the best way to prevent corrosion, but this is a difficult task for parking deck owners due to the openness of their structures. Wind-driven rain, fog, and vehicle-carried snow constantly bring moisture into the “dry” concrete.

Choosing the proper coating is an effective method of reducing trapped moisture from attacking steel reinforcement within the concrete. For most parking deck applications, it’s best to select a waterproofing coating that also allows moisture vapor to migrate from the concrete into the atmosphere. These coatings act as sealers that repel water drops from entering the concrete, and also have microscopic openings that will allow the smaller water vapor to evaporate.

These corrosion-preventing coatings are more than coverings. Their polymers interact chemically with the host concrete to create a strong bond. They are not subject to tears, bubbles, or delamination’s common to covering coatings.