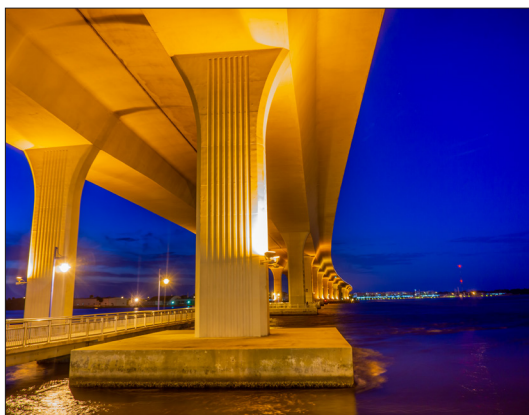


NEWS ALERT



How to Mitigate Rebar Corrosion in Precast Concrete



Precast concrete is a high-quality building material with countless uses: for bridges, parking ramps, light poles, culverts, prefab houses, tanks, and much more. Since precast concrete is made and cured in a controlled environment, it has a low risk of corrosion vs. cast-in-place concrete. That is . . . until cracking occurs, as can often happen during transportation. Once cracks form, corrosives can enter and additional freeze-thaw cracking can occur, leading to long-term corrosion damage. Fortunately, [Cortec® MCI®](#) is an easy way to arrest corrosion and extend service life at any stage in the precast concrete lifespan.

MCI® Admixtures for New Precast Elements

Although many engineers understandably see no need to add corrosion inhibitors to the precast concrete mix, this is the best place to do so to minimize future problems when long service life is desired. Admixtures such as [MCI®-2005 NS](#) do not negatively affect the ready-mix. They introduce Migrating Corrosion Inhibitors that form a protective molecular layer on the surface of metal reinforcement, delaying time to corrosion and reducing corrosion rates once started. Precast elements that contain an MCI® admixture are already prepared to fight corrosion if cracking occurs from normal wear and tear in transit.

MCI® SACIs for Existing Precast Elements

While the use of MCI® admixtures is ideal, sometimes it is difficult to convince decision-makers that another product is needed until the problem becomes obvious. Conveniently, MCI® comes in multiple forms that can be applied even after concrete elements are cast. For example, an excellent response to finding cracks on precast bridge segments stored at the construction site is to apply an MCI® SACI (surface applied corrosion inhibitor). [MCI®-2020](#) offers the highest concentration of Migrating Corrosion Inhibitors that penetrate into concrete and eventually make their way to the reinforcing steel. The addition of a water repellent helps seal the MCI® in and corrosives out. Another option is to apply a two-in-one MCI® water repellent such as MCI®-2018. This SACI combines Migrating Corrosion Inhibitors with a 100% silane water repellent that guards against the intrusion of water, chlorides, and carbonation.



Cortec® Corporation is the global leader in innovative, environmentally responsible VpCI® and MCI® corrosion control technologies for the Packaging, Metalworking, Construction, Electronics, Water Treatment, Oil & Gas, and other industries. Headquartered in St. Paul, Minnesota, Cortec® manufactures over 400 products distributed worldwide. ISO 9001 and ISO 14001 Certified, and ISO 17025 Accredited.





MCI® for Precast Concrete Repair

Sometimes, corrosion has already gone so far that precast concrete elements must be repaired. MCI® Technical Sales and Product Manager, Ash Hasania, found this to be the case when he encountered a client with deteriorating concrete light poles that were more vulnerable to corrosion because of old, poor quality concrete cast in a slender design. [MCI®-2023](#) was used to re-passivate rusted rebars. [MCI® Mini Grenades](#) were added to the ready-mix for the new concrete patches. Once the concrete cured, surfaces were treated with MCI®-2020 and [MCI®-2018](#) for additional corrosion protection. Going forward, the customer began adding MCI®-2005 to the light poles during casting.



Precast and Prevent with MCI®

Precast concrete is everywhere: along the road, under the ground, and sometimes even at home. In spite of the quality advantages of precast concrete vs. cast-in-place concrete, prefab elements still face corrosion risks as a result of cracking and other issues. MCI® offers a simple solution to extend the service life of precast concrete early or late in the process. Contact Cortec® MCI® to learn more about fortifying your precast concrete structures with Migrating Corrosion Inhibitors: <https://www.cortecmci.com/contact-us/>

Keywords: *precast concrete lifespan, precast concrete vs cast in place, extend service life of concrete, MCI, Migrating Corrosion Inhibitors, From Grey to Green, Cortec, how precast concrete is made, admixtures, rebar corrosion in concrete*