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Attention: Editor
December 15, 2025
PRESS RELEASE

MCI® Concrete Admixtures Deliver Corrosion Protection Without Accelerating Set Times in Hot Weather

As the world rotates from summer to winter in the north and winter to summer in the south, engineers and contractors in the Southern Hemisphere are getting ready to face a busy construction season with hot weather challenges. One concern is accelerated concrete set time—which goes even faster with the wrong corrosion inhibitor. For anyone looking to fight corrosion and extend the service life of reinforced concrete structures, Cortec® recommends the use of MCI® admixtures that add corrosion protection without accelerating set time.

The Importance of Corrosion Inhibiting Admixtures

Reinforced concrete structures like bridges, parking ramps, or high rises built near the ocean or in regions where winter temperatures drop below freezing have higher risks of corrosion caused by salty sea air or deicing salts. When these chlorides enter concrete cracks or pores, they accelerate corrosion, forcing rebar to expand and put pressure on the overlying concrete until it cracks, spalls, and eventually

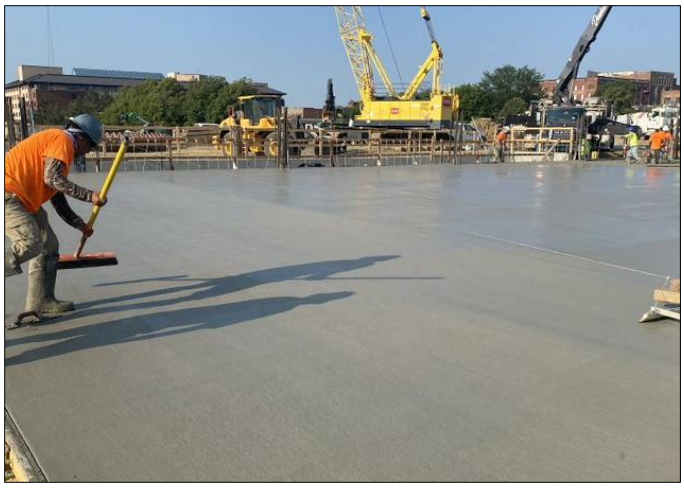
requires structural repair. Anti-corrosion additives for concrete fight this process from day one, delaying the need for repairs and promoting infrastructure durability.

Hot Weather Challenges of Calcium Nitrite Admixtures

While calcium nitrite (CNI) is a common corrosion inhibiting concrete admixture, one challenge is that it accelerates set time, making concrete stiff and finishing difficult in hot summer temperatures and tropical zones. This rapid set acceleration can create "cold joints," or weak points in the concrete that can lead to future structural problems.

Hot Weather Advantages of MCI® Admixtures

In contrast, MCI®-2005 and MCI®-2005 NS add corrosion protection to the concrete mix without accelerating set time. MCI®-2005 has natural set-retarding properties and is a USDA Certified Biobased Product. MCI®-2005 NS offers "normal set" properties that allow contractors to treat the concrete mix according to normal procedures on a high temperature day. Both MCI® admixtures are certified to meet NSF Standard 61 for use in potable water structures and can be used at a much smaller dose than CNI since MCI® works independent of expected chloride content.



Best PT Mix Ever!

An excellent example of MCI®-2005 NS in action comes from a post-tension (PT) parking ramp project in North America, where the contractor was facing a heat index of 38 ºC (100 ºF) at only 9:30 in the morning. The general superintendent was very concerned about continuing the project during the daytime due to a recent bad experience with CNI. However, his MCI® regional sales manager reassured him that they did not have to wait until evening if they followed their normal procedures for a 38 ºC (100 ºF) day. Accordingly, the contractor added his desired set retarder, plasticizer, and supplementary cementitious material (SCM) and went ahead with the pour. The crew immediately noticed that placement and consolidation was easier than with CNI. They also had more bleed water and great finishing results. The superintendent said it was his best PT mix ever, and several local ready-mixers included MCI®-2005 NS in parking garage bids the following week after discovering how well it worked.*

Make Hot Weather Easier for Construction Workers

If you live in a climate that needs corrosion protection and is entering the warm season, be sure to choose your corrosion inhibiting admixtures wisely. With temperatures rising, it is more important than ever not to accelerate concrete set time.

Make life easier on contractors and ready-mix crews by specifying an MCI® admixture that fights corrosion and is easy to work with. Contact Cortec® to discuss the best admixture option for your next concrete pour.

Keywords: concrete set time control in hot weather, avoiding cold joints in hot weather concreting, CNI vs MCI, concrete admixtures, corrosion protection in concrete, Cortec press release, extending concrete service life, concrete corrosion inhibitors, Migrating Corrosion Inhibitors (MCI), how to prevent rusted rebar in concrete

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