



MIGRATING CORROSION INHIBITORS
FROM GREY TO GREEN



Cortec® MCI® Adds ICRI Talent

We were pleased to welcome Jon Connealy to the Cortec® MCI® regional sales team in November! Jon has an extensive background of almost 20 years in the construction industry with half of that time specializing in materials for concrete. He started his longtime membership and service in the International Concrete Repair Institute (ICRI) in 2009 and is the current Region 5 Director and Secretariat for ICRI National. He was also recently named as one of ICRI's "40 under 40."

Sustainable solutions for the concrete building and repair industry are Jon's passion, and his knowledge of all phases of concrete design, maintenance, and repair will be invaluable as he supports MCI® distributors and users in the U.S. "Central Region" (Minnesota, Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Colorado). Join us in welcoming him to the team and don't hesitate to reach out to him for assistance at any time!

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In The News

New Weathering Test Chamber Helps Evaluate Performance of MCI® Coatings and Surface Treatments

Cortec® Laboratories has upgraded its lab with new equipment that can be used for the evaluation of MCI® coatings and surface treatments, among other Cortec® technologies. The new UV Weathering Chamber allows us to test the stability of materials such as MCI® EcoRainbow® Architectural Coating under UV exposure, high humidity, and fluctuating temperatures. In a recent example, we were able to put the UV Weathering Chamber to good use by testing the color fastness of fugitive dyes in MCI®-2018 FD and MCI®-2019 FD surface treatments!

QUV Accelerated Weathering Tester by Q-Lab



The Long-Awaited Vukovar Water Tower Memorial Has Opened!

If you have followed Cortec® MCI® news for the last few years, you have probably heard about the restoration of the Vukovar Water Tower more than once. The water tower, located in Croatia, was hit by artillery more than 600 times but never collapsed during the Croatian Homeland War in the early 1990s. It is considered an important symbol of Croatian independence, victory, and new life. Because of this, it has been undergoing restoration to become a monument with a memorial room, memorial pathway, and viewing area.

Cortec® Corporation (founded by Croatian-American Boris Miksic, with several offices/plants located in Croatia) was proud to donate MCI® materials for the restoration of this water tower. The tower had many areas of damaged concrete and corroded rebar that were unprotected for 25 years following the war. After several years of renovation (which included the use of CorrVerter® MCI® Rust Primer, MCI®-2020, MCI®-2006, and MCI® EcoRainbow® Architectural Coating), the water tower was officially opened October 30th, 2020, with a grand opening ceremony and concert that was streamed online due to COVID-19 precautions.

To learn more about the water tower and read the full story of its MCI® restoration, please log in to Case History #702: https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch702.pdf

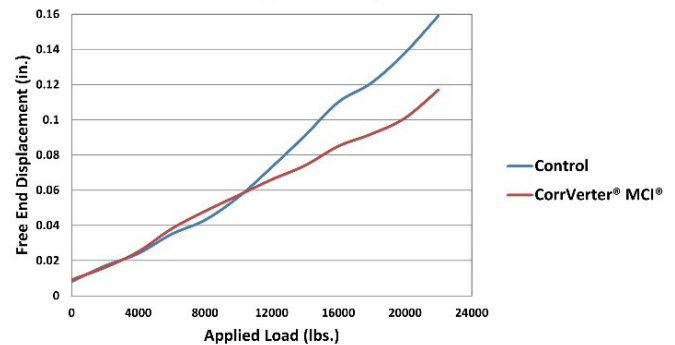


CorrVerter® MCI® Versus Competitor Bonding Agents

When approaching concrete repairs, good surface prep of exposed reinforcing steel is critical to achieving adequate adhesion to patch materials. ICRI's 310.1R-2008 "Guide for Surface Preparation for Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion" reminds us that these surfaces should be free of concrete, dirt, and corrosion products.

CorrVerter® MCI® Rust Primer stands out with clear performance and application advantages to mitigate rebar corrosion for concrete repairs. CorrVerter® MCI® eliminates the intensive labor of abrasive or water blasting and shows similar bond strength to concrete compared with uncoated rebar (bond testing according to ASTM A944). Furthermore, competitor bonding agents offer vague or reduced corrosion protection benefits. One data sheet for a prominent cementitious epoxy resin claimed to reduce the corrosion rate by over 40% and triple time to corrosion, without specifying a standard test method used in the study. Another bonding primer reported excellent corrosion resistance in 120 hours of salt spray testing according to ASTM B-117 (application recommended at 31 mils [787.4 µm] minimum). A third competitive bonding agent alleged corrosion protection with no support data listed. In stark contrast, CorrVerter® MCI® Rust Primer reports 500 hours of corrosion resistance in salt spray testing (ASTM B-117) at only 3-5 mils (75-125 µm) DFT (applied at 8.7-14.5 mils [217.5-362.5 µm] WFT).

Bond Testing According to ASTM A944



Considering these characteristics, CorrVerter® MCI® Rust Primer appears to be the clear winner for concrete repairs in terms of convenience and dependability. Take a closer look at this topic here: https://www.cortecvci.com/whats_new/announcements/CorrVerter_MCI_Stand_Stand_Out_as_Clear_Winner_Text_PR.pdf

Applying CorrVerter® MCI®



Cured CorrVerter® MCI®





Applying Mortar over CorrVerter® MCI® and MCI®-2020



Have You Discovered Our New 'Green' Chemistry Cleaner?

If you like the biological-based power of MCI®-2061 but have not yet heard about the newest addition to our line of MCI® "green" chemistry concrete cleaners, you will be excited to learn about MCI®-2062!

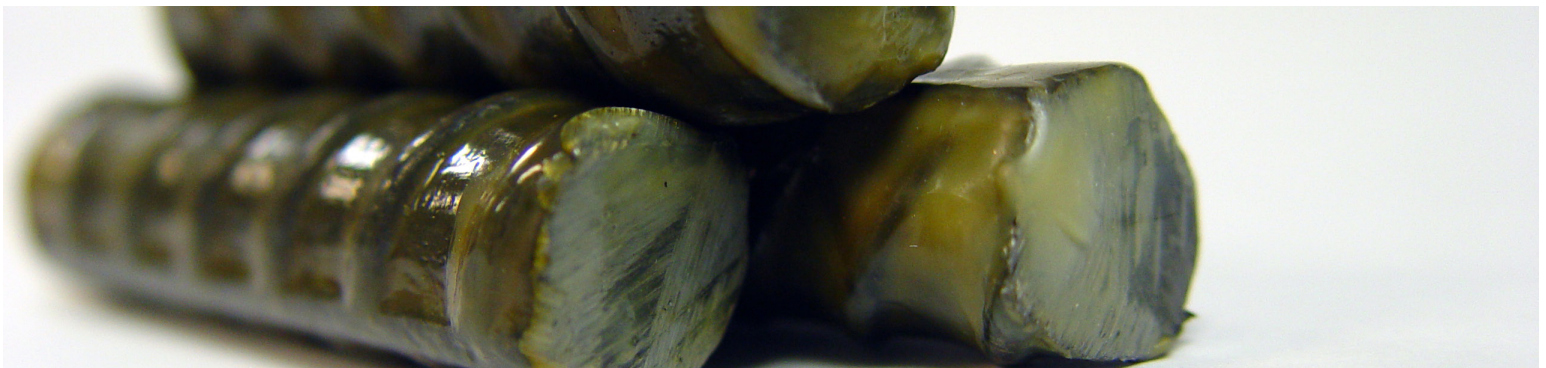
While MCI®-2061 digests hydrocarbon stains, MCI®-2062 targets stains from organic wastes, proteins, fats, greases, and starches. It is therefore highly suited to cleaning soiled concrete in and around dumpsters, restrooms, and food processing facilities.

MCI®-2062 is a multipurpose concentrated bio-enzymatic blend that combines powerful cleaning chemistry with free enzymes and microorganisms capable of biodegrading a wide range of organic wastes. All components work in synergy: cleaning agents lift and disperse the waste while enzymes work to speed up digestion by microorganisms. Read more about MCI®-2061 and MCI®-2062 in action in our case history section below!



MCI® CorShield®/MCI® Coating for Rebar NT Have Merged!

In November, we officially consolidated MCI® Coating for Rebar NT under the MCI® CorShield® name for clearer identification of our recommended go-to corrosion protection coating for steel reinforcement exposed to the elements. This is a great option not only for protecting rebar stored outside on the construction site, but also for protecting reinforcement that has already been installed but remains exposed during construction delays, or for protecting damaged areas on epoxy coated rebar. Find some excellent real-life examples of these types of applications listed amongst our case histories.



Case Histories

The last six months have seen an exciting number of newly released MCI® case histories! Read some highlights below.

Rebar Preservation at Saudi Medical City

A few years ago, in the summer of 2017, a new medical complex being built in Saudi Arabia faced construction delays after much of the concrete work was already finished. This left quite a few exposed rebar in expansion joints and in-fill beams. CorrVerter® MCI® Rust Primer (for rusted rebar) and MCI® CorShield® (for non-rusted reinforcement) provided an economical and satisfactory solution to preserve the exposed reinforcement during the delays. Read the full case history here: https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch694.pdf



Golf Course Concrete Parking Pad Cleanup with MCI®-2061

MCI®-2061 was used at a golf course in August 2020 to clean up a concrete pad where parked equipment had left oil stains. The customer was very happy with the results and effortless application (no blast cleaning), and treatment was captured in a short demo video (watch here: <https://www.cortecvci.com/new-demo-video-available-on-mci-2061-concrete-cleanup/>). Read the full case history here: https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch697.pdf



Preserving Damaged Rebar in Dubai Utility Project

May 2020 found workers applying MCI® CorShield® to rebar at a utility project in Dubai. The protective epoxy coating had been damaged during installation, so MCI® CorShield® was applied to the damaged areas to ensure long-term preservation. Read the full case history here: https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch691.pdf



Solving Calcium Nitrite Set Problems with MCI®-2005 NS

In the summer of 2020, contractors were busy at work pouring concrete for a parking garage that would be part of a new luxury condo in Toronto, Ontario. Temperatures were high, approaching 100 °F (38 °C), and the calcium nitrite admixture specified to inhibit corrosion was accelerating the concrete set time far too much, creating unintentional cold joints. These cold joints can weaken the concrete and cause problems farther down the road. With temperatures staying high, the contractors began looking for a corrosion inhibitor that would not accelerate set time.

Form & Build Supply recommended MCI®-2005 NS. This had no impact on set time and allowed the contractors to eliminate set retarders previously needed to counteract the effects of calcium nitrite. The work crew noticed a stark contrast between MCI®-2005 NS and calcium nitrite and had no more early-setup problems in the remaining 14,126 ft³ (400 m³) of concrete poured. The experience led the contractors to affirm that they would change the specs to MCI®-2005 NS in any future projects that specified calcium nitrite. Read the full case history here: https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch711.pdf



MCI® Super Remover for Corroded FPSO Chains

Some products like MCI® Super Remover are favorites for use even in non-construction applications. One Cortec® distributor in Indonesia recommended this for a company restoring and preserving chains from a FPSO (floating production storage and offloading) unit that was going into layup last year during the COVID-19 pandemic. The corroded pick-up and hang-off chains were first dipped in a 1:3 dilution of MCI® Super Remover for initial rust removal. The remaining rust was removed with VpCI®-423 before rinsing the chains in VpCI®-416 and applying Cor-Shield® VpCI®-369 removable coating for ongoing preservation. A key benefit of this method was that it did not require special cleaning tools on intricate surfaces. Read the full case history here: https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch693.pdf





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Case Histories

Gahan House Walkway Cleanup

In September 2020, the Gahan House Restaurant used MCI®-2062—our new “green” MCI® cleaner for organic waste—to clean up the concrete slab outside the back door of the restaurant. Building management had asked the restaurant to clean up organic and food waste stains that had occurred when taking garbage to the dumpster. The restaurant wanted a cleaner that was not abrasive or damaging to the concrete appearance. They used MCI®-2062 to clean up and were very happy with the results. Read the full case history here: https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch690.pdf



STAY CONNECTED

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E-News Lists: <https://go.pardot.com/l/562712/2018-12-04/j7mv74>

MCI® Facebook: <https://www.facebook.com/cortecmci>

MCI® LinkedIn: <https://www.linkedin.com/showcase/mci-migrating-corrosion-inhibitors/>



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