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Attention: Editor

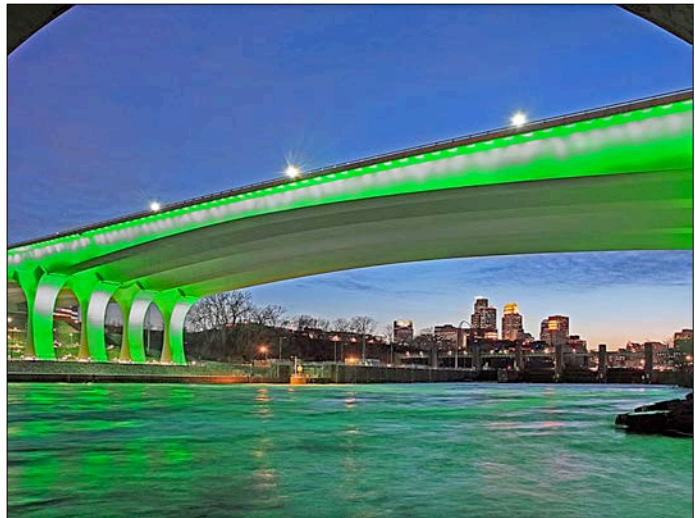
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PRODUCT RELEASE



Cortec's New MCI®-2012 IntegraPel: Prevents Corrosion Of Steel Reinforcement In New Structures!

MCI®-2012 IntegraPel is an integral waterproofing and corrosion inhibiting admixture designed to prevent or retard corrosion of steel reinforcement in new concrete structures. It is a water-based organic admixture. MCI®-2012 IntegraPel uses a two-pronged approach to protect embedded steel. It reduces the intrusion of corrosive species into the concrete and provides a self-replenishing protective layer on embedded reinforcement with Cortec's patented, time-proven migratory corrosion inhibitor (MCI®). MCI®-2012



IntegraPel differentiates itself from other waterproofing admixtures by directly protecting the reinforcing steel, the entity that plays the most important role in determining the longevity of a concrete structure.

MCI®-2012 IntegraPel is particularly suited as a corrosion preventative for concrete construction exposed to corrosive environments (carbonation, chlorides, and atmospheric attack). This product is formulated to reduce porosity of the concrete and make the concrete waterproof.

It also incorporates corrosion inhibitors that protect the steel rebar itself. These two mechanisms work to synergistically enhance the protection. MCI[®]-2012 IntegraPel admixture is added to concrete prior to placement, thus inherently increasing the durability of the concrete/mortar. This economically effective liquid is recommended for all reinforced concrete including precast, pre-stressed, and post-tensioned structures.

ADVANTAGES

- Reduces absorption 55-57% per BS 1881-122
- Protects against ingress of water, chlorides, and other aggressive contaminants
- Forms a self-replenishing monomolecular corrosion-inhibiting layer on the steel, inhibiting the electrochemical corrosion process between metal and chloride, oxygen, and moisture in concrete.
- Not a vapor barrier
- Reduces efflorescence
- Effectively delays onset of corrosion in new structures
- Effectively reduces corrosion rates on metals
- Non-toxic, contains no nitrites, phosphates, or chromates
- Extends the service life of structures
- Doesn't require special mixing procedure for its effectiveness
- A non-restrictive material during transportation
- Doesn't change concrete set time
- Conforms to ASTM C1582 Table 1 regarding concrete strength



TECHNICAL DATA FROM LABORATORY TESTS

Water Repellency Tests

Water Permeation Test per RILEM Test Number 11.4 showed that MCI[®]-2012 IntegraPel provided 100% improvement vs. the untreated control. Water Adsorption Test per Alberta Technical Standard BT001, and BS 1881 Part 122, showed MCI[®]-2012 IntegraPel treated concrete absorbed 55-57% less water vs. the untreated control. The water repellency tests indicated that MCI[®]-2012 IntegraPel produced a concrete of lower water permeability, decreasing ingress of electrolyte when placed in service in harsh environments.

Concrete Property Tests*

| | Control | W/MCI®-2012 IntegraPel | |
|--|-------------|---------------------------|--------------------|
| Slump (Inches) (ASTM C143) | 3.75 | 7.0 | |
| % Air Content (ASTM C231) | 2.8 | 4.5 | |
| Compressive Strength (psi) (ASTM C39) | | | % Of Change |
| 3 Days | 3530 | 3300 | 6.5% |
| 7 Days | 4040 | 3850 | 4.7% |
| 28 Days | 5410 | 4780 | 11.6% |

*Test performed at American Engineering Testing

Corrosion Protection

The Electrochemical Impedance Data (EIS) indicated that the rebar in MCI®-2012 IntegraPel treated concrete exhibited 4.6 times Polarization Resistance vs. the control, or 78% reduction in corrosion rate.

EIS Measurement

(12 day immersion in 3% NaCl solution)

| Sample | Rp (Kohm) | Corr. Rate (uS/cm ²) | % Improv |
|---------------------------|-----------|-------------------------------------|----------|
| Control | 13.25 | 0.075 | - |
| w/MCI®-2012 IntegraPel | 59.6 | 0.017 | 78% |

MCI®-2012 IntegraPel must be added to the concrete mix at the batching plant and mixed thoroughly prior to loading into ready-mix truck drum. It should be added along with the mix water, not added directly to the cement. MCI®-2012 IntegraPel may be used with all types of Portland cements.



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Cortec® Corporation is the global leader in innovative, environmentally responsible VpCI® and MCI® corrosion control technologies for Packaging, Metalworking, Construction, Electronics, Water Treatment, Oil & Gas, and other industries. Our relentless dedication to sustainability, quality, service, and support is unmatched in the industry. Headquartered in St. Paul, Minnesota, Cortec® manufactures over 400 products distributed worldwide. ISO 9001, ISO 14001:2004, & ISO 17025 Certified.

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