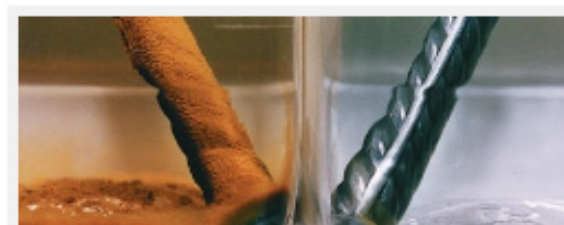




## New Admixture Technology to Extend Durability of Concrete

### Cortec Corporation recently launched MCI 2005 to protect reinforcing metal in concrete.

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To combat the effects of corroding rebar in deteriorating concrete, which is often the cause of costly repairs and financial losses, Cortec Corporation has launched a corrosion solution called MCI 2005.

MCI, which stands for Migrating Corrosion Inhibitor, is a patented technology developed by St. Paul, Minn.-based Cortec to protect reinforcing metal in concrete from corrosion.

A water-based corrosion inhibiting concrete admixture, MCI 2005 is an organic admixture that was designed to protect carbon steel, galvanized steel and other metals embedded in concrete from corrosion induced by carbonation, chloride, atmospheric attack and other corrosive contaminants.

The corrosive effects of carbonation and chlorides cause a breakdown of the natural passivating protection of steel. When MCI comes in contact with steel it forms a protective layer. Using x-ray photoelectron spectroscopy, or XPS, this layer has been measured to be between 20 and 100Å thick at the molecular level said the company.

A unique feature of MCI 2005 is that it can migrate a considerable distance through concrete, forming a corrosion inhibiting protective layer on metals. It maintains structural integrity and extends the service life of concrete structures while being environmentally friendly.

MCI 2005 is ambiodic (mixed), meaning it protects both anodic and cathodic areas within a corrosion cell. It contains a synergistic blend of aminoalcohols and salts of carboxylic acids, which form a protective molecular layer on embedded reinforcement, protecting against corrosion even in the densest concrete.

MCI 2005 has been used in numerous applications worldwide including Princess Tower in Dubai, the world's tallest residential building. It was also used in the construction of a new drinking water reservoir in Guayaquil City, Ecuador as well as the 829.84-meter tall Burj Khalifa Tower, also in Dubai and the world's tallest building, whose construction used 330,000 cubic meters of concrete.

After a thorough review of multiple technologies MCI 2005 was chosen for incorporation in the concrete mix design to extend the service life of these buildings, which are exposed to airborne salts and harsh groundwater conditions.

This corrosion-inhibiting admixture is environmentally friendly, non-toxic, non-flammable and is bio-based as it is produced from sugar beets, a renewable resource. It does not contain any nitrites and will not adversely affect any physical properties of the concrete mix said the company. Lab and field-tested worldwide, MCI 2005 conforms to ASTM G109 - Standard Test Method for Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments and has approval to meet NSF Standard 61 approved for potable water applications.

To learn more visit Cortec on the web at [www.cortecvci.com](http://www.cortecvci.com)