

AN ORGANIC CORROSION INHIBITOR FOR REINFORCED CONCRETE STRUCTURES



MCI® 2020 was chosen for renovation of Pentagon and has won International Concrete Repair Institute Award for the best repair project.

MCI® 2020 provides strong corrosion protection against carbonation, chlorides, and other contaminants suitable for preventative maintenance of new or existing reinforced, precast, prestressed, post-tensioned, or marine concrete structures, bridges, highways, and industrial floors exposed to aggressive environments, such as chemicals, deicing salts, carbonation, atmospheric attack. It has been developed for use in parking garages, concrete piers, dams, offshore platforms, piles, pillars, pipes, utility poles, cooling towers and concrete potable water structures and similar applications.



MCI 2020 was used for restoration of Alcatraz Island, the site of the Alcatraz Federal Penitentiary, located in the center of San Francisco Bay and surrounded by salt water and fog year-round. The National Park Service [NPS] selected MCI® 2020 to inhibit corrosion after loose, spalling concrete was removed.

Water based, non-flammable MCI® 2020 offers engineers, owners, contractors, DOTs, and other government agencies a powerful corrosion inhibiting technology to extend the service life of their reinforced concrete structures significantly. MCI® 2020 can be applied to new concrete or used for rehabilitation.

MCI®2020 is organic, surface applied, migrating corrosion inhibitor designed to penetrate cementitious materials including concrete, mortar, and limestone. It migrates in both liquid and vapor (gas) phases through the pore structure, forming a protective, molecular layer delivering embedded reinforcement and allowing vapor diffusion. It will migrate independent of orientation (horizontal, vertical or overhead up to 3 inches (8 cm) in 30 days.

It is an important component of Cortec®s High Performance Repair System™ (HPRS®). MCI® 2020 is easily applied by spray, brush, or roller and does not etch, stain, discolor, or otherwise harm glass, metals, or automotive paint. It does not contain calcium nitrite or wax and no removal of sound concrete is required.

Testing in both lab and field has proved its performance. Among other project case examples, MCI 2020 was successfully used on the Pentagon renovation and the project was awarded the ICRI award. Corrosion of embedded reinforcing steel was causing spalling on the walls of Pentagon. Carbonation on the walls lowered the pH of the concrete causing the corrosion. The requirements included: achieving a minimum 20-year design life, stopping water absorption, reducing or stopping corrosion, and maintaining the appearance of the walls. The repair program consisted of 200,000 ft² (18600 m²) of surface hand patch repair and over 1,000,000 ft² (92903 m²)

Cortec's MCI®2020 is effective against aggressive environments, including industrial, marine and tropical climates. When specified in new construction, it offers reinforcing steel superior corrosion protection against carbonation and chloride attack.



Once a concrete structure is built, it's impossible to coat the reinforcing steel with fusion-bonded epoxy to protect it from corrosion. MCI® 2020 however, can be easily added to new concrete or used for rehabilitation without significantly increasing construction costs.

treated with MCI® 2020 V/O, and a silicate based coating. MCI® 2020 V/O was chosen to protect and repair the walls based on its warranty and its fulfillment of the other specified repair design requirements. In a project that spanned more than nine years, MCI® 2020 enabled Pentagon building premium repair, rehabilitation, and protection for the next 50 years.

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MCI 2020 is used in construction and repair for numerous bridges worldwide, including the Charleswood Bridge.

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MCI® 2020 conforms to ASTM G 109, ASTM E 96, meets ANSI/NSF Standard 61 Approval for structures containing potable water and is RoHS compliant. **CM**

A unique feature of MCI® is that the inhibitor will migrate a considerable distance through concrete to protect embedded ferrous metals

