MCI®-2020 is organic, surface applied, migrating corrosion inhibitor designed to penetrate through 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 on embedded reinforcement and allowing vapor diffusion. MCI®-2020 provides strong corrosion protection against carbonation, chlorides, and other contaminants and will migrate independent of orientation (horizontal, vertical or overhead up to 8 cm - 3 inches - in 30 days).

Water based, non-flammable MCI®-2020 offers engineers, owners, contractors, DOTs, and other government agencies a time proven, corrosion inhibiting technology that will significantly extend the service life of their reinforced concrete structures. MCI®-2020 can be applied to new concrete or used for rehabilitation and will not delay construction or increase costs. Unlike standard inorganic inhibitors it does not have to come in contact with the reinforcing steel upon application. MCI®-2020 is considered ambiodic (mixed) which means it protects both anodic and cathodic areas within a corrosion cell. It contains a synergistic blend of amino-alcohols and salts of carboxylic acids which form a protective layer on embedded reinforcement delaying the corrosion process.

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

MCI®-2020 è stato scelto per il rinnovamento del Pentagono e ha vinto il premio International Concrete Repair Institute Award per il miglior progetto di rispristino.

MCI®-2020 is an inibitore organico migratorio della corrosione progettato per penetrare, una volta applicato sulle superfici, attraverso i materiali cementizi come calcestruzzo, malta e calcare. Migra sia in fase liquida sia in fase vapore (gas) attraverso i pori della struttura, formando uno strato molecolare protettivo sui rinforzi in essa incorporati e permettendo la diffusione del vapore. MCI®-2020 offre una forte protezione anticorrosiva contro carbonazione, cloruri e altri contaminanti, e migra indipendentemente dall'orientamento (orizzontale, verticale o aereo, fino a 8 cm in 30 giorni).

MCI®-2020, a base acqua e non incombustibile, offre a ingegneri, proprietari, terzisti, Dipartimenti dei Trasporti e altri enti governativi una tecnologia di inibizione della corrosione collaudata che aumenterà in modo significativo la vita utile delle strutture in cemento armato. MCI®-2020 può essere applicato a cemento nuovo o essere usato per il rispristino del vecchio, senza ritardare la costruzione o aumentare i costi. A differenza degli inibitori organici standard, non è necessario che durante l’applicazione entri in contatto con l’armatura di acciaio. MCI®-2020 è considerato ambiodico (misto); significa che protegge sia le zone anodiche sia le zone catodiche all’interno di una cella di corrosione. Contiene una miscela sinergica di amminoalcoli e sali di acidi carbossilici che formano uno strato protettivo sull’armatura d’acciaio, ritardando l’inizio della corrosione o riducendo il tasso di corrosione attuale.
the onset of corrosion as well as reducing existing corrosion rates. MCI®-2020 is recommended for: Preventative maintenance of existing reinforced, precast, prestressed, post-tensioned, or marine concrete structures, bridges, highways, and industrial floors exposed to aggressive environments (chemicals, deicing salts, carbonation, atmospheric attack), parking garages, concrete piers, dams, offshore platforms, piles, pillars, pipes, utility poles, cooling towers and concrete potable water structures. It is also 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. It’s excellent performance is proven in both lab and field testing. 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.

Case study
Corrosion of embedded reinforcing steel was causing spalling on the walls of Pentagon (Fig. 1). Carbonation on the walls lowered the pH of the concrete causing the corrosion. The requirements included: A minimum 20 year design life, stop water absorption, reduce or stop corrosion, and maintain the appearance of the walls. The repair program consisted of 18,600 m² (200,000 ft²) of surface hand patch repair and over 92,903 m² (1,000,000 ft²) 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. MCI®-2020 enabled Pentagon building premium repair, rehabilitation, and protection for the next 50 years.

For further information: www.cortecvci.com