



## MCI® -2020 Gel: A Deep-Reaching Solution for Corroding Rebar



Mitigating corrosion of embedded rebar is a perennial problem for reinforced concrete structures, requiring preventative maintenance and repair. Topical corrosion inhibiting treatments require a clean, properly prepared surface area to work as intended. Cortec's MCI®-2020 Gel is designed to work when proper surface preparation cannot be achieved or is economically undesirable, by delivering Cortec's proven Migrating Corrosion Inhibitor™ Technology directly to the depth of reinforcement.

MCI®-2020 Gel is an injectable corrosion inhibitor that provides a robust dose of corrosion protection directly where it is most needed. Once inside the concrete, the inhibitor can also move laterally through the concrete along the embedded reinforcement via liquid and vapor diffusion. MCI® molecules deposit across metal surfaces, forming a molecular layer that acts as a barrier to corrosive elements such as chlorides and carbonation.

MCI®-2020 Gel is considered a mixed inhibitor that protects against corrosion at both the anodic and cathodic areas of a corrosion cell. Unlike some of its competitors, MCI®-2020 Gel does not contain



secondary amines or nitrites, which together can form carcinogenic nitrosamines.

MCI®-2020 Gel is also non-flammable and non-combustible. It can be used in almost any concrete repair or maintenance application where it is deemed preferable to inject Migrating Corrosion Inhibitors rather than apply them as a surface treatment. These applications include any structure in a corrosive environment (carbonation, deicing salts, atmospheric attack), such as:

- Parking decks, ramps, and garages
- Marine structures, dams, or piers
- Balconies, decks, retaining walls, and lanais
- Building facades and window lintels
- Structural walls and equipment bases
- Below grade tunnels



MCI®-2020 Gel has been proven to be a successful alternative to topical treatments. One example of use is the repair of stone clad residential buildings in Israel. These buildings had an architectural style consistent with others in the region, which is known to have problems with corrosion of both reinforcement and stone cladding tile anchors, causing tiles to detach and start falling off a relatively short time after construction. Standard repairs can be expensive and ineffective, so Migrating Corrosion Inhibitors were used to enhance repair durability and keep the problem from repeating itself prematurely. Injecting MCI®-2020 Gel into holes drilled through stone cladding or grout lines was considered very successful and has led to similar applications in the region.