

MCI®-2020 Gel

DESCRIPTION

MCI®-2020 Gel is an injectable corrosion inhibitor which provides a robust dose of corrosion protection directly at the depth of steel reinforcement in concrete.

MCI®-2020 Gel utilizes the time-proven chemistry of Cortec's Migrating Corrosion Inhibitor™ (MCI®) Technology to migrate to steel reinforcement from injection locations. Once at the reinforcing steel, MCI® molecules deposit across the metal surface to form a monomolecular layer which acts as a barrier to corrosive elements such as chlorides.

MCI®-2020 Gel utilizes the same time-proven inhibitor formulation as the classic MCI®-2020 liquid, but with added thickener to increase ease of use and reliability in injection applications.

PACKAGING & STORAGE

MCI®-2020 Gel is available in 10.3 oz. (304 mL) caulking tubes, 5 gallon (19 liter) pails, 55 gallon (208 liter) drums, liquid totes, and bulk.

To ensure best product performance, store in original packaging, indoors, and out of direct sunlight at 40-100 °F (4-38 °C).

Shelf life: 2 years



HOW IT WORKS

MCI®-2020 Gel is an organic corrosion inhibitor. It is considered ambiodic (mixed), meaning it protects both anodic and cathodic areas within a corrosion cell. MCI®-2020 Gel contains a synergistic blend of amine salts of carboxylic acids which form a protective layer on embedded reinforcement, delaying the onset of corrosion and reducing existing corrosion rates.

By utilizing an injection application, MCI®-2020 Gel delivers active chemistry directly to the depth of steel reinforcement. At this depth, the inhibitor can move laterally through the concrete via aqueous, vapor, and interfacial diffusion along the embedded reinforcement.

MCI®-2020 Gel is effective at extending the service life of concrete structures exposed to corrosive environments (carbonation, chlorides, and atmospheric attack).

WHERE TO USE

- Steel-reinforced concrete bridges exposed to corrosive environments (carbonation, deicing salts, and atmospheric attack)
- Parking decks, ramps, and garages
- Marine concrete structures, dams, and piers
- Balconies, decks, retaining walls, and lanais
- Structural walls and equipment bases
- Below grade tunnels
- Window lintels

ADVANTAGES

- Solves corrosion problems in areas where surface corrosion treatments cannot be used
- Can be dosed to rebar depth, directly targeting problem locations and reducing time needed for migration of the inhibitor
- Migrates to adjacent areas to protect metal

MCI®-2020 Gel

- Economical to install and maintain
- Non-flammable, non-combustible
- No secondary amines or nitrites

PHYSICAL PROPERTIES

Appearance	Opaque yellow gel
pH	8.5-9.3 (10% water)
Density	9.0-9.5 lb/gal (1.03-1.09 kg/L)
Non-Volatile Content	25-35%

APPLICATION

Utilize desired hole size and fill depth to plan the spacing on the structure in question. For columns and beams, hole spacing should be half of the standard spacing. Drill holes to the level of the targeted steel reinforcement with a minimum depth of 2" (51 mm) for a 1" fill or 3" (76 mm) for a 2" (51 mm) fill. Space holes according to the recommended spacing and stagger consecutive rows by half of this value (see standard hole spacing example).

Center the application area such that the maximum distance from the edge of the protected area is 9" (230 mm). Clean the holes with oil-free compressed air for a minimum of 2 seconds to prepare the hole for injection.

MCI®-2020 Gel is injected into the predrilled holes by a hand-held caulk gun or piston pump, filling to the specified depth. After injection, cut off a length of closed cell backer rod sized for hole diameter, filling space between MCI®-2020 Gel and the top of the hole. Leave at least ½" (12.5 mm) at the top for proper patching. Fill the remainder of the hole with a class R3 or R4 repair mortar (per ASTM C928).

DOSAGE

Hole spacing is determined based on hole size and fill depth. Standard hole dimensions are ¾" (19 mm) and 1" (25 mm).

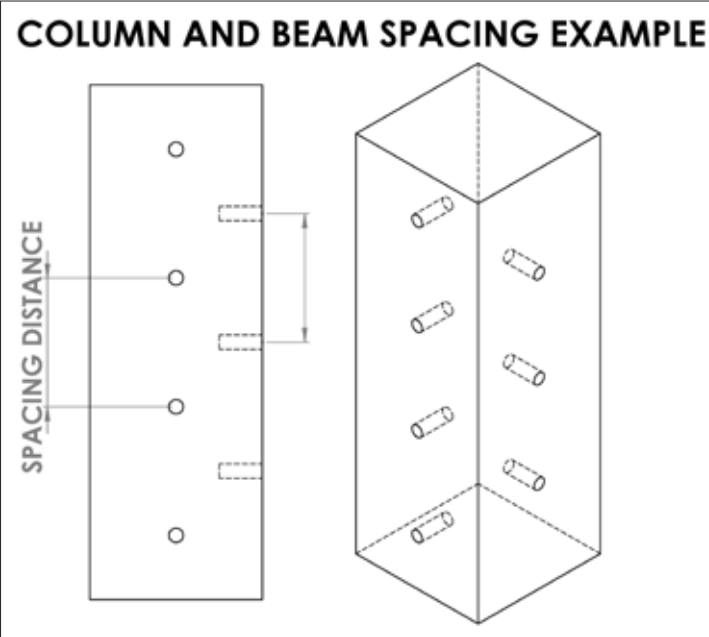
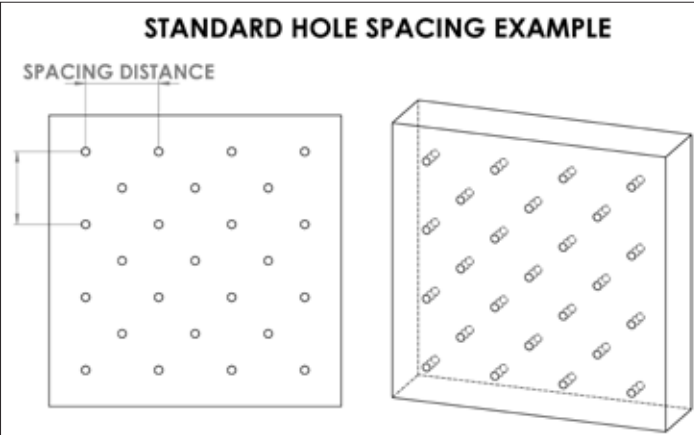
Any surface smaller than the intended hole spacing (such as columns and beams) should follow a modified placement strategy as detailed below:

If access is available to more than one face of a column or beam, the intended hole spacing should be followed, but the holes on opposite or adjacent faces should be offset as space allows. Reference figure below.
 If access is only available to one face, the product should be installed with a hole spacing of half the recommended distance for the given hole size and fill depth, offsetting as space allows.

See the dosage table and example placement charts for more information.

Hole Size	Fill Depth	Hole Spacing	Product Consumption by Surface Area		
			oz./yd2	yd2/gal	m2/L
¾" (19 mm)	1" (25 mm)	36" (0.91 m)	0.5	256	56.5
¾" (19 mm)	2" (51 mm)	42" (1.07 m)	0.74	173	38.2
1" (25 mm)	1" (25 mm)	48" (1.22 m)	0.5	256	56.5
1" (25 mm)	2" (51 mm)	54" (1.37 m)	0.78	164	36.2

Hole Size	Fill Depth	Hole Spacing	Holes Filled by Standard Packaging Units		
			Tube	Pail	Drum
¾" (19 mm)	1" (25 mm)	36" (0.91 m)	42	2600	28600
¾" (19 mm)	2" (51 mm)	42" (1.07 m)	21	1300	14300
1" (25 mm)	1" (25 mm)	48" (1.22 m)	23	1450	15950
1" (25 mm)	2" (51 mm)	54" (1.37 m)	11	725	7975



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