

Surface Treatment MIGRATORY CORROSION INHIBITOR (MCI®) PRODUCTS FOR CONCRETE

# **MCI®-2120** Concentrate



#### **DESCRIPTION:**

MCI-2120 is a concentrated product designed to be diluted 1:3 with potable water. Once diluted, MCI-2120 is designed to be used as a surface applied, migrating corrosion inhibitor that penetrates through cementitious materials including concrete, mortar, and limestone. MCI-2120 migrates in both liquid and vapor (gas) phases through the pore structure, forming a protective, molecular layer on embedded reinforcement. MCI-2120 provides corrosion protection against carbonation, chlorides, and other contaminants.

### **HOW IT WORKS:**

MCI-2120 contains organic corrosion inhibitors, which provide ambiodic (mixed) inhibition to protect both anodic and cathodic areas within a corrosion cell. MCI-2120 contains a synergistic blend of amine salts and carboxylic acids which form a protective layer on embedded reinforcement delaying the onset of corrosion as well as reducing existing corrosion rates.

### WHERE TO USE:

MCI-2120 Concentrate 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, and atmospheric attack).
- Parking garages
- Concrete piers, dams, offshore platforms, piles, pillars, pipes, utility poles, and cooling towers
- Concrete potable water structures
- As a component of Cortec's High Performance Repair System<sup>®</sup> (HPRS<sup>®</sup>).

### **ADVANTAGES:**

MCI-2120 offers engineers, owners, contractors, DOTs, and other government agencies a time proven, corrosion inhibiting technology that will extend the service life of their reinforced concrete structures.

- Protects against corrosion caused by carbonation, chlorides, and other aggressive contaminants
- Effectively reduces corrosion rates on metals with existing corrosion
- ANSI/NSF Standard 61 Approval for structures containing potable water
- Water based and non-flammable
- Does not etch glass
- Does not contain calcium nitrite
- Does not contain wax
- Does not require removal of sound concrete
- Allows vapor diffusion (not a vapor barrier)
- Easily applied by spray, brush, or roller
- Minimal curing time, traffic may resume minutes after application if necessary
- Migrates independently of orientation (horizontal, vertical, overhead)
- Migrates up to 3 inches in 30 days
- Proven performance in both lab and field testing



## PHYSICAL PROPERTIES: MCI-2120:

Appearance:Clear, slightly yellow to amber colored<br/>liquidpH:9.5-10.5 (1% aqueous)Density:8.9-9.2 lb/gal (1.07-1.10 kg/l)Shelf Life:24 months in sealed containerSTORAGE:32°F (0°C)-150°F (60°C)DO NOT FREEZE

#### MCI-2120

#### (after 1:3 dilution with potable water):

Appearance:	Clear, yellow, viscous liquid
pH:	9.0-10.0 (1% aqueous)
Density:	8.4-8.6 lb/gal (1.01-1.03 kg/l)
STORAGE:	32°F (0°C)-150°F (60°C)
	DO NOT FREEZE

#### **COVERAGE:**

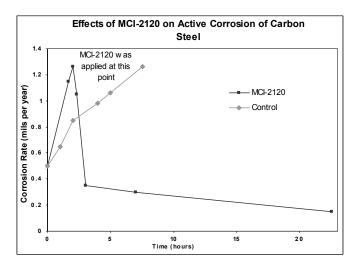
MCI-2120 is applied in a single coat at 150 ft<sup>2</sup>/gallon (3.68 m<sup>2</sup>/liter) to horizontal surfaces. It is applied in two coats at 300 ft<sup>2</sup>/gallon (7.36 m<sup>2</sup>/liter) to vertical and overhead surfaces.

#### PACKAGING:

MCI-2120 Concentrate is available in 5 gallon (19 liter) pails, 55 gallon (208 liter) drums, and 275 gallon (1040 liter) totes.

#### **PERFORMANCE DATA:**

The graph below displays the reduction in corrosion rate after the addition of MCI-2120 in a 2.0% sodium chloride solution.



#### **SURFACE PREPARATION:**

Surfaces should be dry, clean and free of all oil, grease, efflorescence, water repellants, coatings, membranes, and asphalt. Cleaning may be done by steam cleaning, waterblasting, or sandblasting.

#### **APPLICATION:**

Apply MCI-2120 by spray (conventional airless or hand pressure spray equipment), brush or roller according to coverage rates listed above. If applying more than one coat, allow the surface to dry enough between applications so that the second coat penetrates into the surface within 15 minutes. When applying a water repellant, coating, repair mortar or overlay over MCI-2120, the surface should be rinsed with water, pressure washed or blast-cleaned to remove any residue unless prior adhesion testing has been performed. Consult product specifications for more detailed application instructions.

#### **CONSIDERATIONS:**

- Substrate and ambient temperature should be above 35°F (2°C) and below 125°F (50°C)
- Do not apply if temperature is expected to fall below 32°F (0°C) within 12 hours after application
- MCI-2120 will not penetrate water repellants, coatings, paints, membranes, or asphalt
- If structure will be submerged after application of MCI-2120, it is recommended to use a waterproofing coating over MCI-2120 prior to submersion
- Maximum chloride content at the depth of reinforcement in structures being treated with MCI-2120 is 6 lb/yd<sup>3</sup> (3.5 kg/m<sup>3</sup>). For higher levels, consult Cortec technical service

FOR INDUSTRIAL USE ONLY KEEP OUT OF REACH OF CHILDREN KEEP CONTAINER TIGHTLY CLOSED NOT FOR INTERNAL CONSUMPTION CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

#### LIMITED WARRANTY

All statements, technical information and recommendations contained herein are based on tests Cortec Corporation believes to be reliable, but the accuracy or completeness thereof is not guaranteed.

Cortec Corporation warrants Cortec® products will be free from defects when shipped to customer. Cortec Corporation's obligation under this warranty shall be limited to replacement of product that proves to be defective. To obtain replacement product under this warranty, the customer must notify Cortec Corporation of the claimed defect within aix months after shipment of product to customer. All freight charges for replacement products shall be paid by customer.

Cortec Corporation shall have no liability for any injury, loss or damage arising out of the use of or the inability to use the products.

BEFORE USING, USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE, AND USER ASSUMES ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH. No representation or recommendation not contained herein shall have any force or effect unless in a written document signed by an officer of Cortec Corporation.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. IN NO CASE SHALL CORTEC CORPORATION BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.



4119 White Bear Parkway, St. Paul, MN 55110 USA Phone (651) 429-1100, Fax (651) 429-1122 Toll Free (800) 4-CORTEC, E-mail info@cortecvci.com Internet http://www.cortecvci.com

 Distributed by: