

# MIGRATORY CORROSION INHIBITOR™ (MCI®) PRODUCTS FOR CONCRETE



## MCI® 2023 Passivating Grout Patent Pending



### ADVANTAGES

- Offers engineers, owners, contractors, DOTs and government agencies a time-proven corrosion inhibiting technology that will extend the life of all reinforced concrete structures
- Applies quickly and easily by brush
- Has excellent adhesion to the substrate along with excellent durability
- Provides protection to the reinforcing steel from oxidizing agents
- Has the ability to migrate through concrete structures and seek out the steel reinforcing bars and other metal members embedded in the concrete
- Once cured, MCI® 2023 becomes water-repellent and forms an effective barrier against the penetration of water soluble salts

### PRODUCT DESCRIPTION

MCI® 2023 is a two component system incorporating Migrating Corrosion Inhibitors (MCI®) that forms a cement slurry for the protection of reinforcing steel and metals. The resulting slurry has good adhesion to the substrate, high durability and abrasion resistance, stops corrosion and forms an effective barrier against penetration of water and water dissolved salts. MCI® 2023 powder formulation is based on hydraulic binders and complexing and osmotic agents and components which all provide a high degree of passivation. The resin for this two component system consists of a water-based emulsion of organic polymers.

### WHERE TO USE

MCI® 2023 is recommended to protect steel reinforcing prior to restoration with MCI® or other repair mortars. It is especially useful in areas with little concrete coverage of the reinforcing steel which then subjects the concrete to deicing salts and carbonation attack.

### COVERAGE

Approximately 42 lbs./ft<sup>2</sup> (205 kg/m<sup>2</sup>) of treated rebar. When applied in thicknesses greater than 0.03-0.06 inches (0.8-1.6 mm), consumption increases, but there are no adverse effects as long as the subsequent coats are applied when the previous coat is thoroughly dry. Approximate coverage per 26.5 lb. (12 kg) bag and 11 lb. (5 kg) pail is 60 ft<sup>2</sup> at a thickness of 1/16 inch (5.6 m<sup>2</sup> at a thickness of 1.6 mm) or 120 ft<sup>2</sup> at a thickness of 1/32 inch (11.1 m<sup>2</sup> at a thickness of 0.8 mm).

### PACKAGING

26.5 lb. (12 kg) bag of passivating grout powder with 11 lb. (5 kg) pail passivating grout resin. One kit of powder and resin yields approximately 2.5 gallons (9.4 liters).



## SURFACE PREPARATION

Remove all loose rust from rebar by sandblasting, water blasting or wire brush.

## APPLICATION

Apply to rebar immediately after mixing (no later than 30 minutes). To protect cleaned reinforcing steel, brush on multiple coats, 0.04-0.08 inch (1-2 mm) thick, immediately before restoration with MCI® or other repair mortars. If there is an interval between applying the initial protection and the structural restoration, apply a second coat on top of the hardened grout immediately before applying the mortar. The surface should be sufficiently dry before applying the grout. Mix sufficient amounts of resin and powder together to get the consistency required. The brush should leave a  $\frac{1}{32}$ - $\frac{1}{16}$  inch (0.8-1.6 mm) thick coat with each stroke. Mix until smooth and free of lumps.

## LIMITATIONS AND STORAGE

- The emulsion polymers turn into a film at temperatures above 42-43°F (5-6°C). We advise against using the product in colder temperatures
- Do not let the resin for MCI® 2023 Passivating Grout freeze
- Keep powder in its original wrapping and ensure that it is always well sealed

## TYPICAL PROPERTIES

Appearance	Concrete gray when mixed
Shelf Life	Powder 6 months; Liquid 1 year in an unopened package
Mixing Ratio	Plant-proportioned kit
Adhesion to Iron	Pull Out: > 1450 psi (10 MPa)
Steam Permeability	
Resistant coefficient	$\mu = 90$
Storage	Keep from freezing

## 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

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