

03 30 00	Cast in Place Concrete
03 40 00	Precast Concrete
03 70 00	Mass Concrete

MCI®-2006

DESCRIPTION

MCI®-2006 is a powder-based, organic, corrosion inhibiting admixture for protection of metallic reinforcement in concrete structures.

When incorporated into concrete, cementitious grouts, or repair mortars, MCI®-2006 forms a protective corrosion inhibiting molecular layer on embedded metals. In new construction, this is quantified by an increase in critical chloride threshold and subsequent reduction in corrosion rates when corrosion does initiate. When used with repair mortars and grouts, MCI®-2006 not only protects rebar within the patch; it also migrates into undisturbed concrete adjacent to the repair to protect reinforcement already in place.

PACKAGING & STORAGE

Available in 5 pound (2.3 kg) pails, 50 pound (22.7 kg) drums, and 100 pound (45.4 kg) drums.

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®-2006 is an organic corrosion inhibiting admixture based on a blend of amine carboxylate salts. It is considered ambiodic (mixed), meaning it protects both anodic and cathodic areas within a corrosion cell by forming a protective layer on embedded reinforcement, therefore delaying the onset of corrosion as well as reducing existing corrosion rates

MCI®-2006 is effective at enhancing the durability and extending the service life of concrete structures exposed to corrosive environments (carbonation, chlorides, and atmospheric attack).

WHERE TO USE

- Reinforced concrete including precast, prestressed, and post-tensioned structures
- Corrosive environments including exposure to deicing salts, saline groundwater, airborne chlorides, and carbonation
- Marine and coastal structures, highways and bridges, parking decks, balconies, pools, concrete tanks, pilings, substructures, piers, pillars, pipes, and utility poles

ADVANTAGES

- Certified to meet ANSI/NSF Std. 61 for potable water applications
- Powder formula for ease of addition into pre-mixed grouts, repair mortars, or other cementitious-based products
- Compatible with mortars used with galvanic anodes or impressed current cathodic protection (ICCP) systems
- Lower toxicity and environmental impact than traditional corrosion inhibiting admixtures such as calcium nitrite
- Low dosage rate with minimal effect on concrete properties (i.e., workability, strength development, air entrainment, etc.)
- Single dosage rate which is independent of expected exposure to chlorides
- Able to migrate through porous substrates (concrete, masonry, limestone, etc.) by capillary action, vapor diffusion, and ionic attraction
- Field and lab tested globally

MCI®-2006

PHYSICAL PROPERTIES

Appearance	White to off-white powder
Non-Volatile Content	99.5-100%
pH	6-7.5 (1% water)

DOSAGE

Add MCI®-2006 to concrete mix or repair mortars at 1.0 lb/ yd³ (0.6 kg/m³). Dosage is fixed and independent of chloride levels.

APPLICATION

In ready-mix applications, MCI®-2006 is best added with the mix water into ready-mix concrete at the plant. Alternatively, it can be dosed into the ready-mix truck using portable dosing equipment. Concrete should be mixed thoroughly before placement.

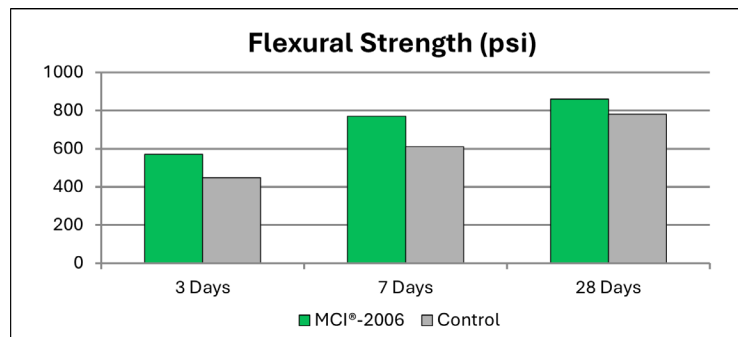
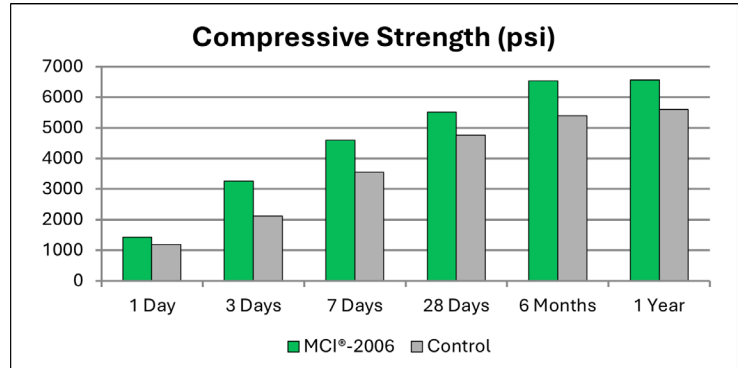
In other cementitious product applications, MCI®-2006 can be pre-blended into the mortar, grout, etc. so that it is evenly dispersed throughout the mix, or it can be added into the mix water prior to mixing with the material.

CONSIDERATIONS

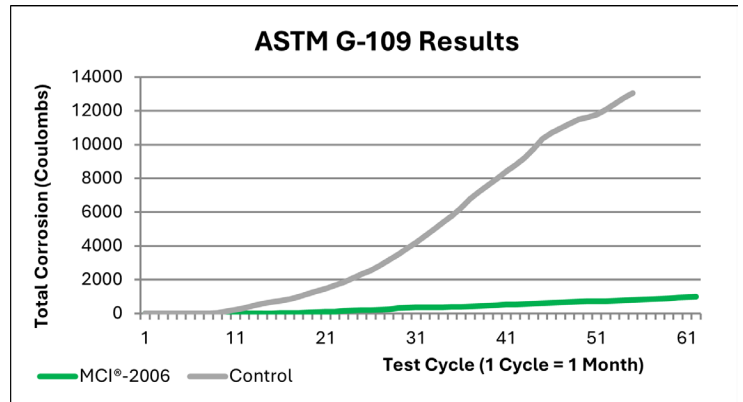
The use of MCI®-2006 can cause a delay of initial setting time. The extent of this delay is dependent on the mix design, temperature, and humidity. The combination of MCI®-2006 with certain superplasticizers can also increase the set delay experienced. Concrete properties are always best determined in a trial using the actual mix components. Cortec® recommends a trial batch any time you are using MCI®-2006 with new mix components.

Contact Cortec Technical Service for further guidance if necessary.

ASTM C494 PHYSICAL PROPERTIES TESTING



ASTM G-109 TESTING



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