

MIGRATORY CORROSION INHIBITOR (MCI®) PRODUCTS FOR CONCRETE



MCI® Fibers



PRODUCT DESCRIPTION

MCI Fibers are mono-filament polypropylene-based fibers containing Migratory Corrosion Inhibitors (MCI).

MCI's protect reinforcing steel, galvanized steel and other metals embedded in concrete from corrosion induced by carbonation, chloride and atmospheric attack. When incorporated into the concrete mix, MCI's form a corrosion inhibiting, protective layer on metals. When used with repair mortars and grouts, MCI's will migrate toward the rebars, providing effective corrosion protection.

The propylene based MCI Fibers also add mechanical benefits. Shrinkage cracking decreased 66% while residual strength doubled compared to concrete without fibers.

WHERE TO USE

MCI Fibers are recommended for:

- All reinforced, precast, prestressed, post-tensioned or marine concrete structures
- Steel-reinforced concrete bridges, highways and streets exposed to corrosive environments (carbonation, deicing salts and atmospheric attack)
- Parking decks, ramps and garages
- Concrete piers, piles, pillars, pipes and utility poles
- Restoration and repair of all reinforced concrete commercial and civil engineered structures

ADVANTAGES

- Shrinkage cracking reduction of 66%, compared to concrete without fibers
- Residual strength doubled, compared to concrete without fibers

- Slow release, long lasting MCI corrosion inhibitors
- Offers engineers, owners, contractors, DOTs and government agencies a time proven corrosion inhibiting technology that will extend the life of reinforced concrete structures
- Protects against the harmful effects of corrosion even in the densest concrete
- Will migrate to adjacent areas to protect surrounding metals
- Required dosage is not affected by chloride concentration
- Does not contain calcium nitrite
- Non-flammable and environmentally friendly
- Concentrated for cost effectiveness on all projects

	Control Concrete without fibers	MCI® Fibers
Impact Strength, First Crack	7 blows	12 blows
Ultimate Failure	10 blows	17 blows
Modulus of Elasticity	5.26 E +06	5.71 E +06
Residual Strength	54 psi	120 psi
Compressive Strength, 7 day	5120 psi	5390 psi
Compressive Strength, 28 day	7000 psi	7090 psi
Flexural Strength, 7 day	610 psi	940 psi
Flexural Strength, 28 day	890 psi	1120 psi
Splitting Tensile Strength	363 psi	441 psi

Toughness Index

$I_5 = 4.8$
 $I_{10} = 7.7$
 $I_{40} = 24.8$



APPLICATION

MCI Fibers can be added to concrete at the ready-mix plant, directly to the ready-mix truck drum or to portable mixers.

DOSAGE

Add to concrete mix, repair mortar or grout at 1 1/2 lbs per 1 cubic yard (910 g per 1 cubic meter).

PACKAGING

MCI Fibers are available in 5 lb (2.3 kg) and 50 lbs (23 kg) bags, and 100 lbs (45 kg) drums.

Store in a sealed container in a dry warehouse.

TYPICAL PROPERTIES

Appearance	White to off-white polypropylene-based fibers
Shelf Life	24 months

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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