

03 01 00	Maintenance of Concrete
03 30 00	Cast in Place Concrete
03 40 00	Precast Concrete
03 70 00	Mass Concrete

# MCI® Mini Grenades, Patented

### **DESCRIPTION**

Mini MCI Grenades consist of Migrating Corrosion Inhibitors (MCI®) packaged in watersoluble PVA bags. Mini MCI Grenades are very convenient to use. Mini MCI Grenades are ideal for repair mortars--one Mini Grenade protects 0.4-0.6 ft3 (0.015 m3).

The grenade dissolves easily when in contact with water in the concrete mix. During mixing the bag will completely dissolve and the MCI compounds will begin to disperse into the mix.

The MCIs 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 the MCIs form a corrosion inhibiting protective layer on metals. When used with repair mortars and grouts, MCIs will migrate toward the rebars providing effective corrosion protection.

# **PACKAGING & STORAGE**

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

Shelf Life: 12 months in a sealed box.



# **HOW IT WORKS**

MCI® Grenades are organic corrosion inhibitors that dissolve easily when in contact with water in the concrete mix. During mixing, the bag will completely dissolve and the MCI® compounds will disperse throughout the mix.

MCIs protect reinforcing steel, galvanized steel, and other metals embedded in concrete from corrosion induced by carbonation, chlorides, atmospheric attack, and other corrosives. MCI® Grenades are considered ambiodic (mixed) inhibitors, meaning they protect both anodic and cathodic areas within a corrosion cell. MCI® Grenades contain a blend of amine salts of carboxylic acid, which form a protective, molecular layer on embedded reinforcing steel they come into contact with.

MCI® Grenades are effective at enhancing durability and extending the useful service life of both new construction and repairs exposed to corrosive environments.

# WHERE TO USE

- 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**

- 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
- Does not affect the air entrainment, compressive strength, or the set time of concrete mix

# MCI®-2000

- Required dosage is not affected by chloride concentration
- · Does not contain calcium nitrite
- · Non-flammable and environmentally friendly
- · Lab and field tested
- Concentrated for cost effectiveness on all projects
- Will migrate to adjacent areas to protect surrounding metals
- Cortec logo on each bag ensures MCI inhibitor is inside

### PHYSICAL PROPERTIES

Appearance White to off-white powder packed in a PVA bag

### **DOSAGE**

Add one Mini Grenade (10 g) per 0.5 ft3/ 0.015 m3.

### **APPLICATION**

Mini MCI Grenades can be added to concrete at the readymix plant, directly to the ready-mix truck drum, or to portable mixers. For best results, add the Mini MCI Grenades to the mix water before the addition of the cementatious materials. Allow the bag and the powder to dissolve prior to addition of the other components. Continue adding cementatious materials and mix as directed by manufacturer / supplier.



4119 White Bear Parkway, St. Paul, MN 55110 Phone (651) 429-1100 Toll Free (800) 4-CORTEC productinfo@cortecvci.com www.cortecvci.com www.cortecvci.com





### 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 six 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.