



Mapeshield™ I
galvanic anodes

What is Mapeshield I?

Mapeshield I is a pure zinc galvanic anode that prevents and stops corrosion of reinforcing steel within concrete structures by applying a low electrical current.

Mapeshield I is available in different sizes and lengths to optimize anode spacing and increase service life.

What are the unique features of Mapeshield I?

- **Thinnest profile on the market:** Bulkier anodes require the removal of additional concrete to ensure minimum cover requirements specified by the manufacturer. Some of the bulky anodes from competitors cannot be used in balconies due to thickness and space restraints. The thin profile of the *Mapeshield I* anode allows for its use in very shallow repairs. Contractors universally agree and see the potential labor savings of using thin anodes in their concrete repairs.
- **Multilayer zinc core:** *Mapeshield I* anodes have a multilayer core that is coated with a conductive gel between each layer. This multilayer core provides a high surface area of zinc and increases the useful surface area of zinc by as much as 4 to 5 times when compared with using a single mass of equivalent weight.
- **Calculation software for design life and spacing:** MAPEI is the only anode manufacturer that offers free design software to engineers. Our software considers exposure conditions, average annual temperatures and chloride levels for maximizing anodes and increasing service life of structures.
- **Higher resistivity repair mortars allowed:** *Mapeshield I* produces between 1.0 and 3.0 milliamps of low electrical current, which allows for the use of repair mortars in excess of 50K ohm-cm.



Where can Mapeshield I be used?

- Parking garage repairs
- Bridge decks and structures
- Apartment and condo buildings
- Pier and dock supports
- Any reinforced concrete member that is susceptible to corrosion
- Retaining walls
- Floor slabs
- Precast elements prior to pour

How should *Mapeshield I* be installed?

- Ensure that the reinforcing steel is clean and free of any corrosion and prepared to a near-white finish.
- Verify electrical continuity of reinforcement with a multimeter before installing *Mapeshield I*. Resistance of up to 1 ohm or 1mV is acceptable.
- If continuity is not established, tie reinforcing bars with rebar tie wire to establish electrical continuity and confirm with a multimeter.
- The leads on *Mapeshield I* should be tightly secured to the reinforcing bar by using a suitable metal “hose clamp” or a traditional rebar tie wire.
- Verify electrical continuity of the *Mapeshield I* anode to reinforcing steel with a multimeter before installing *Mapeshield I*. Resistance of up to 1 ohm or 1mV is acceptable.
- Fill the repair area with a repair mortar that is intended for the type and size of repair.



What are the limitations?

- Do not coat the anode wires or the location where the anode wires are going to be connected to the reinforcing steel.
- Repair mortar surrounding anode to have an electrical resistivity below 100,000 ohm-cm.
- Store *Mapeshield I* in a dry, cool area in its sealed packaging.

For product information not covered in this brochure, please contact MAPEI's Technical Services Department for assistance.

Before use of MAPEI products referred to in this product bulletin, consult the most current technical data at www.mapei.com.





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