



MapeshieldTM CI 100

Surface-Applied Corrosion Inhibitor



DESCRIPTION

Mapeshield CI 100 is a surface-applied corrosion inhibitor designed to penetrate concrete structures and protect embedded steel reinforcement. It forms a protective layer on the surface of the steel reinforcing bar to inhibit corrosion caused by carbonation, the presence of chlorides and other contaminants in the concrete (such as deposits from acid rain and industrial pollution), and helps to prevent additional cracking and spalling in the future. *Mapeshield CI 100* can be applied by spray, brush or roller. By diffusing into the hardened pore structure of concrete to the steel reinforcing bars, *Mapeshield CI 100* delays the corrosion process and reduces overall corrosion activity.

FEATURES AND BENEFITS

- Environmentally friendly with its water-based, nonflammable formula
- Helps to passivate embedded steel against corrosion by penetrating into concrete
- Reduces existing corrosion, enhancing the durability of reinforced concrete
- Compatible with MAPEI repair mortars
- Not a vapor barrier; allows concrete to breathe
- Applied by roller, brush or spray
- Does not require removal of good-quality concrete

INDUSTRY STANDARDS AND APPROVALS

- When dried, compliant with USDA and Canadian Food Inspection Agency for incidental contact

LEED Points Contribution

LEED Points

| | |
|---|----------------|
| MR Credit 5, Regional Materials* | Up to 2 points |
| IEQ Credit 4.2, Low-Emitting Materials – Paints & Coatings | 1 point |

* Using this product may help contribute to LEED certification of projects in the categories shown above. Points are awarded based on contributions of all project materials.

WHERE TO USE

- Steel-reinforced concrete such as in bridges, highways and parking structures
- Marine structures, such as piers, piles and concrete docks
- Concrete-framed building facades and balconies
- Tunnels and other underground structures
- Wastewater treatment tanks
- Concrete pipes and utility poles

LIMITATIONS

- For optimum installation, apply when ambient and surface temperatures are between 35°F and 100°F (2°C and 38°C).
- Ensure that the concrete surface treated with *Mapeshield CI 100* is thoroughly rinsed with water or that *Mapeshield CI 100* is mechanically removed before application of a coating, sealer or additional layer of concrete.



- Do not apply when the temperature is expected to fall below 35°F (2°C) within 12 hours of application.
- Ensure that the concrete surface is as dry as possible before application of *Mapeshield CI 100* to allow better penetration.
- Protect adjacent surfaces – including metals, glass and wood – from overspray. Immediately wash off any overspray with water.
- Two dissimilar metals within the concrete matrix will cause a galvanic reaction and prevent performance of *Mapeshield CI 100*.

Consult MAPEI Technical Services Department for installation recommendations regarding any substrates and conditions not listed.

SUITABLE SUBSTRATES

- Concrete surfaces, structurally sound and stable, and at least 28 days old

SURFACE PREPARATION

- Ensure that the concrete surface is above freezing. Use steam cleaning, waterblasting or sandblasting to remove any dirt, dust, oil, efflorescence, grease and existing coatings that could prevent or reduce the penetrating ability of *Mapeshield CI 100*.
- Allow the concrete surface to dry before application of *Mapeshield CI 100*.

MIXING

Note: Choose all appropriate safety equipment before use. Refer to the Safety Data Sheet for more information.

- *Mapeshield CI 100* requires no pre-mixing or blending. Shake and use directly from the container.
- Do not dilute.

PRODUCT APPLICATION

1. Ambient and surface temperatures during application must be between 35°F and 100°F (2°C and 38°C).
2. Apply *Mapeshield CI 100* to the concrete surface with a conventional low-pressure, airless sprayer or by brushing or rolling onto the surface.
3. Apply at least two coats for maximum effectiveness. Allow at least 1 hour between coats.
4. Allow at least 1 day for *Mapeshield CI 100* to dry and penetrate at 70°F (21°C) before permitting foot traffic.
5. Pressure-wash horizontal surfaces (at a minimum of 2,000 psi) to remove any *Mapeshield CI 100* residue, before application of concrete overlays, coatings or sealers. Rinse or pressure-wash vertical/overhead surfaces.
6. Ambient and surface temperatures as well as absorbency of the substrate will affect drying times.

CLEANING

- Flush or rinse equipment or clothing with water to remove any spills, leaks or overspray. Discard in accordance with local, state, provincial and federal regulations.

Product Performance Properties

| Laboratory Tests | Results |
|--|--|
| Appearance | Clear liquid |
| Density | 8.50 to 8.65 lbs. per 1 U.S. gal. (1,02 to 1,04 kg per L) |
| Flash point | ≥ 200°F (93°C) |
| pH | 10 to 11 |
| Viscosity | 12 to 15 cps |
| Penetration depth (ASTM G109) | > 3" (7,5 cm) in 28 days |
| Consistency | Sprayable liquid |
| Cracked concrete beam test (ASTM G109) | Reduction in rate of corrosion by > 65% versus a control specimen after 1 year |
| VOCs | 0 g per L |

Shelf Life and Application Properties

| | |
|----------------------------|---|
| Shelf life | 2 years in original, unopened container. Protect from freezing. Store at 70°F (21°C). |
| Drying time at 70°F (21°C) | At least 1 day |

CSI Division Classifications

| | |
|---|----------|
| Rehabilitation of Cast-in-Place Concrete | 03 01 30 |
| Rehabilitation of Precast Concrete | 03 01 40 |
| Rehabilitation of Cast Decks and Underlayment | 03 01 50 |

Packaging

| Size |
|-----------------------|
| 5 U.S. gals. (18,9 L) |
| 55 U.S. gals. (208 L) |

Approximate Coverage*

| Substrate Type | Coverage |
|-----------------|--|
| Normal concrete | 100 to 250 sq. ft. per 1 U.S. gal. (2,45 to 6,12 m ² per L) |
| Dense concrete | ≥ 300 sq. ft. per 1 U.S. gal. (7,35 m ² per L) |

* Coverage varies depending on the surface porosity and texture of the surface.

**Mapeshield™
CI 100**

Refer to the SDS for specific data related to VOCs, health and safety, and handling of product.

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith.

ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.

We proudly support the following industry organizations:



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For the most current BEST-BACKED™ product data and warranty information, visit www.mapei.com.

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