

Mapeshield CI 110

Surface-Applied Corrosion Inhibitor with Integrated Water Repellent



DESCRIPTION

Mapeshield™ CI 110 is a surface-applied corrosion inhibitor, with an integrated moisture repellent, designed to penetrate concrete and protect embedded steel reinforcement. *Mapeshield CI 110* delays the corrosion process, reduces overall corrosion activity and creates a water-repelling barrier on the surface of the concrete.

FEATURES AND BENEFITS

- Environmentally friendly with its 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

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

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 110*.
- Allow the concrete surface to dry before application of *Mapeshield CI 110*.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

- *Mapeshield CI 110* 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 110* 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 110* to dry at 70°F (21°C) before permitting foot traffic.
5. For application of successive concrete overlays, coatings or sealers, pressure-wash horizontal surfaces (at a minimum of 2,000 psi) and rinse or pressure-wash vertical/overhead surfaces, removing any *Mapeshield CI 110* residue.

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.

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 110* is thoroughly rinsed with water or that *Mapeshield CI 110* 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.
- Ambient and surface temperatures as well as absorbency of the substrate will affect drying times.
- Ensure that the concrete surface is as dry as possible before application of *Mapeshield CI 110* 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 110*.

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

Product Performance Properties

Laboratory Tests	Results
Density	55.873 lbs./ft. ³ (0.895 g/cm ³)
Flash point	168°F (76°C)
pH	11.06
Viscosity	10 to 15 cps
Penetration depth (ASTM G109)	> 4" (10 cm) in 28 days
Cracked concrete beam test (ASTM G109)	Reduction in rate of corrosion by > 94% versus a control specimen after 1 year
VOCs	< 350 g per L

Shelf Life and Application Properties

Shelf life	2 years in original, unopened container
Appearance	Amber liquid
Consistency	Sprayable liquid
Drying time at 70°F (21°C)	15 to 20 minutes

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
Pail: 5 U.S. gals. (18.9 L)
Drum: 55 U.S. gals. (208 L)

Approximate Coverage*

Substrate Type	Coverage
Normal concrete	100 to 250 sq. ft. per U.S. gal. (2.45 to 6.12 m ² per L)
Dense concrete	≥ 300 sq. ft. per U.S. gal. (7.35 m ² per L)

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

ADDITIONAL INFORMATION

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **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.**

CONTACT INFORMATION

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