

# Building Restoration Solutions





## BUILDING RESTORATION SOLUTIONS

Whether you own a condominium on the beach in Fort Lauderdale, work in a high-rise in Toronto or attend college in Phoenix, you know that there is one constant: The need for long-lasting repairs. The type of building and how it is used and its geography will vary, but the need for restoration where you live, work, play and learn is ongoing. MAPEI's wide range of time-tested products can address every aspect of the total building envelope, from the foundation to the roof, from the floors to the ceilings, and from the balconies to the facade. We can meet every restoration challenge from concrete repair and waterproofing to corrosion mitigation, structural strengthening and aesthetics.

For more than 85 years, Mapei S.p.A., the Italian parent company of MAPEI Corporation (USA), has been preserving historical architecture throughout Italy and Europe. And for more than 35 years, our USA company has taken this knowledge and craftsmanship to cities in the United States, Canada and the Caribbean. Through these many years of experience, MAPEI has seen and examined every possible condition and has worked with engineers and contractors in developing comprehensive strategies for solving problems with the right products and the most effective solutions to stand the test of time.

At MAPEI, we offer the technical support, the engineering, the products, the experience and the know-how to solve the restoration challenges ahead. MAPEI continues to invest heavily in research and state-of-the-art processes that help reshape the way we build by bringing more and more innovative products to our customers, who, in turn, help build better building structures.

### A. Concrete Repair

1. **Planitop® X** and **Planitop XS** are for fast-setting, hand-applied repairs of vertical, overhead and horizontal structural concrete elements, like overhead beams, facades, balconies, ceilings and walkways.
2. **Planitop® 12 SR** and **Planitop 23** one- and two-component high-strength mortars are for hand and pump application on vertical and overhead concrete surfaces.



Planitop 23



Planitop 11 SCC



Mapecem Quickpatch

3. **Planitop® 11** one-component, pumpable and pourable concrete mix is ideal for partial and full-depth repairs on balcony edges and garage columns from 1" to 8" (2.5 to 20 cm). **Planitop 11 SCC** one-component, self-consolidating, polymer-modified concrete mix is designed for form-and-pour and form-and-pump applications on horizontal, vertical and overhead balcony edges and garage columns. Containing silica fume and a corrosion inhibitor, it can be placed from 1" to 8" (2.5 to 20 cm).
4. **Planitop® 15** fiber-reinforced, fluid mortar containing silica fume is for both form-and-pour and form-and-pump applications on overhead beams and columns. It is designed for repairs up to 4" (10 cm); it can be extended 50% by weight for repairs up to 8" (20 cm).
5. **Planitop® 18, Planitop 18 ES** and **Planitop 18 TG** comply with ASTM C928 R3 requirements for "very rapid hardening" repair mortars. Dependent on the project requirements, *Planitop 18* products can be opened to traffic between 1 and 6 hours after placement and are available in flowable to trowel grades with extended working times. **Mapecem® Quickpatch** high-performance, fast-setting, patching mortar applies from featheredge to 3" (7.5 cm) for concrete floors, driveways, sidewalks and balconies.
6. **Ultratop® Loft W [NA]** (fine-textured) and **Ultratop Loft F [NA]** (coarse-textured) are one-component, cement-based decorative toppings that are trowel-applied.
7. **Ultratop** decorative topping and **Ultratop SP** polishable topping are for fast-track concrete resurfacing of interior wear surfaces.
8. **Epojet™** high-modulus, low-viscosity epoxy injection resin and **Epojet LV** ultra low-viscosity epoxy injection resin are designed to seal cracks. **Epojet SLV [NA]** is a moisture-tolerant, two-component, 100%-solids, super low-viscosity, epoxy injection resin that penetrates deeply and seals dry and damp hairline, non-dynamic cracks. Its extremely low viscosity creates excellent penetration into fine cracks, provides high bond strength and prolongs life of cracked concrete.
9. **Planibond® AE** nonsag, epoxy anchoring gel is also for cap sealing and setting injection ports. It is also available in the fast-setting version **Planibond AE Fast**. **Planibond Hi-Mod Gel** is a high-modulus, high-strength, moisture-tolerant, zero-VOC, two-part, non-sag, structural epoxy adhesive designed for a wide variety of bonding and repair applications.



Planitop 12 SR



Epojet LV



Mapelastic



Planiseal WR 40

## B. Waterproofing

1. **Mapelastic**<sup>®</sup> flexible, cementitious waterproofing membrane protects concrete from chemical attack by de-icing salts, sulphates, chlorides and carbon dioxide that can lead to concrete deterioration. Use it in projects such as swimming pools, balconies, terraces, fountains and bathrooms.
2. **Mapefloor**<sup>™</sup> Parking Deck System is a two-component, polyurethane system designed to provide an elastomeric waterproofing membrane for heavy pedestrian and vehicular traffic. The system includes **Mapefloor PU Primer** or **Primer SN**<sup>™</sup>, designed to enhance the adhesion of the **Mapefloor** system to the concrete substrate; **Mapefloor PU 400 FC** basecoat with its high flexibility and crack-bridging properties, for use as the waterproofing membrane; and **Mapefloor Finish 415 NA** aromatic interior topcoat and **Mapefloor Finish 450** aliphatic exterior topcoat, both designed to provide protective wear coats for parking decks and access ramps. For complete system details, consult the installation manual for *Mapefloor* Parking Deck Systems, found in the Concrete Restoration Systems section of MAPEI's Website.
3. **Resfoam**<sup>™</sup> **HB 45** flexible, hydrophobic polyurethane grouts are used for stopping water infiltration in all concrete elements within parking garages. They effectively form a permanent waterproof barrier against water intrusion.
4. **Planiseal**<sup>®</sup> **WR** penetrating, water-based silane/siloxane water repellent helps to protect horizontal and vertical concrete surfaces from moisture-related staining and dirt buildup. **Planiseal WR 40** clear, water-based, 40%-silane penetrating water repellent and sealer is designed to protect concrete and masonry against moisture/chloride intrusion. **Planiseal WR 100** is a clear, high-performance, 100%-silane penetrating water repellent and sealer designed to provide outstanding water repellence on concrete and masonry.
5. **Planiseal**<sup>®</sup> **Plug** fast-setting water-stop mortar patches and seals small water leaks in two minutes on both horizontal and vertical concrete surfaces.
6. **Planiseal**<sup>®</sup> **CRT** is a fast-curing, 100%-solids, cold-fluid-applied, single-component, moisture-curing, structural waterproofing membrane that will not shrink.
7. **Planiseal**<sup>®</sup> **Membrane SA** is a 63-mil, self-adhering sheet membrane consisting of 61 mils of rubberized asphalt laminated to a 2-mil PET film. The combination of these two excellent waterproofing materials provides a durable, high-performance waterproofing membrane. *Planiseal Membrane SA* is suitable for installations where the ambient and substrate temperatures are above 40°F (4°C).



Planiseal Plug



**Mapefloor Parking Deck System**



**Planibond 3C**



**Mapefer 1K**



**Planiseal MB**

8. **Planiseal® Mastic** is a solvent-based, rubberized-asphalt mastic that provides excellent adhesion to *Planiseal Membrane SA* waterproofing sheet membrane as well as to structural concrete, masonry and wood surfaces. *Planiseal Mastic* is for use as a secondary seal on the seams, T-joints, laps, penetrations, terminations and other detailing areas of *Planiseal Membrane SA*.
9. **Planiseal® CR2 H** and **Planiseal CR2 V** are fast-curing, 100%-solids, cold-fluid-applied, two-component, elastomeric polyurethane structural waterproofing membranes that will not shrink.
10. **Idrostop™** hydrophilic, expandable rubber strip is used to produce watertight construction joints between concrete beds and elevation walls.

### C. Corrosion Reduction

1. **Planibond® 3C** epoxy-modified corrosion inhibitor protects embedded steel reinforcement.
2. **Mapefer™ 1K** unique polymer, cementitious anticorrosion coating inhibits oxidation and rust formation on steel reinforcement.
3. **Mapeshield™ I** pure zinc galvanic anode is formulated to stop and prevent corrosion of reinforcing steel. It is available in 6 different zinc weights with 10- and 20-year duration capabilities.
4. **Mapeshield™ CI 100** and **Mapeshield CI 110** surface-applied corrosion inhibitor is designed to penetrate concrete structures and protect embedded steel reinforcement.

### D. Moisture Reduction and Self-Leveling Underlayments

1. **Planiseal® MB** premium epoxy moisture barrier is for ultimate moisture transmission reduction.
2. **PlaniLevel™ 360** and **PlaniLevel 420** self-leveling underlayments allow flooring installation within 24 to 48 hours, while **PlaniLevel 450** and **PlaniLevel 500** are ready for flooring installation in 2 to 3 hours. In open areas without environmental controls, it is ideal to use **PlaniLevel 560** before enclosing the structure.



## E. Facade Aesthetics

1. **Mapelastic**<sup>®</sup> is a two-component cementitious membrane that waterproofs concrete and masonry. It offers excellent protection against water and aggressive chemicals.
2. **Elastocolor**<sup>®</sup> protective and decorative acrylic coatings for facades and walls are available in unlimited color options and smooth or sanded textures.
3. **Planitop**<sup>®</sup> **200** is a water-repellent skimcoating mortar designed to smooth, level and finish interior/exterior concrete walls and masonry, glass and porcelain mosaics, acrylic paints and drywall panels.
4. **Mapecoat**<sup>™</sup> **Deck T** is a water-based, slip-resistant coating specially designed for use on new and previously coated concrete. *Mapecoat Deck T* creates an attractive, durable wear surface for residential and commercial indoor/outdoor decks, balconies and walkways. It offers enhanced durability to withstand pedestrian and light vehicular traffic with the convenience and easy application of a single-component product.
5. **Mapecoat**<sup>™</sup> **Deck S** is a water-based, urethane-modified, acrylic coating specially designed for use on new and previously coated concrete and other properly prepared substrates. *Mapecoat Deck S* has an attractive, low-sheen finish that creates a durable wear surface for residential and commercial indoor/outdoor floors, decks, balconies and walkways.
6. **Planiseal**<sup>®</sup> **288** is a slightly flexible, two-component, polymer-modified, cementitious waterproofing and protective mortar for concrete and masonry that protects against water and moisture seepage, and carbonation.



## F. Structural Strengthening

1. **MapeWrap**<sup>®</sup> fiber-reinforced polymer (FRP) structural strengthening products consist of flexible carbon and fiberglass fiber fabrics. They are applied with dedicated epoxy resins to repair and maintain deteriorated concrete elements (columns and beams), to upgrade load-bearing capacity and to rectify original design flaws.
2. **Carboplate**<sup>®</sup> carbon fiber plate and **Maperod**<sup>®</sup> carbon fiber rod are pre-impregnated with epoxy-based resin to repair and upgrade beams and slabs for flexural strengthening, and to reinforce structures subject to vibration.
3. **MapeWrap**<sup>®</sup> **C Fiocco** high-strength cord, made from uni-directional carbon fiber threads, is designed to be impregnated with **MapeWrap 21** to provide structural and functional restoration of concrete and masonry elements.



## Global Leader in Concrete Restoration Systems



**Construction Grouts**



**Waterproofing**



**Concrete Repair Mortars**



**Self-Leveling Underlayments**



**Cementitious Flooring**



**Exterior Finishing**



**Epoxy Adhesives**



**Corrosion Protection**



**Fiber-Reinforced Polymer**

For more information on the complete line of MAPEI products, visit our Website at [www.mapei.com](http://www.mapei.com).



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#### **Customer Service**

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#### **Services in Mexico**

0-1-800-MX-MAPEI (0-1-800-696-2734)

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