Parking Facility and Stadium Solutions

MAPEI®

AT&T Stadium
Dallas, TX

PARKING FACILITY AND STADIUM SOLUTIONS

Keeping parking structures and stadiums safe, operational and attractive requires quick solutions when these structures become weakened through wear and tear. Downtime means a loss of income for owners and surrounding businesses, and an inconvenience for patrons.

MAPEI can proactively protect this investment and help create a safe environment from the expensive and damaging effects caused by repetitive traffic patterns in driving, parking and turn lanes; water leakage through cracks and joints; pollution; and freeze/thaw cycling.

The devastating effects of chloride ingress from de-icing salts and carbonation on steel reinforcement can include cracking, delamination and spalling of concrete, as the steel corrodes and expands. If this process goes unchecked, the corrosion and loss of steel can ultimately lead to loss of structural integrity and more destructive damage. Understanding the reasons for the concrete's delamination and the steel's corrosion will lead to an effective and cost-efficient solution.

MAPEI Concrete Restoration Systems (CRS) specialists, working in conjunction with engineers and contractors, know the importance of keeping these structures operational and safe, and of restoring their value to ownership in the most efficient manner. These experts can identify the specific problems and their causes, and can develop the most effective rehabilitation and protection solutions that will minimize downtime and create long-term cost savings.

Whether it be traffic and parking deck coatings, stairwell repair, surface repair and corrosion protection, water ingress or structural strengthening, MAPEI's CRS products are engineered to eliminate costly repair downtime and get the facility back to full operation effectively, efficiently and in virtually new condition. In addition, MAPEI's wide range of products is backed by comprehensive warranties and the single-source advantage. For the architect, engineer, owner/operator and contractor, MAPEI has been delivering solutions and field-proven results for more than 85 years.

A. Traffic Deck Membranes and Overlays

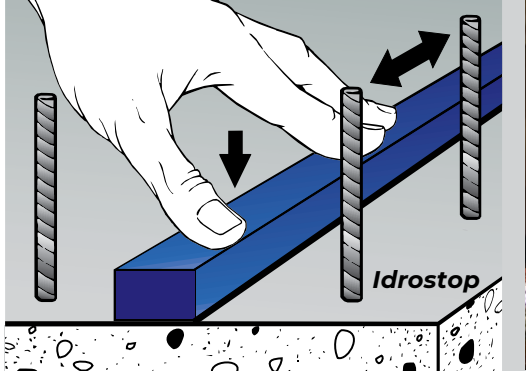
1. *Mapefloor*™ Parking Deck System is a two-component, polyurethane system designed to provide an elastomeric waterproofing membrane for heavy pedestrian and vehicular traffic. The system includes primer ***Mapefloor*™ *PU Primer*** or ***Primer SN***™, designed to enhance the adhesion of the *Mapefloor* 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.
2. *Mapecoat*™ Pedestrian CRT System: ***Mapecoat 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. ***Planiseal*® *CR1*** is a fast-curing, 100%-solids, cold-fluid-applied, single-component, moisture-curing, structural waterproofing membrane that will not shrink.
3. ***Planiseal*® *Traffic Coat*** epoxy overlay and low-viscosity epoxy binder for parking decks protects slabs from moisture intrusion and de-icing salts, and provides a durable and attractive wear surface with extended service life. The fast-setting version of this product is ***Planiseal Traffic Coat FS.***

Mapefloor system

Planiseal Traffic Coat


Resfoam HB 45


Planiseal WR



B. Waterstopping and Waterproofing

1. ***Resfoam*® *HB 45*** flexible, hydrophobic polyurethane grout is used for stopping water infiltration in all concrete elements within parking garages. It reacts with active water and forms a closed-cell, nonshrink flexible foam, expanding up to 750% of its original volume, to effectively form a permanent waterproof barrier against water intrusion.
2. ***Planiseal*® *WR*** penetrating, water-based silane/siloxane water repellent helps to protect vertical concrete surfaces from water-moisture staining. ***Planiseal WR 40*** is a clear, water-based, 40%-silane penetrating water repellent and sealer designed to protect concrete and masonry against moisture/chloride intrusion, the effects of freezing/thawing, and such airborne contaminants as acid rain and industrial fumes. ***Planiseal WR 100*** clear, high-performance, 100%-silane penetrating water repellent and sealer is designed to provide outstanding water repellence on concrete and masonry.
3. ***Mapeband*™ *TPE*** professional-grade, flexible band for sealing and waterproofing expansion joints and cracks subject to movement up to 7/32" (5.5 mm).
4. ***Planiseal*® *Plug*** fast-setting water-stop mortar patches and seals small water leaks in 2 minutes on both horizontal and vertical concrete surfaces.
5. ***Idrostop***™ hydrophilic, expandable rubber strip is used to provide watertight construction joints between concrete beds and elevation walls.
6. ***Mapelastic***® flexible waterproofing membrane is for columns, walls and overhead slabs. It is designed for use where concrete surfaces are subject to vibration and subsequent cracking.

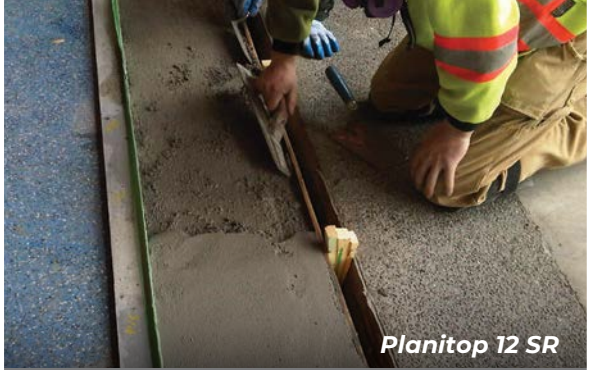

Planiseal Plug


Mapelastic


Mapeband TPE


Planiseal WR 100


Planitop X


Planitop 12 SR


Planiseal CR1

7. ***Planiseal*® *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.
8. ***Planiseal*® *CR1*** is a fast-curing, 100%-solids, cold-fluid-applied, single-component, moisture-curing, structural waterproofing membrane that will not shrink.
9. ***Planiseal*® *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).
10. ***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*.
11. ***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.

C. Structural Repair and Patching

1. ***Planitop*® *X*** and ***Planitop XS*** are designed for the fast-setting, hand-applied repairs of vertical and overhead structural concrete elements, like columns, overhead beams and slabs, and vertical walls.
2. ***Planitop*® *11*** one-component, pumpable and pourable concrete mix is ideal for partial and full-depth repairs on horizontal, vertical and overhead bridge elements from 1" to 8" (2.5 to 20 cm).
3. ***Planitop*® *11 SCC*** one-component, cementitious, self-consolidating, polymer-modified concrete mix is designed for form-and-pour and form-and-pump applications on horizontal, vertical and overhead bridge structures. Containing silica fume and a corrosion inhibitor, it can be placed from 1" to 8" (2.5 to 20 cm).
4. ***Planitop*® *12 SR*** spray- and trowel-applied concrete repair mortar is for overhead structural repairs of beams and slabs where extensive rehabilitation is required.


Planitop 15


Planitop 18


Planibond Hi-Mod Gel


Epojet SLV

5. ***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. Designed for repairs up to 2" (5 cm), it can be extended 50% by weight for repairs up to 4" (10 cm).
6. ***Planitop***® ***18*** fast-setting, horizontal repair mortar allows vehicular traffic within 1 hour.
7. ***Planitop***® ***18 ES*** one-component, rapid-hardening repair mortar with extended working time can be opened to vehicular traffic in as little as six hours and meets the requirements for an ASTM C928 R3 repair mortar. ***Planitop 18 TG*** is a one-component, shrinkage-compensated, very rapid-hardening, trowel-grade, cementitious repair mortar with a corrosion inhibitor.
8. ***Planitop***® ***23*** two-component, vertical, overhead and horizontal repair mortar can be applied to a depth of 4" (10 cm) in two lifts.
9. ***Mapecrete***™ ***Film*** evaporation retardant and finishing aid is designed to retard moisture evaporation on freshly placed concrete surfaces, helping to prevent “plastic shrinkage” and cracking.
10. ***Planibond***® ***AE*** is a high-strength, moisture-tolerant, zero-VOC, two-part, non-sag, epoxy anchoring gel. ***Planibond AE Fast*** is a rapid-setting, high-strength, moisture-tolerant, two-component, 100%-solids, epoxy anchoring gel designed for a wide variety of vertical/horizontal bonding and repair applications. Both products are used as a cap seal for pressure-injection epoxy grouting and to seal cracks and set anchor bolts.
11. ***Epojet***™ ***LV*** low-viscosity epoxy injection resin is for hairline, structural crack repair.
12. ***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.
13. ***Planiseal***® ***SLV Hi-Mod*** is a solvent-free, two-component, 100%-solids, super low-viscosity, epoxy healer/sealer designed to penetrate into new or worn cracked concrete surfaces. *Planiseal SLV Hi-Mod* seals hairline cracks against further moisture penetration and chloride intrusion.
14. ***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.


Planiseal SLV Hi-Mod


Planibond 3C


Mapefer 1K


Planibond AE

D. Corrosion Protection

1. ***Planibond***® ***3C*** and ***Mapefer***™ ***1K*** offer a choice of a three-component or one-component corrosion-inhibiting coating for embedded steel reinforcement to inhibit oxidation and rust formation.
2. ***Mapeshield***™ ***I*** pure zinc galvanic anode is formulated to stop and prevent corrosion of reinforcing steel. It is available in two different lengths and with 10- and 20-year duration capabilities.
3. ***Mapeshield***™ ***CI 100*** and ***Mapeshield CI 110*** are surface-applied corrosion inhibitors designed to penetrate concrete structures and protect embedded steel reinforcement.

E. Structural Strengthening

1. ***MapeWrap***® fiber-reinforced polymer (FRP) structural strengthening systems consist of flexible carbon and fiberglass fiber fabrics that are applied with dedicated epoxy resins, to be used for the repair and maintenance of deteriorated concrete elements (columns and beams) for upgrading load-bearing capacity and for rectifying original design flaws.
2. ***Carboplate***® and ***Maperod***® pre-impregnated carbon fiber plates and rods repair and upgrade beams and slabs for flexural strengthening, and reinforce structures subject to vibration.
3. ***MapeWrap***® ***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.


Planitop 23


MapeWrap


Carboplate


Maperod

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