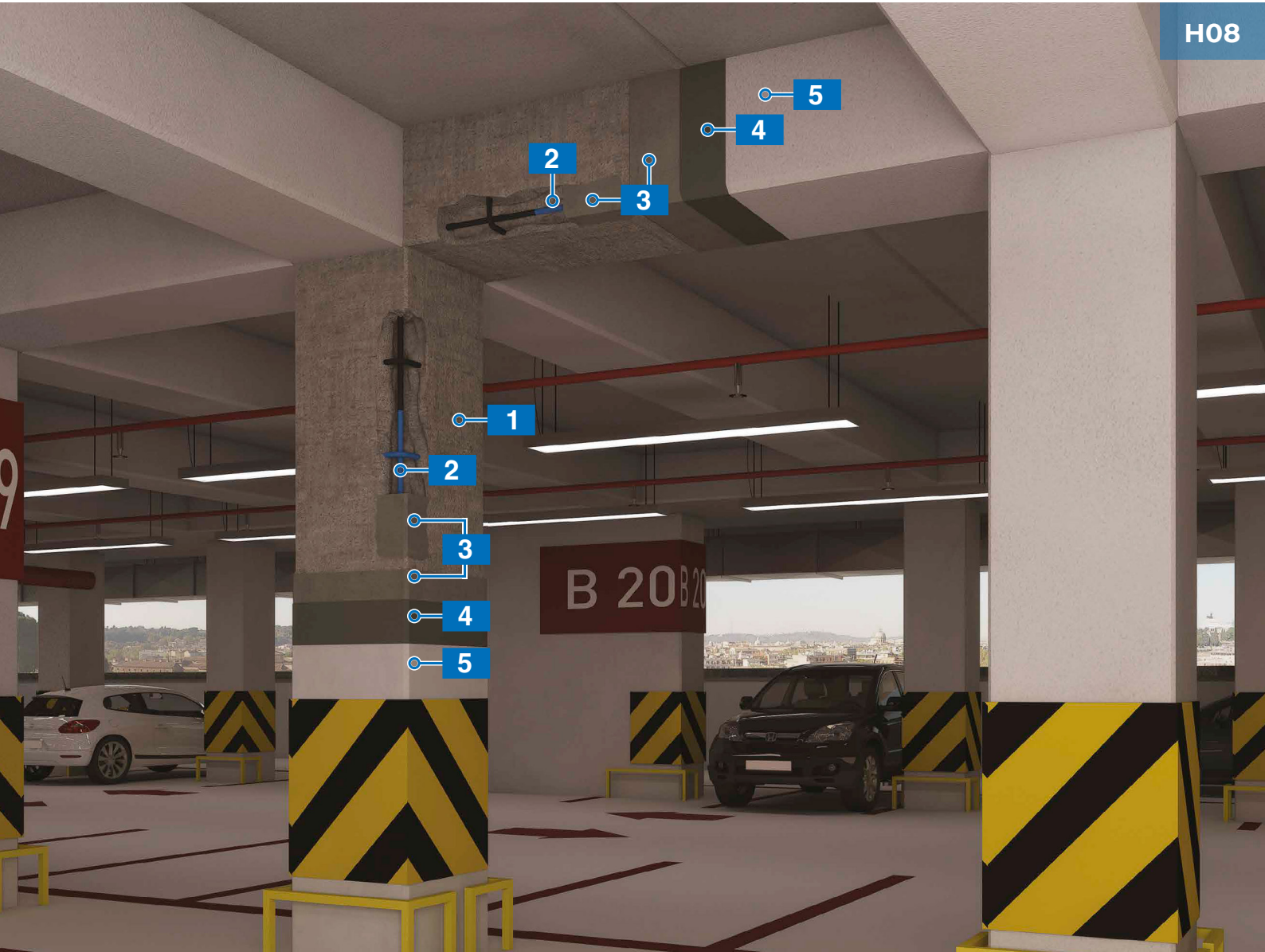


# SYSTEM FOR THE REPAIR AND PROTECTION OF STEEL REINFORCED CONCRETE

H08



concrete substrate

corrosion-inhibiting mortar  
**Mapefer 1K**

structural repair and  
smoothing mortar  
**Planitop Smooth &  
Repair R4**

waterproofing and  
protective coating  
**Mapelastico Smart**  
(if required)

painted surface

1

2

3

4

5

# WORK METHOD STATEMENT

Ceramic/Stone System – Internal  
Repair and Protection of Steel Reinforced Concrete

MAPEI: H08  
Version: 12/4/2023  
Revision: 0

## PART 1 SYSTEM

### 1.1 INFORMATION

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- This work method statement covers the system for repair and protection of steel reinforced concrete, in accordance with industry best practice, relevant standards and as per MAPEI technical data sheets (TDS).
- MAPEI provides technical data sheets (TDS) and safety data sheets (SDS) for all products which should be read in conjunction with this Work Method Statement (WMS). Where necessary, conduct a chemical risk assessment and SWMS to ensure each products' correct and safe use. These documents can be obtained from [www.mapei.com.au](http://www.mapei.com.au), or by clicking directly on the products listed within the PDF.
- The surface covering manufacturer's installation guidelines should be referred to in conjunction with this WMS. Any system guidelines specified on the surface covering manufacturer's technical information take precedence over this WMS.
- Products in this WMS can contribute towards satisfying the relevant Green Star credits. The VOC content of products can be found under section 9 on the product SDS, while VOC emissions certificates can be found on the product webpage.

### 1.2 USER NOTES

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### 1.3 RELEVANT DOCUMENTATION

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1. **SA HB 84-2018 – Guide to concrete repair and protection**
2. **Protection and Repair of Concrete in compliance with European Standard UNI EN 1504**
3. **EN 1504 – Products and systems for the protection and repair of concrete structures**

This Work Method Statement (WMS) provides general recommendations only and is not intended to be interpreted as a generic specification for the application/installation of the listed products. As each project differs in exposure and site conditions, specific recommendations may vary from the information contained above. For recommendations for specific applications/installations please contact MAPEI Australia Pty Ltd.

## 1.4 SUBSTRATE PREPARATION

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1. Prior to the removal of any concrete, it is essential to conduct a thorough assessment of the cause and extent of damaged, deteriorated or defective concrete. Professional advice may be required to determine the severity of the deterioration, the stability of the structure and suitability of repair works.
2. **Concrete Substrate:** Remove any laitance, spalling, loose or deteriorated concrete via means of high-pressure hydro-scarifying or scabbling. Make sure a surface roughness of at least CSP 3 is achieved in accordance with the International Concrete Repair Institute (ICRI) standards. Clean the surface to remove any contaminants that may inhibit bond, such as, dust, grease, oil, paint or corrosion deposits. The substrate must then be prepared in accordance with relevant MAPEI technical data sheets (TDS).
3. **Steel Reinforcing:** Exposed reinforcing must be cleaned back to a bare metal surface, removing all corrosion. Removal via hydro-sandblasting for large areas or vigorous brushing for small areas is recommended. The rods must be fully exposed with adequate space behind the reinforcement for cleaning, anti-corrosion treatment and repacking with the selected repair mortar. The space should never be less than 2-3 times the size of the largest aggregate in the repair mortar.

## 1.5 CORROSION INHIBITING MORTAR

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### A. MAPEFER 1K

One component, corrosion inhibiting cement mortar for the protection of reinforcing rods.

#### APPLICATION:

- Apply the mortar in two homogeneous coats with a brush, approximately 2 hours apart but no longer than 24 hours, to ensure a total dry thickness of 2 mm is achieved.
- Allow to cure before applying a repair mortar (approximately 6-24 hours at 20°C 50% R.H.).

## 1.6 STRUCTURAL REPAIR & SMOOTHING MORTAR

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### A. PLANITOP SMOOTH & REPAIR R4

Structural R4 class, rapid setting, shrinkage compensated, thixotropic, fibre reinforced, cementitious mortar, applied in a single layer from 3 to 40 mm thick, for repairing and smoothing concrete. Applied in layers from 3 to 40 mm.

#### APPLICATION:

- Mix and apply the mortar in accordance with the TDS. Apply additional layers in accordance with the relevant TDS.
- Finish the surface with a trowel or a damp sponge float a few minutes after application.
- Once repair work is complete and the material has hardened (25-30 minutes at 20°C 50% R.H), keep the mortar damp for at least 24 hours using a water spray, especially in hot and windy environment.

## 1.7 WATERPROOFING MEMBRANE — IF REQUIRED

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### A. MAPELASTIC SMART

Two component, Class II high flexibility cementitious mortar (with crack-bridging capacity >2 mm) applied by trowel or roller for the protection of concrete structures.

#### APPLICATION:

- Prior to the application of the membrane, ensure the substrate is not highly burnished and has a surface profile of CSP 1 – 3.
- Mix components A & B in strict accordance with the TDS.
- Membrane must be applied in at least two coats by trowel or roller within 60 minutes of it being mixed. Waterproofing membrane applied at a thickness of at least 1 mm per wet coat.
- In areas with hairline cracks or which are highly stressed, insertion of **MAPENET 150** in the first layer of fresh **MAPELASTIC SMART** is recommended.
- The membrane may be painted over using a product from the Mapei **ELASTOCOLOR RANGE**, acrylic resin-based paint in water dispersion available in a wide array of colours.

# SYSTEM FOR THE **REPAIR AND PROTECTION** **OF STEEL REINFORCED CONCRETE**

## Product Guide



### Mapefer 1K

Size	Barcode
5 kg	8022452094316



### Planitop Smooth & Repair R4

Size	Barcode
5 kg	9345490002983
20 kg	9345490002983



### Mapelastic Smart Part A

Size	Barcode
20 kg	8022452051937

### Mapelastic Smart Part B

Size	Barcode
10 kg	8022452027833