

MAPEFLOOR® PARKING SYSTEM

Waterproofing coatings
for trafficked areas



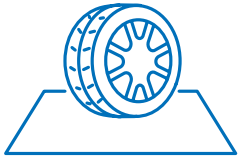


**RESIN COATINGS
THAT PROTECT THE SURFACE
OF CONCRETE TRAFFICKED
AREAS IN CAR PARKS.**

MAPEFLOOR® PARKING SYSTEM

Waterproofing coatings
for trafficked areas

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Mapefloor® Parking System

Protecting the surface of concrete trafficked areas in structures designed for parking cars and vehicles is extremely important in order to preserve their functionality and durability to maintain a **high level of safety** and **minimise maintenance costs**.

Due to their special physical and mechanical properties, the resin coating products used in the **Mapefloor® Parking System** guarantee a high level of protection for surfaces and may be adapted to suit a wide range of environmental conditions and installations.

Main properties of treated trafficked areas

- **Surfaces are waterproof**, aggressive liquids are prevented from penetrating into the concrete and coming into contact with the reinforcing bars.
- **Slip-resistant finish** so that vehicles and people may travel in safety. The degree of slip resistance may be varied according to specific requirements.
- **Good resistance to chemicals** such as oil, fuel, lubricants, de-icing salts, etc.
- **High degree of mechanical resistance** to the passage of vehicles.
- **Flexible systems*** to guarantee that surfaces remain impermeable, even if substrates settle slightly after applying the system.
- May be applied on **external surfaces.***
- **Easy to maintain.**
- Excellent **cost/performance ratio** over the years.
- **Highly durable.**
- **Attractive finish:** different colours may be used to divide areas according to specific type of use (e.g. trafficked areas for vehicles, parking areas, pedestrian trafficked areas, checkpoints, horizontal road signs, etc.).

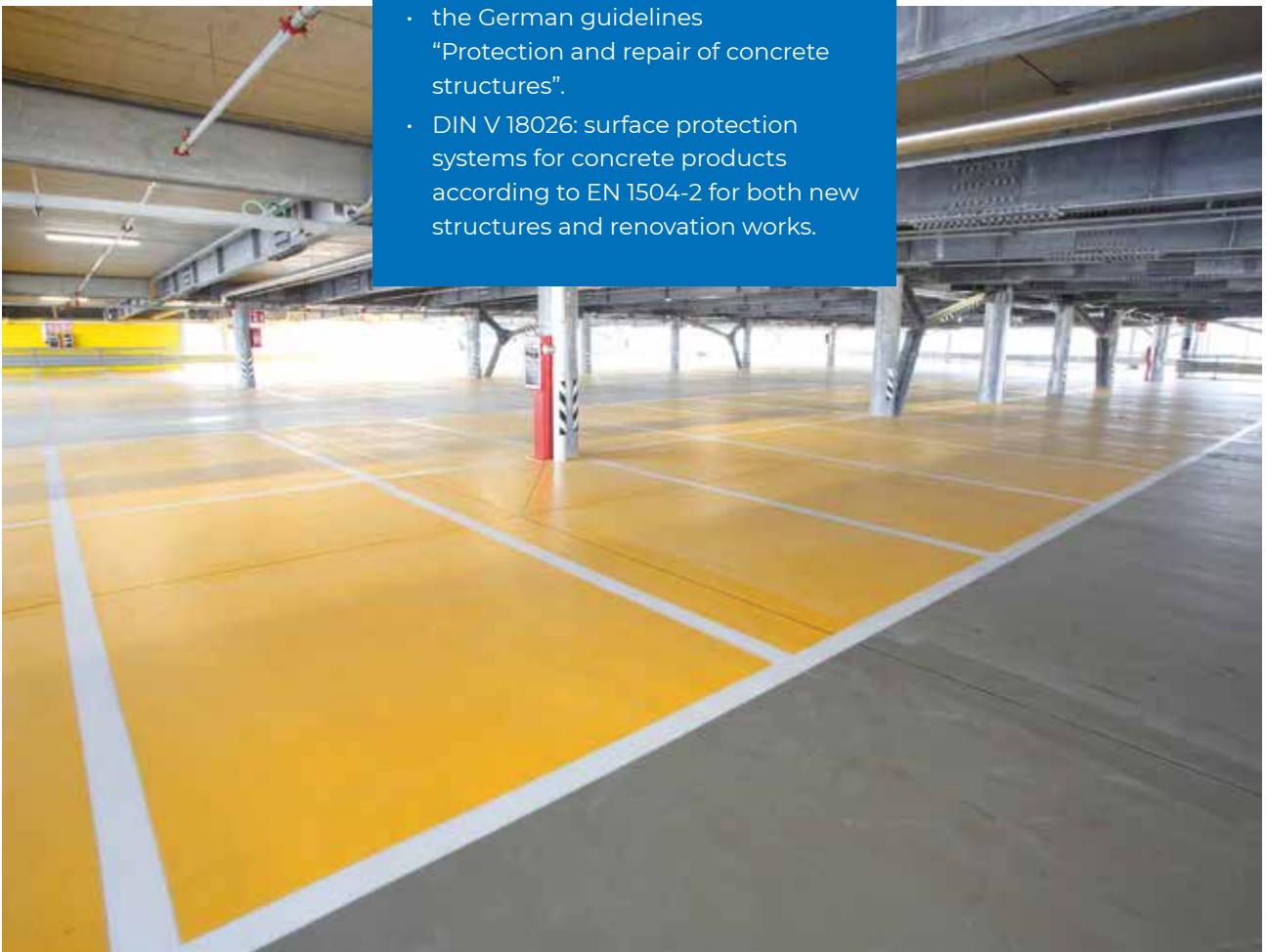
** Depending on the type of system applied*





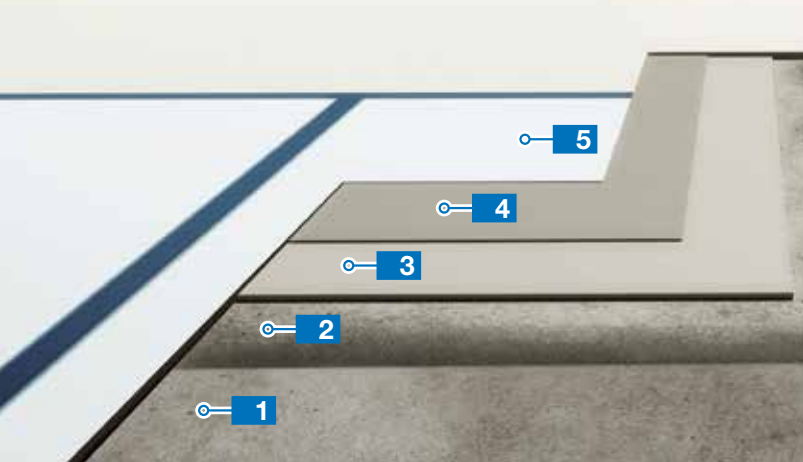
Systems tested in compliance with

- the German guidelines "Protection and repair of concrete structures".
- DIN V 18026: surface protection systems for concrete products according to EN 1504-2 for both new structures and renovation works.



Mapecolor® Parking System HE

Multi-layered seamless polyurethane coating system with high dynamic crack-bridging capacity for pedestrian areas and areas with vehicular access subjected to intense use, and to **protect parking areas even outdoor** in compliance with the Guidelines of the German Committee on Reinforced Concrete **OS 11a** and concrete surface protection systems according to EN 1504-2. **Total thickness 5 - 5.5 mm.**



- 5** UV-resistant polyurethane finish
Mapecolor Finish 451
- 4** Wearing layer
Mapecolor PU 410 + Mapecolor Paste
+ **Quartz 0.25** + broadcast **Quartz 0.9** or **Quartz 1.2**
- 3** High-flexibility polyurethane membrane
Mapecolor PU 400 LV+ Quartz 0.25
- 2** Primer
Primer SN + Quartz 0.5 + broadcast **Quartz 0.5**
- 1** Concrete substrate

Highly flexible, slip-resistant, multi-layered, coloured coating system with crack-bridging capacity down to -20°C. Suitable for creating strong, waterproofing* coatings with high chemical resistance on both internal and external surfaces.

Where to use

- Multi-storey car parks
- Flat roofs for vehicle use
- Internal and external transit areas for garages
- Garages

* Depending on the amount of movement in the cracks in the substrate and the crack-bridging capacity of the system.

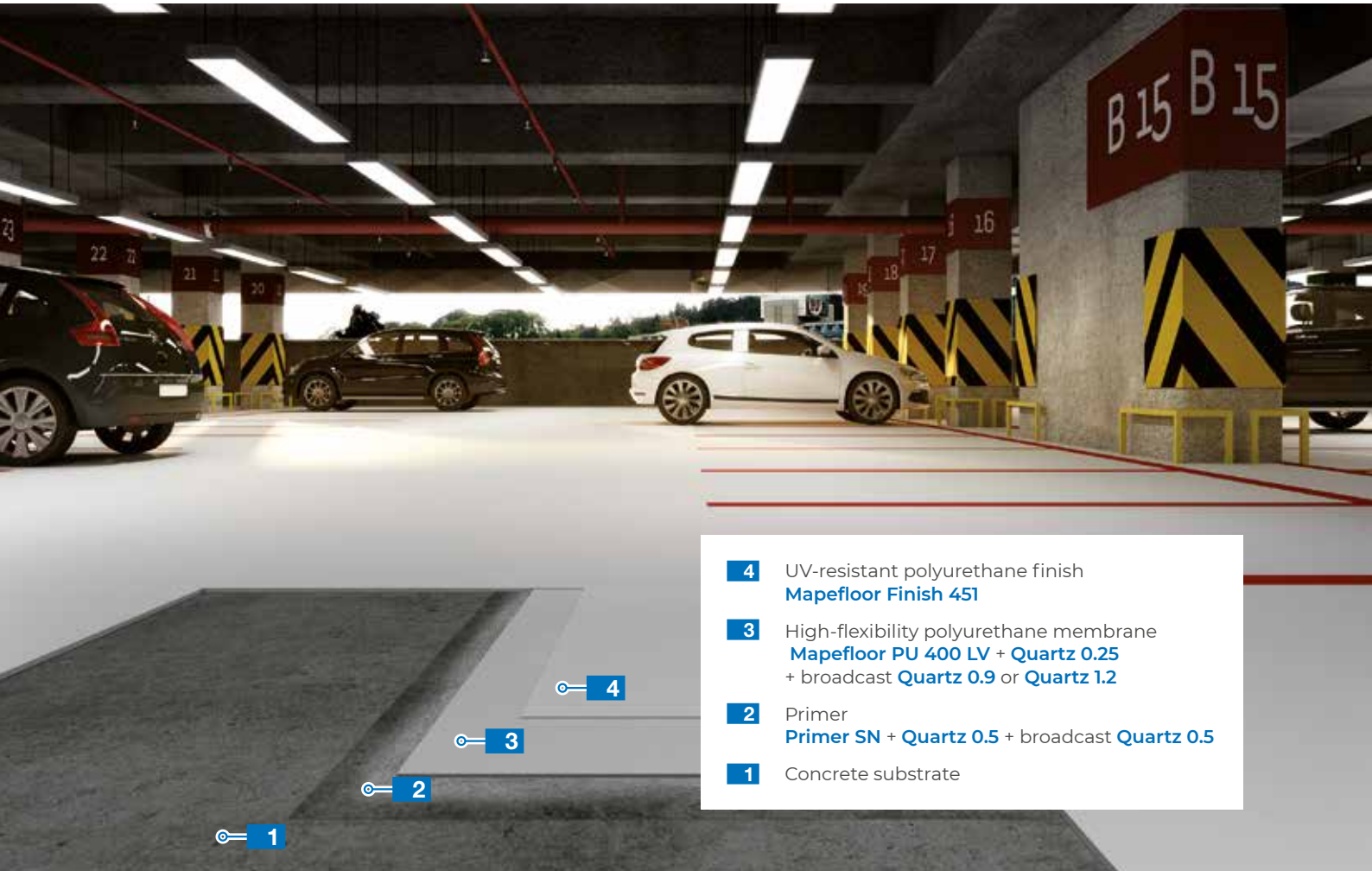
TECHNICAL DATA	
Tear strength* (DIN 53515) +23°C	27 N/mm
Tear strength** (DIN 53515) +23°C	27 N/mm
Elongation at break* (DIN 53504) +23°C	450%
Elongation at break** (DIN 53504) +23°C	80%
Shore A hardness* (DIN 53505)	73
Shore A hardness** (DIN 53505)	88
Dynamic crack-bridging capacity at -20°C	Class B 3.2

* Values for **Mapecolor PU 400 LV** flexible membrane mixed with 30% by weight of **Quartz 0.25**.

Values for **Mapecolor PU 410 membrane mixed with 30% by weight of **Quartz 0.25**.

Mapefloor® Parking System ME

Multi-layered seamless polyurethane coating system with high dynamic crack-bridging capacity for pedestrian areas and areas with vehicular access subjected to intense use, and to **protect parking areas even outdoor** in compliance with the Guidelines of the German Committee on Reinforced Concrete **OS 11b** and concrete surface protection systems according to EN 1504-2. **Total thickness 4 - 4.5 mm.**



- 4** UV-resistant polyurethane finish
Mapefloor Finish 451
- 3** High-flexibility polyurethane membrane
Mapefloor PU 400 LV + Quartz 0.25
+ broadcast **Quartz 0.9** or **Quartz 1.2**
- 2** Primer
Primer SN + Quartz 0.5 + broadcast **Quartz 0.5**
- 1** Concrete substrate

Flexible, slip-resistant, multi-layered, coloured coating system with crack-bridging capacity at temperatures down to -20°C. Suitable for creating strong, impermeable and waterproofing* coatings with high chemical resistance on internal surfaces, including those subjected to variations in temperature.

Where to use

- Multi-storey car parks - intermediate levels
- Internal trafficked areas for garages
- Garages

* Depending on the amount of movement in the cracks in the substrate and the crack-bridging capacity of the system.

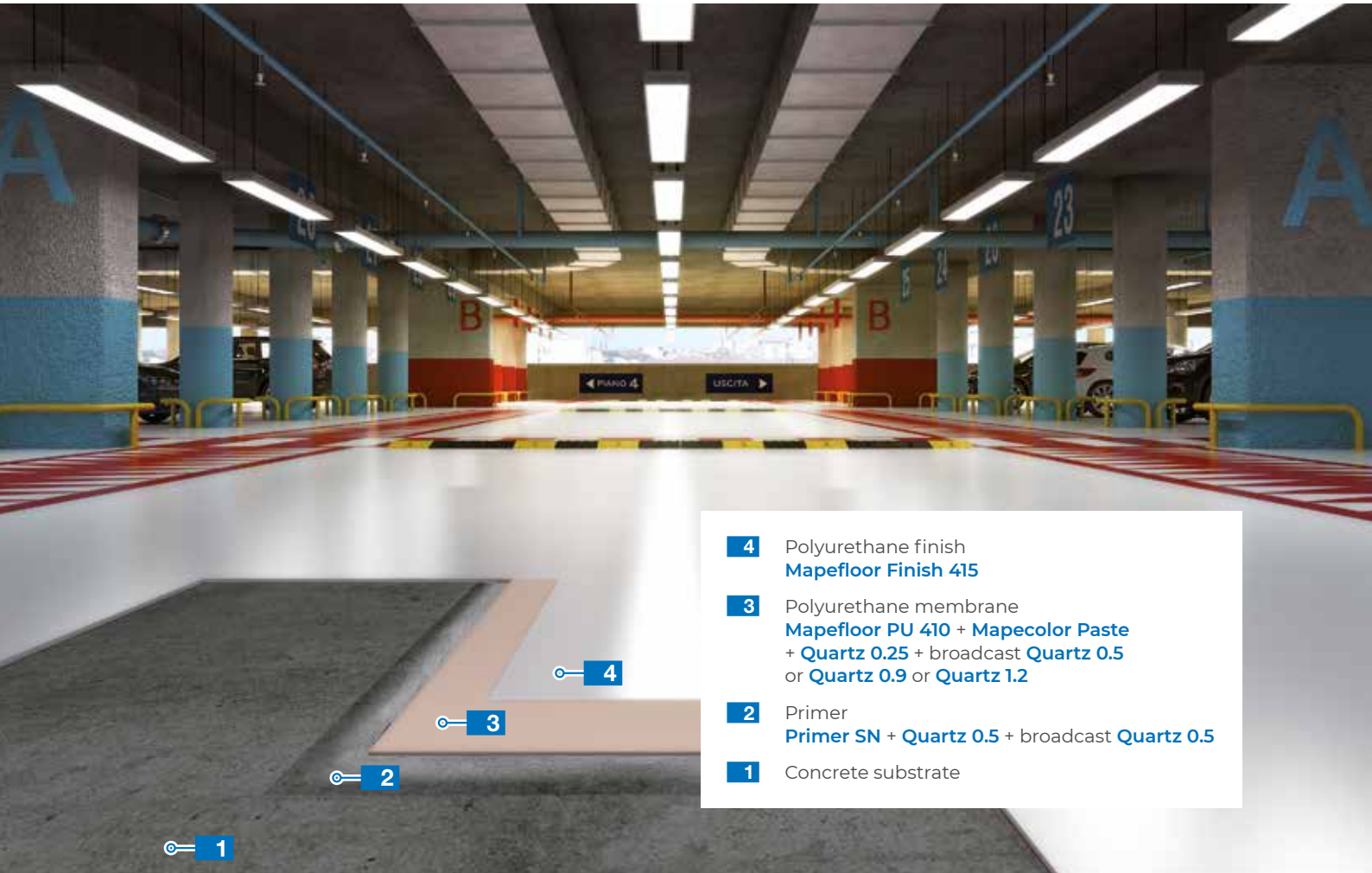
TECHNICAL DATA

Tear strength* (DIN 53515) +23°C	27 N/mm
Elongation at break* (DIN 53504) +23°C	450%
Shore A hardness* (DIN 53505)	73
Dynamic crack-bridging capacity at -20°C	Class B 3.2

* Values for **Mapefloor PU 400 LV** flexible membrane mixed with 30% by weight of **Quartz 0.25**.

Mapefloor® Parking System ID

Multi-layered seamless polyurethane coating system with good dynamic crack-bridging capacity for pedestrian areas and areas with vehicular access subjected to intense use to **protect internal parking areas** in compliance with the Guidelines of the German Committee on Reinforced Concrete **OS 13** and concrete surface protection systems according to EN 1504-2. **Total thickness 2 - 2.5 mm.**



- 4** Polyurethane finish
Mapefloor Finish 415
- 3** Polyurethane membrane
Mapefloor PU 410 + Mapecolor Paste
+ **Quartz 0.25** + broadcast **Quartz 0.5**
or **Quartz 0.9** or **Quartz 1.2**
- 2** Primer
Primer SN + Quartz 0.5 + broadcast **Quartz 0.5**
- 1** Concrete substrate

Flexible, slip-resistant, multi-layered, coloured coating system. Suitable for creating strong, waterproofing* coatings with high chemical resistance on internal surfaces, including those subjected to moderate variations in temperature.

Where to use

- Multi-storey car parks - intermediate levels
- Internal trafficked areas for garages
- Garages

* Depending on the amount of movement in the cracks in the substrate and the crack-bridging capacity of the system.

TECHNICAL DATA

Tear strength* (DIN 53515) +23°C	27 N/mm
Elongation at break* (DIN 53504) +23°C	80%
Shore A hardness* (DIN 53505)	88
Dynamic crack-bridging capacity at -10°C	Class A 1

* Values refer to **Mapefloor PU 410** membrane mixed with 30% by weight of **Quartz 0.25**.

Mapefloor® Parking System RHT

Multi-layered seamless epoxy coating system for pedestrian areas and areas with vehicular access subjected to intense use in compliance with the Guidelines of the German Committee on Reinforced Concrete **OS 8** and **concrete surface protection systems** according to EN 1504-2. **Total thickness 3 - 3.5 mm.**



- 4 Epoxy finish
Mapefloor I 300 SL + Mapecolor Paste + Quartz 0.25
- 3 Epoxy intermediate layer
Mapefloor I 300 SL + Mapecolor Paste + Quartz 0.5 + broadcast Quartz 0.5 or Quartz 0.9 or Quartz 1.2
- 2 Primer
Primer SN + Quartz 0.5 + broadcast Quartz 0.5
- 1 Concrete substrate

Slip-resistant, multi-layered, coloured coating system. Suitable for creating strong, impermeable coatings with high chemical resistance on internal surfaces.

Where to use

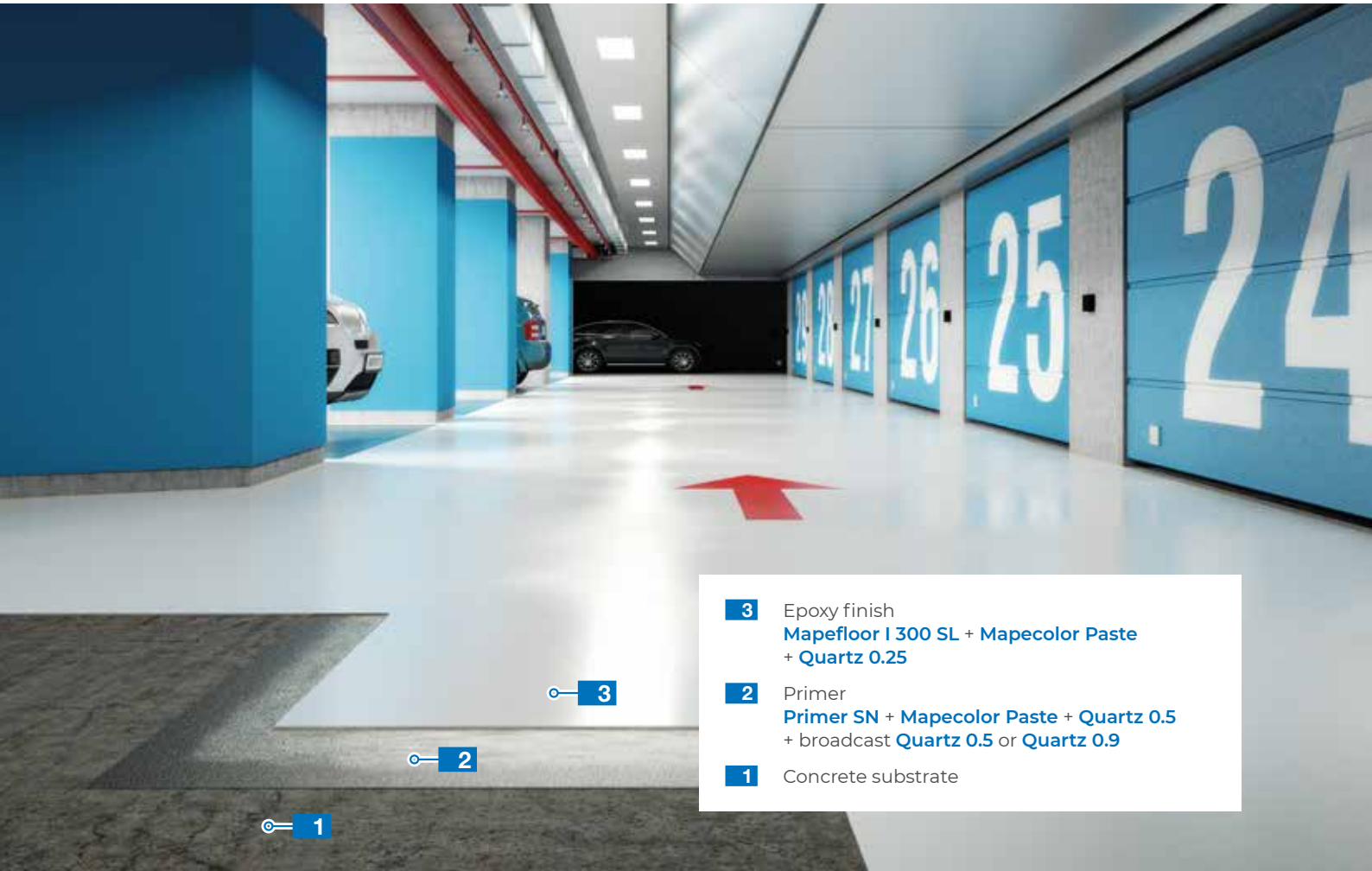
- Multi-storey car parks subjected to heavy traffic
- Garages, transit areas for garages, etc.

TECHNICAL DATA

Adhesion to substrate (EN 13892-8)	3,10 N/mm ² (failure of concrete)
BCA wear resistance (EN 13892-4)	10 µm
Impact strength (EN ISO 6272)	20 Nm

Mapefloor® Parking System RLT

Multi-layered seamless epoxy coating system for pedestrian areas and areas with vehicular access subjected to light use in compliance with the Guidelines of the German Committee on Reinforced Concrete **OS 8** and **concrete surface protection systems** according to EN 1504-2. **Total thickness 0.8 - 1.2 mm.**



- 3** Epoxy finish
Mapefloor I 300 SL + Mapecolor Paste + Quartz 0.25
- 2** Primer
Primer SN + Mapecolor Paste + Quartz 0.5 + broadcast Quartz 0.5 or Quartz 0.9
- 1** Concrete substrate

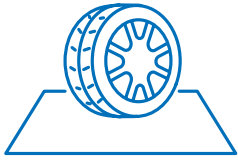
Slip-resistant, multi-layered, coloured coating system. Suitable for creating strong, impermeable coatings with high chemical resistance on internal surfaces.

Where to use

- Multi-storey car parks subjected to light traffic
- Garages, transit areas for garages, etc.

TECHNICAL DATA

Adhesion to substrate (EN 13892-8)	3,10 N/mm ² (failure of concrete)
BCA wear resistance (EN 13892-4)	10 µm
Impact strength (EN ISO 6272)	20 Nm



Application examples of Mapefloor® Parking System



1 Mapefloor Parking System HE

The **floor slab** where vehicles travel is affected by the problems caused by mechanical wear and aggressive chemicals, combined with the effects of harmful atmospheric agents and high temperature variations acting on the structure from summer to winter. The solution to implement must create an impermeable, slip-resistant, coloured surface that is resistant to traffic and contact with oil and fuel. It must also be flexible enough to allow for any movements in the substrate and have crack-bridging properties to prevent water and de-icing salts infiltrating into the slab and corroding the reinforcing bars in the structure.

2 Mapefloor Parking System ID - Mapefloor Parking System RHT/RLT

The access **ramps** in particular must be very strong with a highly slip-resistant finish, and able to prevent water containing dissolved de-icing salts and liquids from penetrating.

3 Mapefloor Parking System ME - Mapefloor Parking System ID

The **intermediate floors** must offer protection against mechanical wear and aggressive chemicals, and also prevent de-icing salts from penetrating into them, but the movements due to expansion and contraction of the substrate are less compared with the top floor.

4 Mapefloor Parking System RHT - Mapefloor Parking System RLT

To protect **trafficked areas on the lowest underground floors** it is not necessary to guarantee the flexibility and crack-bridging capacity of the system because there is limited risk of the floor slabs suffering from structural failure. The coatings resistance to mechanical wear and aggressive chemicals, along with its impermeability, slip-resistant and wide range of different colours, are all characteristics that combine to provide sufficient protection and preserve the surface.

EVERYTHING'S OK WITH MAPEI

HEAD OFFICE
MAPEI SpA
Via Cafiero, 22 - 20158 Milan
Tel. +39-02-37673.1
mapei.com
mapei@mapei.it

