

Hempafloor

Car Park Deck Waterproofing
& Coating Solutions

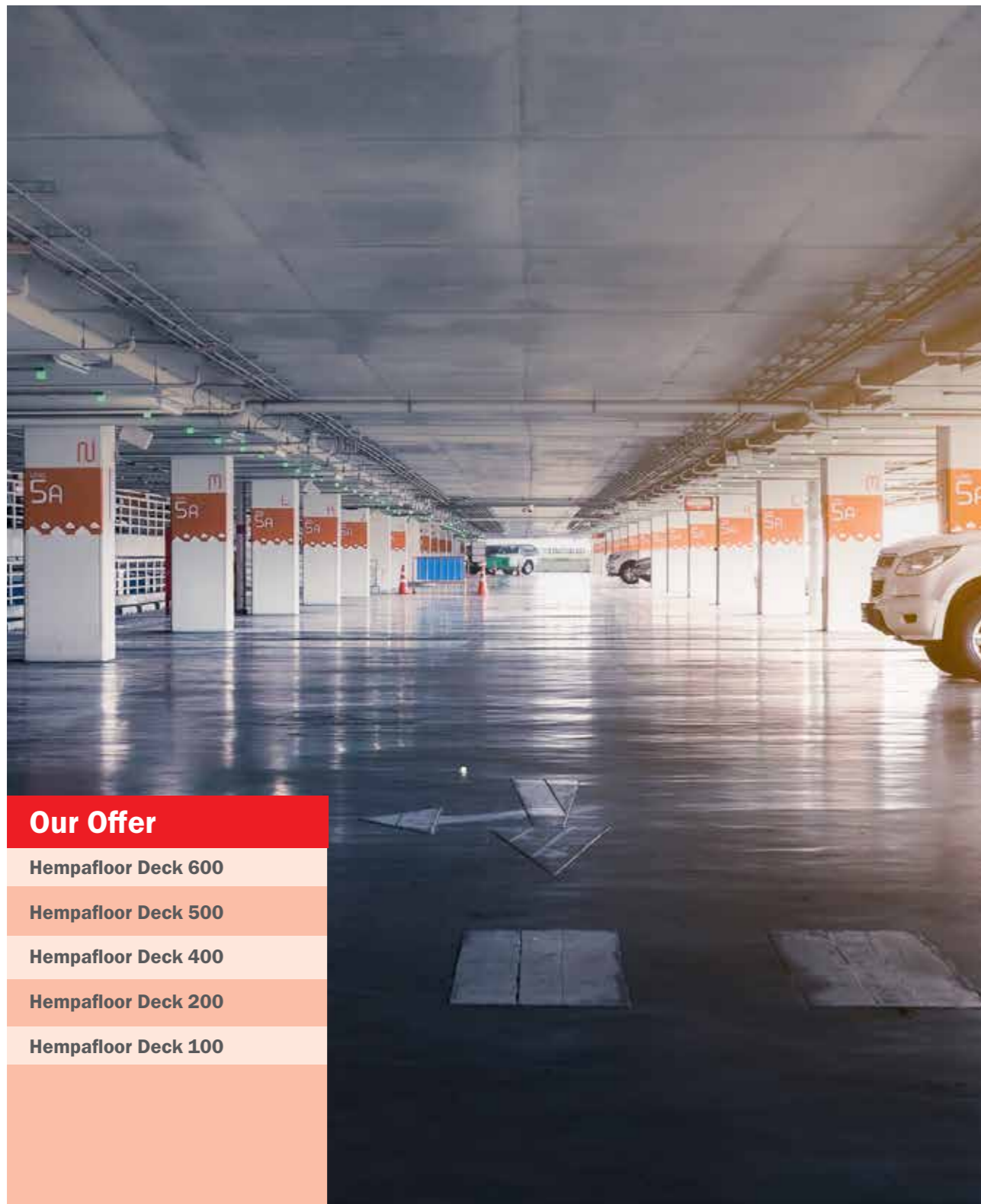


Guide to Hempafloor Car Park Deck Waterproofing & Protective solutions

Multi-storey car parks are subject to great demands regarding mechanical and chemical stress, rain and condensation, de-icing salts, fuels, and oils that attack on surfaces that are already subjected to vehicle loads.

Ramps, spiral ramps, and driveways are particularly vulnerable, as are joints and details penetrating moisture, contaminants, and spalling concrete can affect the building structure, and therefore pose a threat to the safety of drivers and pedestrians.

Hempafloor Deck systems permanently seal parking decks and underground car parks and meet the highest standards of safety, cleanliness, and cost-effectiveness.



Our Offer

Hempafloor Deck 600

Hempafloor Deck 500

Hempafloor Deck 400

Hempafloor Deck 200

Hempafloor Deck 100

Multiple Challenges, One solution



Without the right solutions, underfoot car parks are likely to fall foul of a long list of challenges that could lead to cracked, unsightly, and unclean deck surfaces – or worse, compromised concrete slabs and an unsafe structure.

The Hempafloor Deck system is a high-performance, versatile coating system designed to specifically protect concrete floors and traffic decks normally found in car parks that are subjected to heavy vehicular traffic.

A combination of systems can be produced using the various products within the range to ensure that the final protection offered is tailor-made for the end use of the floor. Ramps, turning circles, and parking bays require the extra protection these systems offer. In addition, the final PU Topcoat can be produced in a wide range of attractive colours.

Water Seepage

To fully protect a deck coating and its underlying structure, it's important to guard against liquids seeping into the concrete. If liquids seep into the concrete, then the critical metal reinforcement will start to rust and corrode, putting the carpark's structural integrity at risk.

This could lead to anything from concrete failure, cracking, discoloration, or leaking between decks and dripping corrosive, salt-contaminated water onto cars, or possibly even the concrete falling apart completely.

Concrete Slab & Movement

Car parks are constructed with large, clear spans with a minimum number of supporting columns in order to achieve the maximum number of vehicle parking spaces. This type of construction, when subjected to cyclical traffic flow, inevitably leads to the structure flexing and moving.

The floor coating will also experience these issues and needs to be able to flex with the movement of the cars and the underlying concrete slab without splitting apart.









We offer a variety of sophisticated solutions to deal with the widest range of applications.

- External and internal decks
- Decks above-occupied premises
- Underground decks
- Internal and external stairwells
- Internal, external, and underground ramps
- Sports stadiums and balconies
- Line markings
- Surface car parks

Support Offered

Our commitment to customer support is illustrated by the many services that come part and parcel when working with us, which include:

-  **Consultation**
-  **Site Survey**
-  **Specification**
-  **Technical Support**
-  **Installation**
-  **Warranty & Aftercare**

Layer of Defence

The Hempafloor Deck range is designed to provide superior deck coating properties at every point of the building's life-cycle. Much of this stems from the innovative polyurethane-based formulations, which provide a number of advantages, like exceptional tensile strength and elastomeric capability, to ensure optimum performance.

Tough and Durable



The Hempafloor Deck coatings, specially formulated to have high durability, hard-wearing and long-lasting characteristics, protect the deck from damage caused by fuel and oil spills, impact, traffic wear, point loading, weather, and structural movement.

The systems incorporate an aggregate-filled wearing course and multi-layer coats designed for the highest-trafficked, highest-space-change rate car parks.

Chemical Resistance



Chemicals play a vital role in flooring deterioration. Parking areas are exposed to exhaust fumes, oil spills from vehicles, and other chemicals.

The Hempafloor Deck coatings protect these areas from oil spills, splashes from chemicals, alkalis, solvents, regular floor cleaning materials, and other corrosive elements.

Security



The floor plays a very important role in the safety and general experience of a car park user. For a start, the potential for water and slippery automotive oils to be spilt around poses a dangerous slip risk.

To avoid painful slips and trips, Hempafloor Deck systems provide a positively textured, anti-slip surface that enhances traction underfoot.

Aesthetic Enhancement



With an exceptional topcoat and line marking colour range, design opportunities become almost unlimited, allowing the creation of an aesthetically pleasing and welcoming environment that will leave a positive first impression on the user.

Hempafloor's high-quality, durable waterproofing, and protection systems offer a functional and creative design to improve and enhance the aesthetics of your car park.

**Exposed and heavy-traffic areas
(ramps, turnings, hammerheads,
and service decks)**
Hempafloor Deck 600



**External decks,
Sun proof**
Hempafloor Deck 500



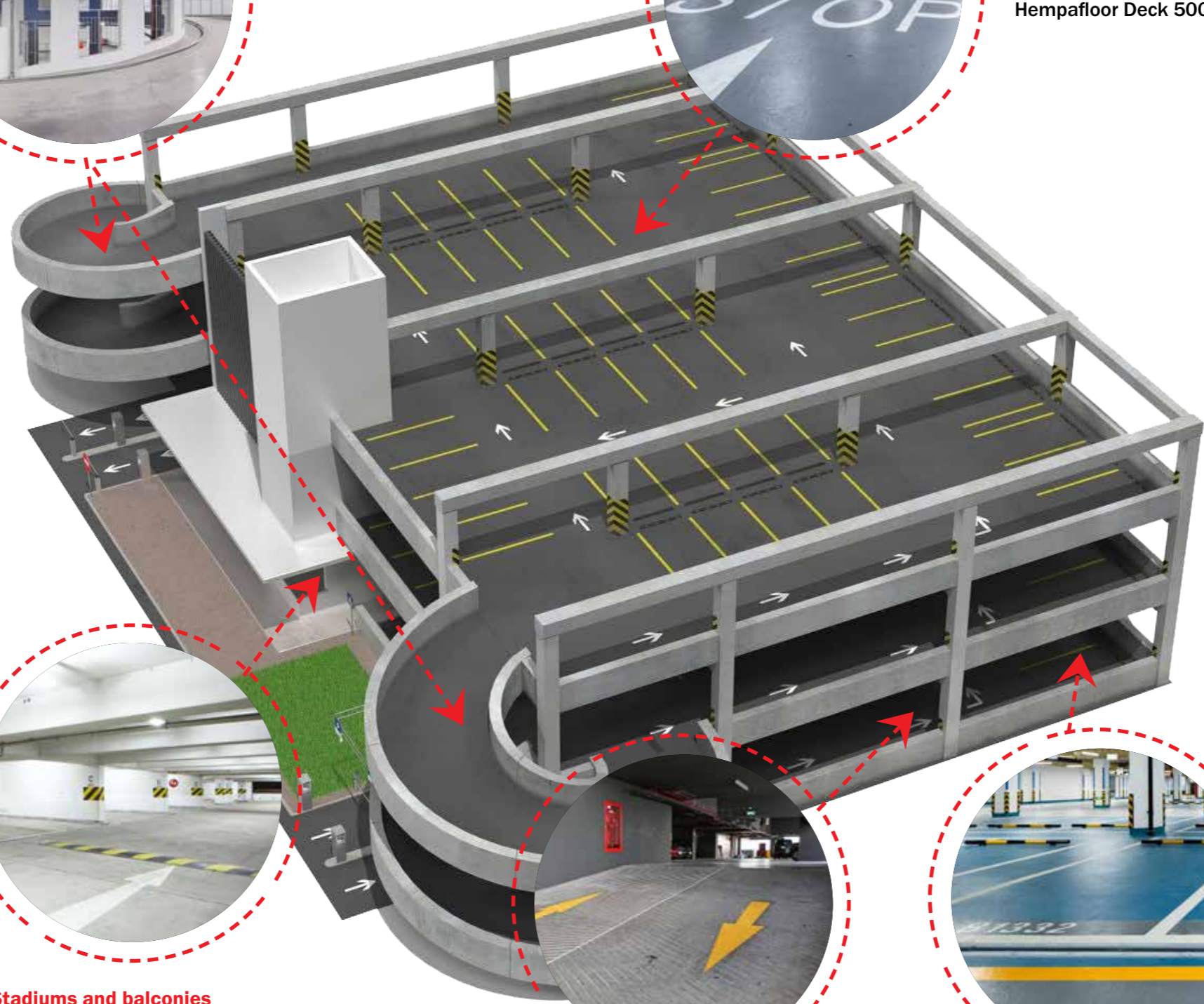
Stadiums and balconies
Hempafloor 200/
Hempafloor Deck 500



Basement areas
Hempafloor Deck 400/
Hempafloor Epoxy solutions



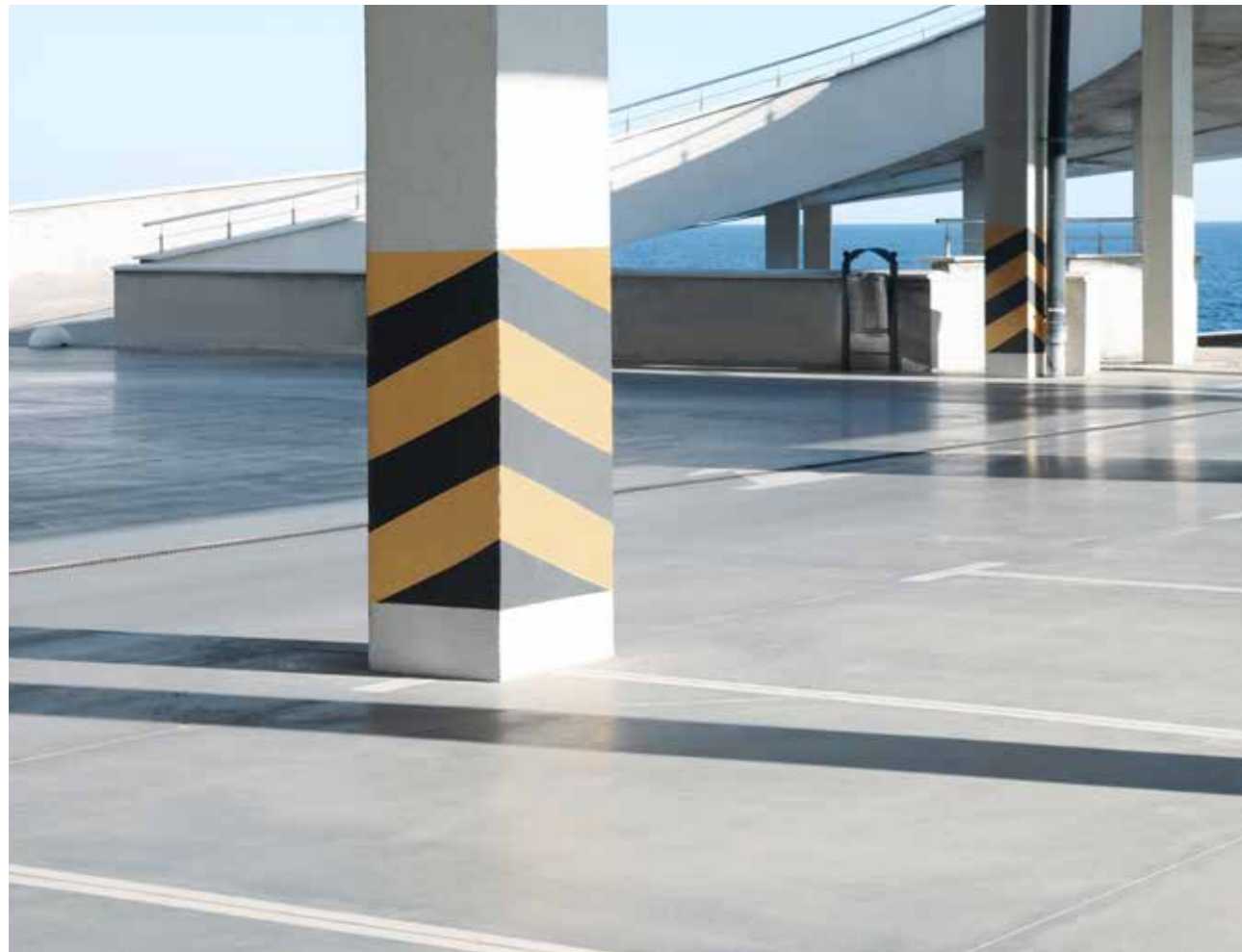
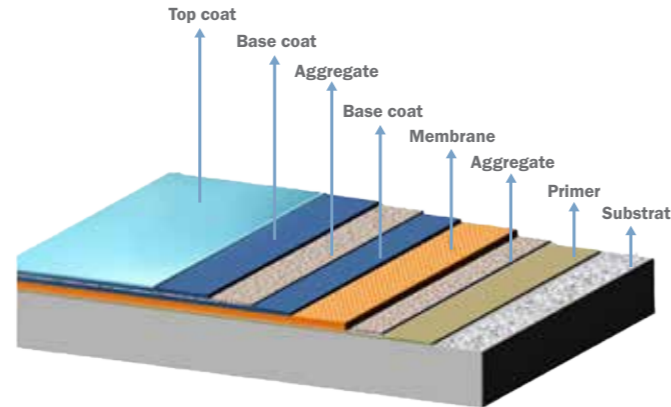
Internal decks
Hempafloor Deck 200



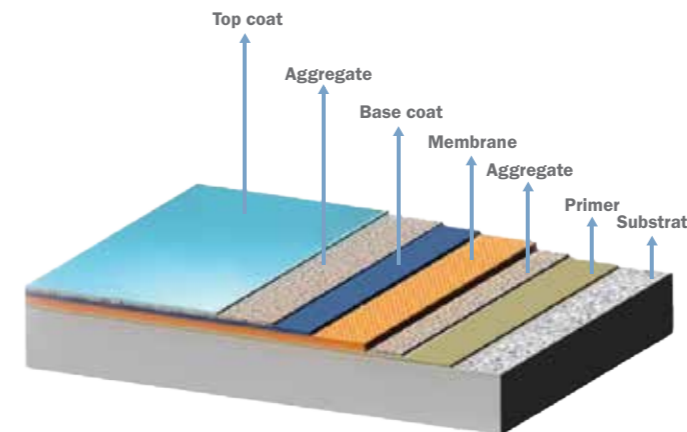
Solutions For External Decks

Hempafloor Deck 600 - A heavy-duty waterproofing and UV-Stable Deck system for high durable exposed areas of heavy traffic (ramps and turning areas) designed to overcome all the challenges of car park top decks (ASTM C957).

- Hempafloor Prime 420
- Hempel's Anti-Slnt 67500
- Hempafloor Waterproof 600
- Hempafloor Durable 200
- Hempel's Anti-Slnt 67500
- Hempafloor Durable 200
- Hempafloor durable 300



Hempafloor Deck 500 -- A heavy-duty waterproofing and UV-Stable Deck system for exposed areas of standard use for parking bays and driveways (ASTM C957). It is also recommended for internal decks exposed to weather challenges. With an exceptional colour range In PU topcoats as well as with line markings, design opportunities become unlimited, allowing the creation of an aesthetically pleasing and welcoming environment that will leave a positive first impression on the user.

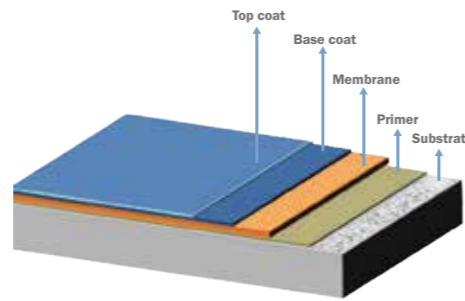


- Hempafloor Prime 420
- Hempel's Anti-Slnt 67500
- Hempafloor Waterproof 600
- Hempafloor Durable 200
- Hempel's Anti-Slnt 67500
- Hempafloor durable 300

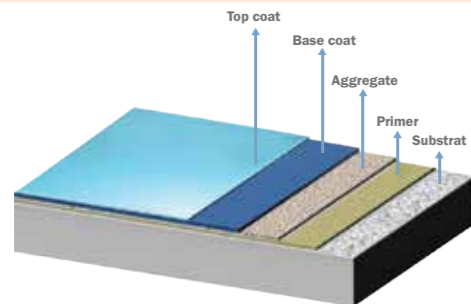
Solutions for Internal Decks and Walkways

Hempafloor Deck 400 - A polyurethane-based waterproofing and smooth deck coating system. It is not just the parking bays and main routes that need a high-performance deck coating, but other areas such as mechanical rooms, Utility rooms, etc.

Hempafloor Prime 420
 Hempafloor Waterproof 600
 Hempafloor Durable 200
 Hempafloor Durbale 200

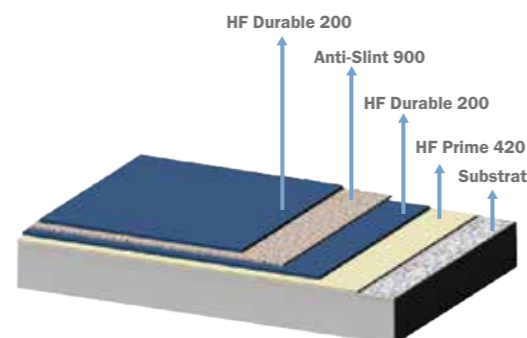


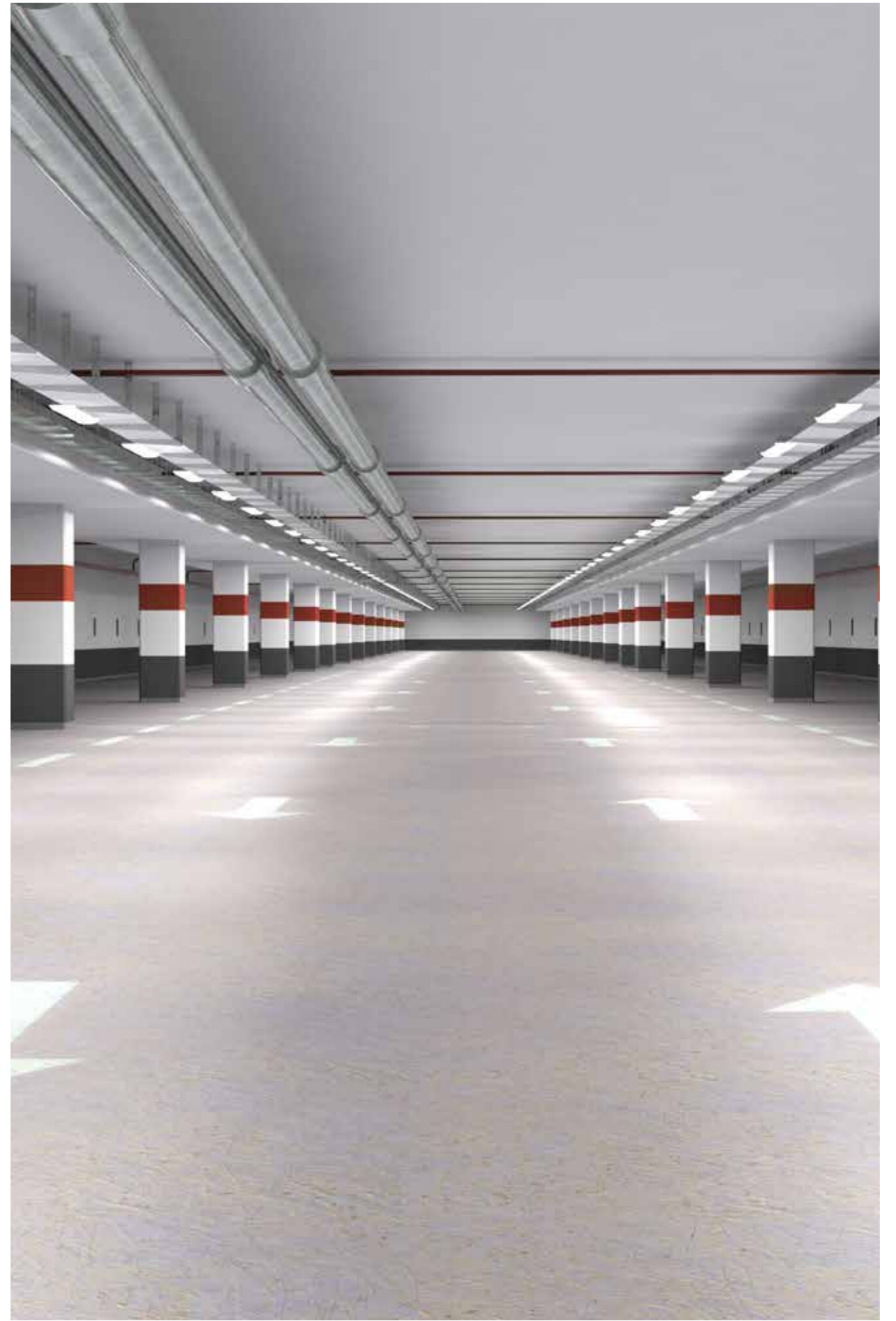
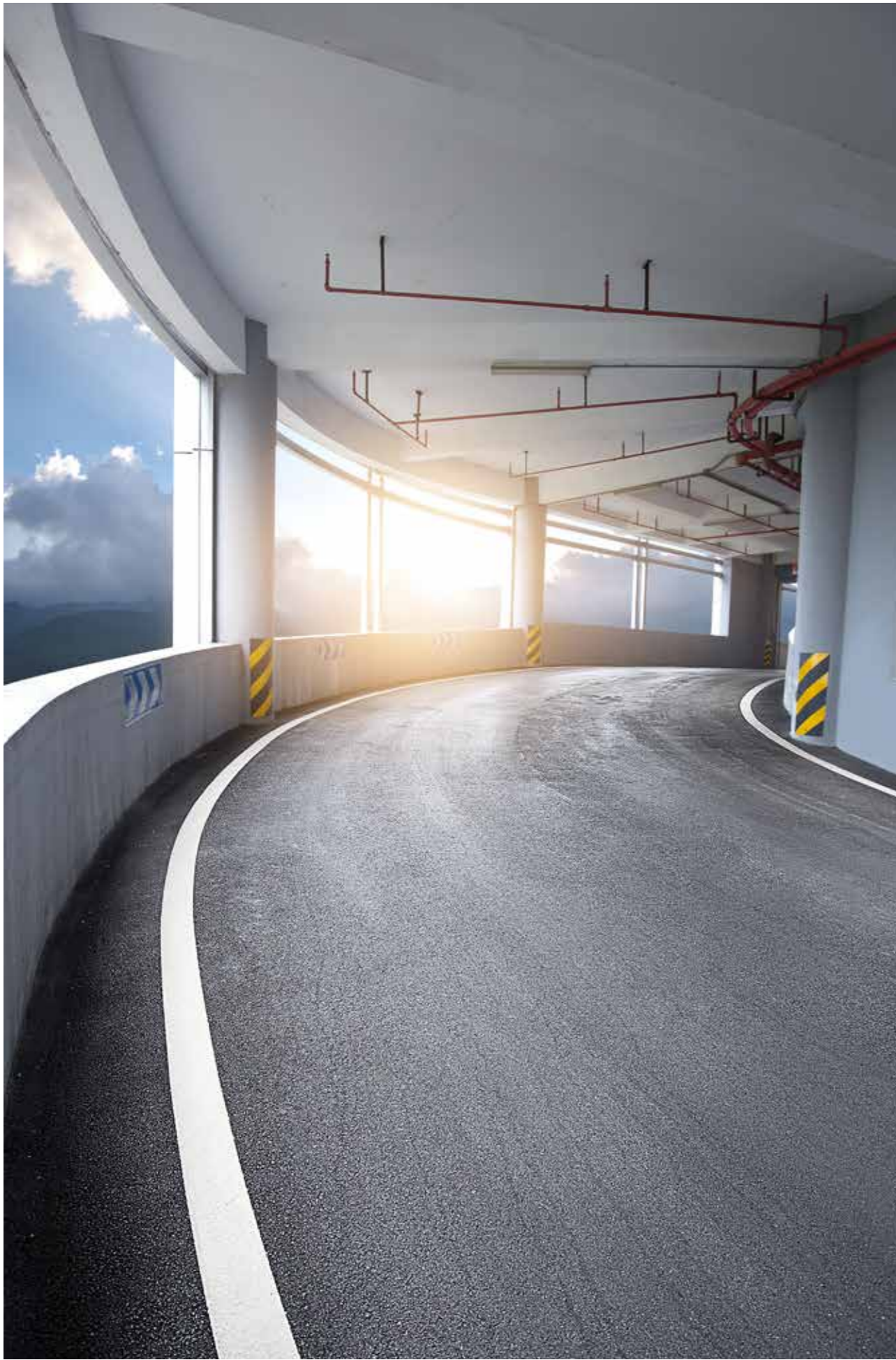
Hempafloor Deck 200 - A polyurethane-based protective coating system for exterior trafficable flat roofs, sports stadiums, and balconies. Hempafloor Deck 200 is also UV-resistant, wear-resistant, and mechanical stress resistant. This coating system provides a good, non-slip coating even after many years of use.



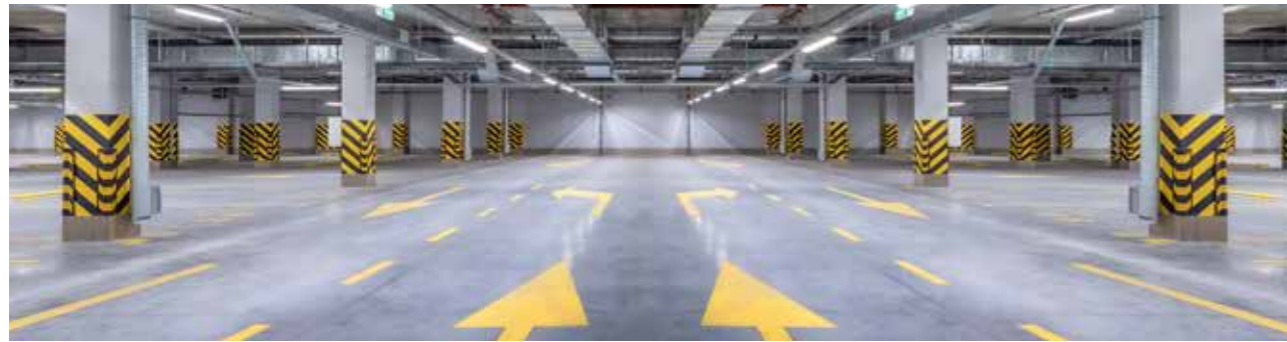
Hempafloor Prime 420
 Hempel's Anti-Slnt 67500
 Hempafloor Durable 200
 Hempafloor durable 300

Hempafloor Deck 100 - A polyurethane-based protective coating system for interior trafficable areas where UV resistance is not a challenge and being wear-resistant as well as resistant to mechanical stress is important. This coating system provides excellent slip resistance.





Compliance To Standards



Deck System	Standard Reference	Compliance	Remarks
Hempafloor Deck 600 <ul style="list-style-type: none"> Hempafloor Prime 420 (100-150µ DFT) Hempel's Anti-Slinit 0.5-1.00 Kg/M² Hempafloor Waterproof 600 (500-1000µ DFT) Hempafloor Durable 200 (200-400µ DFT) Hempel's Anti-Slinit 0.5-1.00 Kg/M² Hempafloor Durable 200 (200-400µ DFT) Hempafloor Durable 300 (75-150µ DFT) 	ASTM C957	Refer to remarks	<ol style="list-style-type: none"> Abrasion resistance (1000 cycles / 1kg / CS-17) ASTM C501-21 Adhesion-in-peel after water immersion (ASTM C794-06) Chemical resistance (ASTM D471-16 & ASTM D412-16) Weathering resistance QUVA (ASTM C1442-14 &ASTM D412-16). Low temperature Crack Bridging Ability (ASTM C1305/ C1305M-16). Slip Resistance ASTM E303-22 VOC Emission (LEED/ CDPH/ EHLB VI.2) Resistant to chemical ASTM D1308
Hempafloor Deck 500 <ul style="list-style-type: none"> Hempafloor Prime 420 (100-150µ DFT) Hempel's Anti-Slinit 0.5-1.00 Kg/M² Hempafloor Waterproof 600 (500-1000µ DFT) Hempafloor Durable 200 (200-400µ DFT) Hempel's Anti-Slinit 0.5-1.00 Kg/M² Hempafloor Durable 300 (75-150µ DFT) 	ASTM C957	Refer to remarks	<ol style="list-style-type: none"> Low temperature Crack Bridging Ability (ASTM C1305/ C1305M-16) Adhesion-in-peel after water immersion (ASTM C794-06) Chemical resistance (ASTM D471-16 & ASTM D412-16) Weathering resistance QUVA (ASTM C1442-14 &ASTM D412-16) Abrasion resistance (1000 cycles / 1kg / CS 17) ASTM C501-21 Slip Resistance ASTM E303-22 Resistant to chemical ASTM 1308 VOC Emission (CDPH/EHLB VI.2)

Compliance To Standards

Deck System	Standard Reference	Compliance	Remarks
Hempafloor Deck 400 <ul style="list-style-type: none"> Hempafloor Prime 420 (100-150µ DFT) Hempafloor Waterproof 600 (500-1000µ DFT) Hempafloor Durable 200 (200-400µ DFT) Hempafloor Durable 200 (200-400µ DFT) 	ASTM C957	Refer to remarks	<ol style="list-style-type: none"> Low temperature Crack Bridging Ability (ASTM C1305/ C1305M-16) Adhesion-in-peel after water immersion (ASTM C794-06) Chemical resistance (ASTM D471-16 & ASTM D412-16) Weathering resistance QUVA (ASTM C1442-14 &ASTM D412-16) Slip Resistance ASTM E303-22 VOC Emission (CDPH/EHLB VI.2)
Hempafloor Deck 200 <ul style="list-style-type: none"> Hempafloor Prime 420 (100-150µ DFT) Hempel's Anti-Slinit 0.5-1.00 Kg/M² Hempafloor Durable 200 (200-400µ DFT) Hempafloor Durable 300 (75-150µ DFT) 		Refer to remarks	<ol style="list-style-type: none"> Accelearted Weathering Test (UVA Resistance) - ISO 16474-3:2021 Abrasion resistance (1000 cycles / 1kg / CS 17) ASTM C501-21 Slip Resistance ASTM E303-22 Resistant to chemical ASTM D1308 VOC Emission (CDPH/EHLB VI.2)
Hempafloor Deck 100 <ul style="list-style-type: none"> Hempafloor Prime 420 (100-150µ DFT) Hempafloor Durable 200 (200-400µ DFT) Hempel's Anti-Slinit 0.5-1.00 Kg/M² Hempafloor Durable 200 (200-400µ DFT) 		Refer to remarks	<ol style="list-style-type: none"> Elongation test (ASTM D412) Abrasion resistance (1000 cycles / 1kg / CS 17) ASTM C501-21 VOC Emission (CDPH/EHLB VI.2)

Certified to the Highest Standards



Hempafloor Deck 600 and 500 coating solutions meet the requirements for ASTM C957, "Standard specifications for High Solids Content, Cold-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface."

The recommended substrate temperature for application is 10 to 50 °C.
Contact our Technical Services Team for further details and guidance.

Hempafloor Deck 600

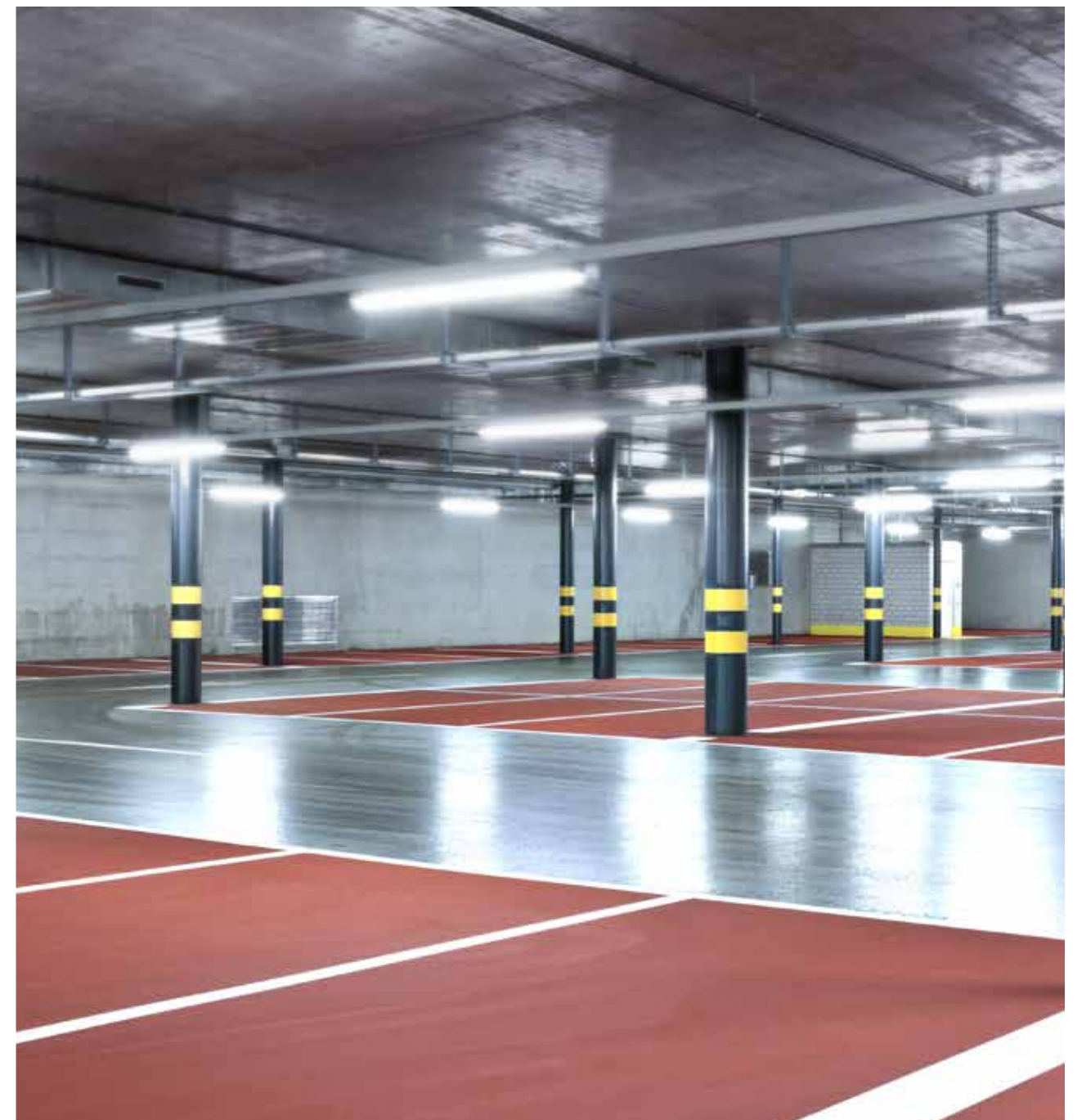
Complies with ASTM C957 for the following tests as per the standard specification:

Abrasion resistance, C501
Tensile Strength ASTM D412
Elongation ASTM D412
Chemical Resistance ASTM D471
Shore A ASTM D2240

Hempafloor Deck 500

Complies with ASTM C957 for the following tests as per the standard specification:

Abrasion resistance, ASTM C501
Tensile Strength ASTM D412
Elongation ASTM D412
Chemical Resistance ASTM D471
Shore A ASTM D2240



Standard Colours*



Traffic Grey B
RAL 7043



Traffic Grey A
RAL 7037



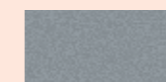
May Green
RAL 6017



Carmine Red
RAL 3002



Traffic Blue
RAL 5017



Silver Grey
RAL 7001

*The printed colours may differ from the examples shown and are not indicative of the full colour range. For a full-colour chart and samples, contact the nearest Hempel office or technical representative.

A wide range of colours is available in UV-stable Hempafloor Durable 300.

Advantages of Hempafloor Deck Systems

Safety and attractiveness for traffic areas in car parks and underground car parks. state-of-the-art solvent-free polyurethane resin technology and tested according to the current regulations.



De-Icing Salt Resistant



Chemically Resistant



Abrasion Resistant



Anti-Slip



Temperature- and Shock-Resistant



Weather Resistant



Water Vapour Permeable



Fire Resistance Class Bri-81in Accordance DIN EN 13501-1)



Many Colour Varieties



Cost-Effective



Bright and Friendly Look



Mechanically Resistant



Fast Processing Time



Hard-Wearing



Watertight



Static/Dynamic Crack Bridging

The modular system enables the preferred product to be selected at every level of the coating system.

This makes it particularly easy to put together the best possible Hempafloor Deck system according to the individual requirements of each construction project.

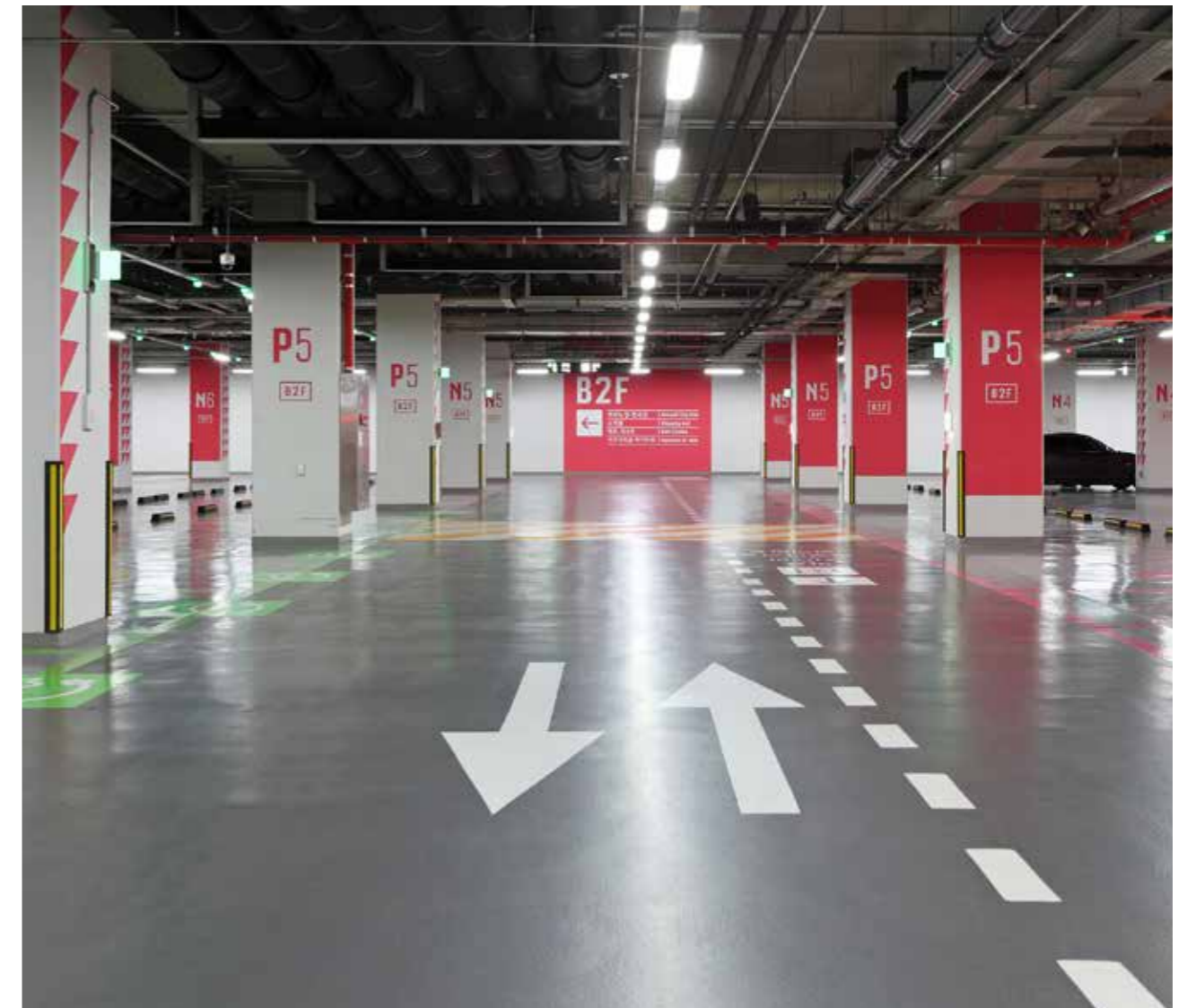
The versatility of our range means that specifiers and developers can choose movement joints that are as specific and individual as the building itself.

Markings

The Hempafloor range has a dedicated range of durable marking and coating solutions for multi-story and surface car parks, with performance that far surpasses traditional materials. Our cold liquid-applied line marking products are available in a wide range of colours and are suitable for car park line marking, signage, parking bay and driving lane coating, colour demarcation, and blacking out.

Our Offer

1. Hempel's SB Airfield & Road Marking 569ME
2. Hempel's Traffic Paint KSS 567KW
3. Hempel's Traffic & Airfield Paint 56880



Anti-Carbonation Coatings for Walls, Ceilings, and Columns Inside Car Park

Carbonation of Concrete

- When it comes to underground car parks and multistorey car lots, it is important to protect internal walls and ceilings from the effects of carbonation from vehicles.
- Carbonation is the reaction of carbon dioxide in the environment with the calcium hydroxide in the cement paste.
- This reaction produces calcium carbonate and lowers the pH to around 9. At this value, the protective oxide layer surrounding the reinforcing steel breaks down, and corrosion becomes possible.



Carbonation of Concrete



- When steel corrodes, the resulting rust occupies a greater volume than the steel.
- This expansion creates tensile stresses in the concrete, which can eventually cause cracking, delamination, and spalling.











Contex Anti-Carbonation Topcoats

Our Offer

1. Contex Top Coat Matt 48610
2. Contex EM 58600
3. Contex Topcoat Silk 48620
4. Contex Smooth 46600



Features and Benefits:

- | | |
|---|---|
|  Excellent Anti-carbonation Properties |  Outstanding Colour |
|  Instant and Wide Range of Colour Availability |  Excellent Washability & Easy-to-Clean |
|  High Crack Bridging Ability |  Alkali and Chemical-Resistant |
|  Weather Resistance |  Water Repellant |
|  UV Resistance |  Breathable Coatings |

- Contex Anti-Carbonation system for use on the walls, columns, soffits, and ceilings in interior parking structures. It can be applied to a wide variety of substrates, including concrete, plaster, brick, and cementitious partitions.
- Anti-carbonation paint provides a protective coating for car park structures, resistant to the attack of chlorides, carbon dioxide, and other acidic gases that are a product of high vehicular traffic.
- Context Anti-carbonation Topcoats can be used to add coloured zones to large-scale car parks, allowing visitors to find their vehicles easier, and the high reflective properties of colours enhance brightness around the facility.

As a world-leading supplier of trusted coating solutions, Hempel is a global company with strong values, working with customers in the protective, marine, decorative, container, and yacht industries. Hempel factories, R&D centres, and stock points are established in every region. Across the globe, Hempel's coatings protect surfaces, structures, and equipment. They extend asset lifetimes, reduce maintenance costs, and make homes and workplaces safer and more colourful.

Hempel was founded in Copenhagen, Denmark in 1915. It is proudly owned by the Hempel Foundation, which ensures a solid economic base for the Hempel Group and supports cultural, social, humanitarian, and scientific purposes around the world.

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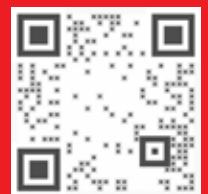
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