Seamless Car Park Solutions
MasterSeal Traffic Systems
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Our reference in Stockport (United Kingdom):
Stockport Exchange Train Station
Master Builders Solutions from BASF

Building on partnership. Our Master Builders Solutions experts find innovative and sustainable solutions to meet your specific construction needs. Our global experience and network help you to be successful – today and tomorrow.

Master Builders Solutions

The Master Builders Solutions brand brings all of BASF’s expertise together to create chemical solutions for new construction, maintenance, repair and renovation of structures. Master Builders Solutions is built on the experience gained from more than a century in the construction industry.

The know-how and experience of a global community of BASF construction experts form the core of Master Builders Solutions. We combine the right elements from our portfolio to solve your specific construction challenges. We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide. We leverage global BASF technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make you more successful and drive sustainable construction.

The comprehensive portfolio under the Master Builders Solutions brand encompasses concrete admixtures, cement additives, chemical solutions for underground construction, waterproofing solutions, sealants, concrete repair and protection solutions, performance grouts, performance flooring solutions.
Long Term Deck Solutions for Short Term Parking
Master Builders Solutions from BASF

The triumph of the car as a product for the masses started in the mid-20th century. At the same time, it became a key factor in urban planning with solutions ranging from cities designed for cars to pedestrian precincts. Especially when a large number of cars need to be parked in a relatively small area, at places of work, near public buildings and in densely populated cities, space is at a premium. Multi-storey and underground car parks provide the parking spaces required. At the same time, they are the drivers first point of contact with their destination. It is an architectural challenge to meet both sets of requirements. Master Builders Solutions from BASF is a strong partner for your project. As a company, BASF can look back on a 150 year history and has decades of experience in the construction chemicals field. Thanks to this experience and continuous investments in research and development, we are in a position to develop optimum product solutions.

As a specialist in seamless traffic systems, we offer tailor-made solutions for any application. Our traffic systems are not only outstandingly well-suited to meet functional requirements but also allow designers considerable leeway for creativity.

MasterSeal Traffic a long Established Market Leader

MasterSeal Traffic systems have been specified and installed for more than 20 years in the UK. Formerly branded as CONIDECK, MasterSeal Traffic systems were first developed in the late 1980’s and quickly gained success across Europe.

1993: Eden Walk Shopping Centre Multi Storey Car Park (MSCP), Kingston upon Thames
One of the first multi deck MaterSeal traffic installations

2000: Metro Centre Blue and Yellow MSCP’s, Newcastle upon Tyne
The UK’s largest shopping centre

2002: Q-Park Candleriggs MSCP, Glasgow
The introduction of fast curing MasterSeal Traffic polyaspartic coatings

2004: The Mall underground MSCP, Walthamstow
MasterSeal Traffic success with The Mall

2007: Q-Park Liverpool One MSCP’s, Liverpool
All Q-Park carpark refurbishments and new build construction completed with MasterSeal Traffic

2015: intu Gade, Church, Sutton MSCP’s, Watford
The largest single MSCP refurbishment project in the UK in 2015
Our reference in Chester (United Kingdom): Cheshire Oaks Shopping Centre
Our reference in Blackpool (United Kingdom):
Talbot Road Multi-storey Car Park
Even a small car can weigh 1,000 kg and more; the weight of an SUV can easily reach 2.5 tonnes. Even when parked, vehicles represent a significant load on a structure. As soon as they start moving, the forces on the structure and the surface are simply huge. A reinforced concrete structure is therefore the solution of choice. But what protects reinforced concrete against loads on its surface and ensures that the building continues to function properly and remains economical in the long term?

The surfaces of a car park face extreme mechanical, chemical and dynamic loads: mechanical loads caused by vehicles moving off and braking, chemical loads caused by oils, fuels and road grit and dynamic loads caused by temperature fluctuations and changing traffic densities combined with varying occupancy rates.

MasterSeal Traffic systems from BASF’s Master Builders Solutions offer multi-layer traffic surfaces that are tailor-made to withstand the requirements faced by each individual project. They are ideal for both new and refurbishment projects where the rapid installation of parking spaces, ramps and spiral ramps save time for the investor. The large selection of colours available means that drivers can be given orientation and helps provide car parks with a clearly structured appearance.

MasterSeal coating must be applied to a minimum of 150mm vertically to the upstand from the base substrate.
The function of a car park is always the same – to provide parking spaces for as many vehicles as possible. However, the requirements faced by the deck system may be very different depending on the position of a parking area in the building. MasterSeal Traffic systems consist of several layers, all applied in liquid form. This means that the coating can be adapted to the requirements of the specific project with regards to both cost/benefit analysis and the individual properties of the surface.

To allow customers to benefit from the variety of possibilities offered by Master Builders Solutions from BASF, we have developed a number of services to support owners, designers, architects and application contractors, from conceptual design through to the completion of a project. Our holistic consultancy approach includes support for each stage of the design and decision-making process. On the basis of your project requirements, our expert employees indicate the wide range of possibilities that are available. This way, you can always be sure that you choose the right system for a refurbishment, modernisation or new build project.

For further information, go to:
www.master-builders-solutions.basf.co.uk

The benefits at a glance

Individual:
- A variety of possibilities for coloured parking space design

Reliable and versatile:
- Implementation of special properties (such as crack-bridging, non-yellowing or anti-slip properties, high mechanical strength) is possible
- Fast track systems for fast and economical rehabilitation

Economical:
- Strong, proven car park systems with a long service life
- Low maintenance expenses thanks to easy cleaning of surfaces
1 Exposed Deck (pages 14–15)
2 Intermediate Deck (pages 16–17)
3 Spiral and other Ramps (pages 18–19)
4 Ground Bearing Slabs (pages 20–21)
5 Fast Track Systems (pages 22–23)
Concrete Repair
Easy to Apply and Durable Solutions

With Master Builders Solutions your concrete repair problems in carpark renovation are easily solved. We provide easy-to-apply mortars for hand application on vertical and overhead areas, systems for spray application, and flowable mortars for pourable applications. Our repair mortars are specifically designed not only to meet the demanding requirements of EN 1504-3 (the European standard for concrete repair) but also to offer excellent application properties.

MasterEmaco Repair

1. Corrosion Protection: MasterEmaco P 5000 AP
2. Bonding slurry (optional): Either MasterEmaco repair mortar or MasterEmaco P 5000 AP
3. Repair Mortar: MasterEmaco S 5400
4. Fairing Coat (optional): MasterEmaco N 5100 FC
Reinforced Concrete Repair System
Long Lasting Low Maintenance Repairs

1 Corrosion Protection

MasterEmaco P 5000 AP
- Provides active corrosion inhibition to protect the reinforcing bars
- Polymer modified formulation for better adhesion on steel reinforcement
- Simply mixed with water
- Multi-use: can also be used as bonding slurry to improve bond of MasterEmaco repair mortars
- Light grey/off white colour for easy site control of coverage on reinforcement

2 Bonding Slurry

- Typically not needed for MasterEmaco repair mortars!
- A well-prepared, pre-wetted surface is absolutely sufficient for our time-saving MasterEmaco repair mortars
- In case a bonding slurry is demanded, you can use MasterEmaco S 5400 with 10% higher water addition or MasterEmaco P 5000 AP

3 Repair mortar

MasterEmaco S 5400
- Cement-based, single-component, extra high-strength, high-modulus, fibre-reinforced structural repair mortar
- Meets the requirements of EN 1504-3 class R4
- Can easily be spray or trowel applied
- Vertical, horizontal and overhead application from 5 to 50 mm.
- Very easy to smoothen, gives very dense and uniform surface.

4 Fairing Coat (optional)

MasterEmaco N 5100 FC
- Cement-based, single-component, polymer-modified, fast-setting levelling mortar and blowhole filler
- Ideal for fine finishing and levelling repairs on large vertical and overhead areas
- Fast setting properties allows quick over-coating.
- Very tight and uniform surface

Application of MasterEmaco P 5000 AP on cleaned reinforcement
Levelling of surface with MasterEmaco N 5100 FC
Parking Deck Repairs
Easy to Apply and Durable Solutions

MasterEmaco T 545
Magnesia-phospate Cement Fast Hardening Repair Mortar
- Applied when very early strengths are required, even in cold temperatures
- Minimum temperature: −20°C
- Mineral based; excellent adhesion to concrete and other mineral substrates
- Excellent resistance against de-icing salts; good freeze-thaw resistance
- No additional bonding primer required
- Rapid strength gain, areas can be returned to service in less than an hour

MasterEmaco T 1100 TIX
Plastic Bedding and Traffic Repair Mortar for horizontal patch repair
- A thixotropic bedding mortar
- Fast hardening, even at sub-zero temperatures
- Can be re-opened to traffic after only 2 hours at 20°C
- For repair of inclined traffic areas
- High durability
- High freeze-thaw resistance
- Very little shrinkage

MasterEmaco T 1200 PG
Flowable Traffic Repair Mortar
- For flowable or fluid horizontal repair
- Fast hardening, even at sub-zero temperatures
- Can be re-opened to traffic after only 2 hours at 20°C
- High durability
- High freeze-thaw resistance
- Very little shrinkage

MasterEmaco T 1400 FR
Flowable Steel Fibre Reinforced Traffic Repair Mortar
- For large area horizontal repair
- Fast hardening, even at sub-zero temperatures
- Can be re-opened to traffic after only 2 hours at 20°C
- High durability
- High freeze-thaw resistance
- Very little shrinkage

Cut out preparation, full depth repair.

Structural load bearing finished repair.
Concrete Protection
Anti-Carbonation Coatings for Vertical and Overhead Application

In order to protect the investment, concrete walls, columns and soffits in car parks should be protected against the environmental influences. In terms of protection from water and CO₂ ingress, our MasterProtect acrylic coatings are the optimal choice for these concrete structures. Their non-yellowing chemical base combined with excellent resistance to weathering and UV light, make them the ideal solution for concrete protection. Additionally they also provide an aesthetic finish. MasterProtect acrylic coatings are fully certified as Surface Protection Systems for concrete according to EN 1504-2.

Surface Protection Systems

- Significantly delays concrete deterioration caused by freeze-thaw and de-icing salt attacks
- Excellent resistance against CO₂ diffusion
- Good adhesion onto concrete substrates
- Available in most common RAL colours
- Easy to apply by hand or spray
- Environmentally friendly, water-based, non-solvenated formulations
- MasterProtect 330 EL with additional crack-bridging ability for structures subject to higher movements (physical and thermal)

Spray-application of MasterProtect 330 EL as crack-bridging anti-carbonation protection of a car park wall.

Manual Application of MasterProtect 330 EL (Carpark Airport Brussels, Belgium)
Our Reference in Manchester (United Kingdom)
First Street Multi-storey Car Park
Exposed Decks
Open-Air Parking

There is nothing more difficult to plan than an open-air event; the risk of bad weather is simply too great. In the case of car parks, special protection is called for. The top deck of a multi-storey car park is normally not covered and is exposed to the elements the whole year round. In addition to the chemical and mechanical loads in a multi-storey car park, materials are subjected to severe stress from ultraviolet radiation, rain, snow and ice as well as extreme temperature variations. In order to survive in the long term in such a harsh environment, surfaces must be coated with a high-strength elastomeric coating system that is resistant to these conditions.

The MasterSeal Traffic 2205 system combines exceptional elasticity with durable wear resistance. Due to its multi-layer monolithically bonded structure the system offers an optimal performance even on heavy-duty substrates. Our non-solvent containing polyurethane membranes are crack-bridging and provide a high level of mechanical resistance in combination with the tested wearing surface. The membranes are applied by specialist computer controlled spray equipment which allows for both fast application and cure time for almost instant waterproofing. To finish you can choose among a variety of coloured top coats.

System example MasterSeal Traffic 2205*
For crack-bridging coatings on exposed surfaces in accordance with OS10, BBA Approved.

System features
- Dynamic crack-bridging properties: class 4.2 in accordance with EN 1504-02 and DIN V 18026
- Homogeneous and anti-slip
- High wear resistance
- Resistant to road grit
- Stable colouring
- Resistant to petrol, oil, diesel and bio-diesel

System benefits
- Spray applied for fast application and cure times
- High level of protection for structure with separate membrane and wear coat
- Variety of colours for individual design of parking areas
- Low weight per square metre avoids unnecessary loads and reduces material consumption for buildings
- Tried and tested for many years

Other applications
- Exposed parking surfaces, intermediate decks

Other suitable systems
- MasterSeal Traffic 2263 – for crack-bridging coatings on exposed surfaces in accordance with OS 11a.
- MasterSeal Traffic 2203 – for the fast crack-bridging rehabilitation of exposed surfaces, with spray application in accordance with OS 10.

* The appropriate surface coating must be selected on the basis of the particular requirements for the individual project.
Intermediate Decks
A Compass for Drivers

“Where’s the car?” This is a question you can certainly ask if the intermediate decks of the car park all look the same and there is simply no orientation. Colour-coded zones, if possible, marked clearly on the ground, can be a great help. But, before looking for your parked car, you need to find a parking space in the first place. Intermediate decks are subjected to continuous mechanical stress caused by traffic. The surface is also attacked by oil, petrol and other aggressive substances such as coolants and brake fluids.

MasterSeal Traffic systems offer the ideal solution for this application – for example MasterSeal Traffic 2257 provides an excellent textured surface for improved slip resistance as well as being available in a wide range of colours for clear demarcation. In general, Master Builders Solutions from BASF offers a wide range of tried and tested systems designed to withstand high stresses. Whether you need a coating with pronounced crack-bridging properties or a conventional coating, the systems can be adapted to the individual structure, rather than adapting the structure to the coating. Thanks to the different colours available, decks and individual areas can be colour-coded. The anti-slip properties required for traffic, parking and walking areas can be set precisely.

System example MasterSeal Traffic 2257*
For fast track UV light Stable coating of car parking areas, BBA Approved.

System features
- Fast curing and anti-slip
- High wear resistance
- Resistant to road grit
- UV light stable
- Resistant to petrol, oil, diesel and bio-diesel

System benefits
- Variety of colours for individual design of parking areas
- Low weight per square metre avoids unnecessary loads and reduces material consumption for buildings
- Tried and tested for many years

Other applications
- Covered outdoor areas

* The appropriate surface coating must be selected on the basis of the particular requirements for the individual project.
Our Reference in Liverpool (United Kingdom)
Strand Street Car Park
Spiral and other Ramps
Increasing Shear on Tight Bends

They may not proof of the theory of relativity, but spiral and other ramps in multi-storey car parks also show that energy is equal to mass times speed. This energy acts directly on the surface of the ramp, which needs special protection against mechanical loads. These forces are further increased by the turning action of the moving wheels which increases the shear and thus wear on the deck significantly. In addition, ramps and spiral ramps are well-known accident black spots. It is especially important to use an enhanced anti-slip surface here.

Thanks to the use of higher thicknesses in these areas subject to high stresses, the extremely high-strength multilayer system MasterSeal Traffic 2262 ensures reliable long term protection in such areas. Different anti-slip classes are available to meet high safety requirements. Rapid curing properties make this system ideal for the refurbishment of such highly stressed areas with short closure times and a rapid return to day-to-day business.

System example MasterSeal Traffic 2262*
For high-strength coatings on spiral and other ramps.

**System features**
- High wear resistance
- High chemical resistance
- Resistant to road grit
- Resistant to petrol, oil, diesel and bio-diesel

**System benefits**
- Easy to install and low maintenance
- Wide range of applications including ramps, entrances and exits

**Other applications**
- Indoor and covered outdoor ramps and spirals, with additional measures on floor slabs exposed to soil

**Other suitable systems**
- MasterSeal Traffic 2260 – for parking areas subject to severe mechanical loads.
- MasterSeal Traffic 2257 – for the fast crack-bridging rehabilitation of spiral and other ramps.

* The appropriate surface coating must be selected on the basis of the particular requirements for the individual project.
Ground Bearing Slabs
Versatile Coatings

While structures above ground level need to be protected against rain water penetrating from above, parking decks at or below ground level need protection against moisture penetrating the structure from below as a result of rising damp or capillary action. The dynamic nature of open sided car park structures can also be significantly reduced.

In these cases, it is important to combine surface protection systems with high-performance primers with special chemistry to resist moisture and lay the foundation for a durable coating. The MasterSeal Traffic 2260 system is an economical solution for the coating of internal surfaces which can be precisely tailored to meet the requirements of the specific project.

System example MasterSeal Traffic 2260*
For the economical coating of parking areas in accordance with OS8, BBA Approved.

System features
- High wear resistance
- Anti-slip
- Resistant to road grit
- Resistant to petrol, oil, diesel and bio-diesel

System benefits
- Simple, economical system
- Wide range of applications

Other applications
- Ramps, underground car parks

Other suitable systems
- MasterSeal Traffic 2262 – for high-strength coatings on spiral and other ramps.
- MasterSeal Traffic 2257 – for exposed and covered parking areas.

* The appropriate surface coating must be selected on the basis of the particular requirements for the individual project.
Our reference in Liverpool (United Kingdom)
Q-Park Liverpool ONE Shopping Centre
Seamless Car Park Solutions
MasterSeal Traffic Systems

Our Reference in Swindon (United Kingdom)
Regent Circus Development Car Park
Fast Track Systems
Refurbishment in Three Hours

Speed counts, whether you are talking about travelling or the rehabilitation of underground and multi-storey car parks. Especially in the case of ramp refurbishment, time is also money. As access and connection routes, they are crucially important for the use of a car park. MasterSeal Traffic 2272 fast track car park system was specially developed for applications like this.

The solution is as follows: the system consists of only three products, which can be applied in a very short space of time. The deck surfaces can be returned to traffic in as little as three hours. The only requirement to be met is a structure and substrate temperature of at least 15°C. Following completion, the system withstands severe mechanical loads on spiral and other ramps and also has anti-slip properties. It is therefore possible to install a durably resistant coating without closures, now or in the long term.

System example MasterSeal Traffic 2272*
For the fast and economical rehabilitation of parking areas and spiral and other ramps.

System features
- Fast low-temperature curing properties
- Polyurethane-polyaspartic technology
- In accordance with EN 1504-2 and DIN V 18026, OS8
- For traffic areas subject to medium to heavy mechanical loads
- Wear-resistant
- Resistant to road grit

System benefits
- Economical rehabilitation of car parks
- Minimal closure times and rapid re-opening
- Ideal for overnight rehabilitation

Other applications
- Indoor and covered outdoor parking areas, spiral and other ramps

* The appropriate surface coating must be selected on the basis of the particular requirements for the individual project.
In Detail
High Quality Detailing for Long Term Low Maintenance Solutions

These examples show that coating systems from BASF’s Master Builders Solutions protect and provide a design for the highly stressed floor surfaces of multi-storey and underground car parks. In addition, they also feature convincing details. Any coating applied to a surface also raises the question of connections with neighbouring components, in this case especially vertical components such as supports and walls, but also functional elements such as channels and expansion joints. BASF’s Master Builders Solutions products provide durable solutions to these problems, ensuring the quality of the entire coating, both as standard details and as special details. Please contact your local Master Builder Solutions technical office for standard and bespoke CAD drawings.
Coating system
Triangular wedge of EP mortar
Steel support
Concrete
Filling with triangular groove
Seal profile
EP mortar strip
Concrete / screed
Mount (on both sides, offset)
Concrete
Coating system
Triangular wedge of EP mortar /
rounded joint with EP mortar
Insulating strip
EP mortar
Concrete
Kicker joint with e.g. MasterSeal 590
Concrete
Coating system
Steel channel
EP mortar
Concrete
Coating system
Concrete primer
Steel primer
Concrete primer
Concrete primer
Concrete
MasterSeal NP 474
Elastic joint sealant
Round PE profile
Elastic joint sealant
Elastic joint sealant
Our reference in Peterborough (United Kingdom):
Queensgate Shopping Centre
Master Builders Solutions from BASF for the Construction Industry

MasterAir
Complete solutions for air entrained concrete

MasterBrace
Solutions for concrete strengthening

MasterCast
Solutions for the manufactured concrete product industry

MasterCem
Solutions for cement manufacture

MasterFinish
Solutions for formwork treatment and surface improvement

MasterFlow
Solutions for precision grouting

MasterFiber
Comprehensive solutions for fiber reinforced concrete

MasterGlenium
Solutions for high performance concrete

MasterInject
Solutions for concrete injection

MasterKure
Solutions for concrete curing

MasterLife
Solutions for enhanced durability

MasterMatrix
Advanced rheology control for concrete

MasterPel
Solutions for water tight concrete

MasterPolyheed
Solutions for mid-range concrete

MasterPozzolith
Solutions for water-reduced concrete

MasterProtect
Solutions for concrete protection

MasterRheobuild
Solutions for high strength concrete

MasterRoc
Solutions for underground construction

MasterSeal
Solutions for waterproofing and sealing

MasterSet
Solutions for set control

MasterSure
Solutions for extraordinary workability retention

MasterTop
Solutions for industrial and commercial floors

Master X-Seed
Advanced accelerator solutions for concrete

Ucrete
Flooring solutions for harsh environments

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