





## Master Builders Solutions from BASF

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 & protection solutions, performance grouts and performance flooring solutions.





#### Protecting your structure

The need to waterproof structures is a worldwide issue, but Asia Pacific has some unique challenges. Asia Pacific has many major cities situated in the tropics which are subject to high temperatures, high humidity and high rainfall. The need to waterproof is a greater imperative as the damage done by constant exposure to water takes its toll on concrete structures like car parks, high rise buildings and road and rail infrastructure.

The ability to apply and thus waterproof a structure in the shortest time is an essential need in the high rainfall areas. The MasterSeal® range of spray membranes and waterproofing systems fulfills this need and has found use in the major cities of Asia Pacific.

### Spray-applied membrane systems from Master Builders Solutions

BASF's two-component spray-applied polyurethane and polyurea MasterSeal membrane systems form a tough durable membrane in less than a minute. Designed to keep water in or water and contaminants out of concrete structures, MasterSeal membranes have achieved global acceptance and have been successfully installed on many structures since the European introduction in the early 1990's.

MasterSeal membrane systems reduce the time needed to create a waterproof barrier, and have the physical characteristics to cope with the dynamic movements of a wide range of infrastructure projects and the climate variations found across Asia Pacific. When matched with a range of specialty primers and topcoats they create systems for diverse applications such as parking garages, basements, cut-and-cover tunnels, reservoirs and secondary containments.

#### Solutions for civil engineering waterproofing

The MasterSeal spray membranes are ideal for above grade and below grade concrete structures. Industry trends calling for projects with deeper basements or for construction on reclaimed land can present difficult challenges for the design and construction team. In such cases, the speed at which the concrete can be made watertight is critical to all steps that follow. MasterSeal spray membranes form a watertight barrier within one minute, potentially reducing the overall project schedule, and are unaffected by contact with groundwater or seawater.

They also can be used to line water retaining structures. One of their key attributes is their ability to cope with dynamic cracks that occur during or after construction. This ability has led them to be a product of choice in cut-and-cover tunnels across Asia Pacific. Another important consideration is that MasterSeal membranes are "fully bonded", to the substrate meaning that if punctured, they do not allow the water to 'track' behind the membrane and thus any repair required is easily identified and completed.





#### Solutions for car parking structures

BASF has developed systems for the protection of parking decks after thoroughly studying the design of car parks and the performance of the protective systems that previously had been available. The MasterSeal system we created addresses three key challenges that greatly impact the sustainability of a car park. First, being flexible, MasterSeal copes with the dynamic and thermal movement of the large free spans found in a parking structure. Second, MasterSeal chemically protects the underlying concrete from damage caused by contaminants that are common to car parks, such as de-icing salts or vehicle fluids. Third, there are MasterSeal options for providing the correct level of slip resistance, and the ability to absorb the torsional forces of turning tyres. All are accomplished while being aesthetically pleasing.

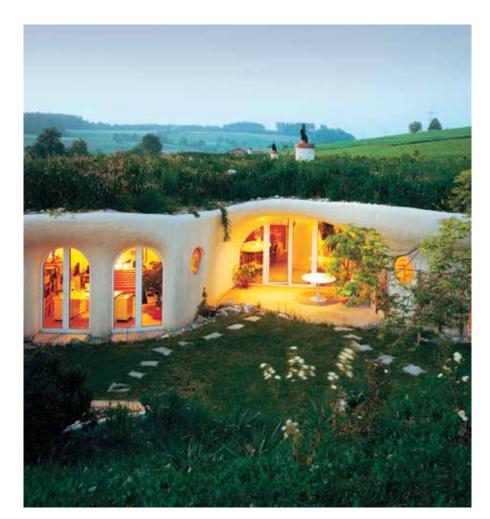
MasterSeal car park solutions are suitable for all parking garage applications - from condominiums to the largest shopping malls. The designer's system selection will depend upon a number of criteria including, expected service life, climatic conditions, the level of traffic flow, the amount of vehicle movement over the lifetime of the structure and budget constraints. Our sales personnel are trained to evaluate this information to determine the best solution for the structure.

Inevitably car parks wear out and require maintenance. One of the most important needs for the car park owner or operator is the speed of their repair. Should maintenance work inconvenience the user there is the risk that alternative parking solutions will be found. MasterSeal eliminates this issue by virtue of its fast cure range of primers, membranes, wear coats and topcoats. Using MasterSeal allows the complete reinstatement of the full system and return to traffic after only 12 hours.

#### Solutions for roofing

The MasterSeal range of membrane systems are designed to protect roofs from the harsh environment even in locations where extreme thermal changes are encountered. MasterSeal roofing solutions are suitable for flat or pitched roofs and are compatible with concrete, plywood, metal sandwich panels and other common roofing substrates. The use of liquid applied spray membranes enables fast installation to vertical surfaces and easy waterproofing of detailed penetrations such as ventilators, skylights and chimneys. With the advantage of being seamless and able to resist root penetration, the membranes are perfect for roof gardens and other landscaping above occupied areas. The MasterSeal range of

membranes can be used to refurbish old roofs without the necessity of removing existing membranes by spraying over the in-situ waterproofing, providing a simple maintenance solution. MasterSeal membranes are fully bonded to the substrate and are able to resist the effects of wind suction, elevated temperature, thermal shock and can accommodate minor structural movement Our experts can work with the designer and owner to determine the appropriate system for a long term solution and, with our network of trained applicators, ensure that the structure is correctly waterproofed. The use of spray applied membranes has meant that many complex projects have been waterproofed thanks to the innovative systems from BASF.









# 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

#### MasterEmaco®

Solutions for concrete repair

#### MasterFinish®

Solutions for formwork treatment

#### **MasterFlow®**

Solutions for precision grouting

#### MasterFiber®

Comprehensive solutions for fiber reinforced concrete

#### MasterGlenium®

Solutions for hyperplasticized concrete

#### MasterInject®

Solutions for concrete injection

#### MasterKure®

Solutions for concrete curing

#### MasterLife®

Solutions for enhanced durability

#### MasterMatrix®

Advanced rheology control solutions for self-consolidating concrete

#### MasterPel®

Solutions for water tight concrete

#### **MasterPolyheed®**

Solutions for high performance concrete

#### MasterPozzolith®

Solutions for water-reduced concrete

#### MasterProtect®

Solutions for concrete protection

#### MasterRheobuild®

Solutions for superplasticized concrete

#### MasterSeal®

Solutions for waterproofing and sealing

#### MasterRoc®

Solutions for underground construction

#### MasterSet®

Solutions for retardation control

#### MactarSura®

Solutions for workability control

#### MasterTop®

Solutions for industrial and commercial floors

#### Master X-Seed®

Advanced accelerator solutions for pre-cast concrete

#### Ucrete®

Flooring solutions for harsh environments

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