



## MasterEmaco®

Solutions for concrete repair  
and protection



## Master Builders Solutions



The Master Builders Solutions brand brings all of its 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 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 Master Builders Solutions 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.

### Asia Pacific's need for longer lasting concrete structures

Reinforced concrete is the primary building material for Asia's expanding infrastructure and for buildings erected to house millions of people who continue migrating to urban areas. The pace of construction in the region has never previously seen globally. Inevitably, such construction booms result in compromises on quality in exchange for expediting completion dates. Every flaw exposes a structure to additional climatic or environmental stresses that can result in premature, severe and costly deterioration.

Climates vary across the Asia Pacific region - from one extreme to the other - from the heat and humidity of deserts and tropical areas, to subarctic and temperate zones. Depending upon the climatic zone, a concrete structure must be able to withstand searing heat, monsoons, and freeze thaw cycles or prolonged

sub zero temperatures. In urban environments, concrete structures must be able to withstand the effects of airborne pollutants and dynamic stresses from surrounding traffic. The reliance upon concrete for ports, housing and transportation infrastructure demands reliable and lasting construction. When a structure needs maintenance, the repair must be fast, long-lasting, cost effective, and simple to install.

Master Builders Solutions brings the lessons learned in the European and North American markets to provide solutions for damage when it occurs and protect against further degradation or to prevent deterioration in the first place. Asia's climatic conditions have been studied by Master Builders Solutions' development teams and our products have been modified to be suitable for the conditions encountered.



### Solutions for sustainable concrete repair

Reinforced concrete is the construction material of choice for the buildings and highways that comprise our urban and industrial environment. The sustainability of the concrete is a critical issue for planners and asset owners. Master Builders Solutions in conjunction with industry experts and universities, have studied the causes behind the deterioration of reinforced concrete structures. We have developed repair strategies to address such electro-chemical processes as those that result when piers and wharfs are exposed to salt and when concrete structures are attacked by airborne pollutants. Although the causes of the deterioration vary with different environments, the repair strategies for all locations are similar and our solutions are equally applicable to the repair of a wharf, a bridge or a skyscraper. Master Builders Solutions now delivers to Asia the body of knowledge and product portfolio amassed over 50 years within the global concrete repair and rehabilitation market.

Master Builders Solutions researchers consulted with industry experts, clients and applicators when we created our range of MasterEmaco® repair products, MasterProtect® coating and protection systems and our MasterBrace® carbon fiber strengthening system. Master Builders Solutions combines these materials to create engineering solutions that repair and extend a structure's useful life by preventing further damage and to return the structure to original or upgraded design requirements.



### Comprehensive solutions for concrete rehabilitation

The introduction of EN 1504, the world's first performance standard for concrete repair, provided the opportunity for Master Builders Solutions to help customers meet the standard by connecting our global development team with state of the art cementitious formulations. The resulting repair products range incorporates the latest technologies available for crack reduction without compromising application ease. During the development stage several leading refurbishment companies assisted us in honing the application properties. This enabled Master Builders Solutions to minimize the time needed for repair and to ensure the fastest return to service possible under conditions encountered in Asia.

Master Builders Solutions' range of products for concrete rehabilitation includes MasterEmaco structural mortars designed for replacing the high strength concrete lost due to degradation. The MasterEmaco range incorporates active corrosion inhibition with state of the art galvanic anodes to ensure the integrity of steel reinforcement for many years after repair. It also includes products for non-structural repairs such as re-profiling balconies or facades, features thick build-up overhead and fast setting to allow rapid completion of the project.

Trained Master Builders Solutions personnel, supported by our worldwide network of experts, will help owners and consultants to assess their repair requirements and to offer tailor made solutions.

Renovation of existing structures is often more economical in terms of the use of resources than demolition and rebuilding. Many owners look to renovation and repair as a way to renew the value of their assets without the disruption to income generation that demolition and rebuilding would cause. The use of composite materials to strengthen the structure to allow for higher loads has been a boon to asset owners. Designers can now add extra traffic lanes to bridges, offer increased loads per floor in existing buildings and even consider increasing the height of the building to create additional floors and occupiable space.



The MasterProtect coatings and impregnations, utilizing the latest German technologies, extend the life of structures by minimizing the ingress of moisture to the concrete, thereby preventing salts from affecting the steel reinforcement. These protective coatings can also be coloured to enhance the aesthetics of the structure and bring life to inner city developments. Even when existing structures are suffering from chloride attack, surface applied corrosion inhibitors are able to control and slow the rate of deterioration.

Master Builders Solutions connects owners, designers and engineers to rehabilitation specialists and technologies, earning our reputation as the preferred partner in repair and protection.



#### Connecting partners for better answers

Continuous innovation and tailor-made solutions ensure customers using Master Builders Solutions are more successful. We operate across the Asia Pacific region, with more than 80% of our products produced within the region for regional conditions. The corporate culture of Master Builders Solutions is focused upon innovations, customers and safety. Master Builders Solutions has been rated among the top employers in many countries throughout the region because we ensure workplace safety, support the communities in which we are located, and strive to utilize and produce safe and environmentally appropriate technologies.

Master Builders Solutions offers a wide range of building construction products, concentrating on repair and protection solutions, performance flooring solutions, precision grouting solutions and waterproofing solutions. Our internationally connected technical experts and our local sales force combine forces to ensure that solutions are tailored to meet local conditions.





# Master Builders Solutions 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

**MasterSure**

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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