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, performance flooring and tiling solutions.
Foundation engineering is at the heart of every project whether civil infrastructure, industrial or commercial building. With the challenging conditions of a high water table and an aggressive, corrosive ground water, the technologies required for this field of construction are continually put to the test.

Key Technologies:
1. Smart Dynamic Concrete
2. Sprayed Concrete
3. Injection
4. Waterproofing
5. Anchoring
Foundation Engineering

As building structures become ever more complex to construct, there is a real need to focus on watertight structures that genuinely extend the life of an asset. BASF’s construction systems have been incorporated for use on many projects with stringent durability requirements.

Whatever structure you are building and whatever foundation engineering challenges you face, BASF Construction Chemicals has an intelligent solution to help you be more successful.

At BASF, we create chemistry – and have been doing so for 150 years. As the world’s leading chemical company, we combine economic success with environmental protection and social responsibility. Through science and innovation, we enable our customers in nearly every industry to meet the current and future needs of society.

BASF Construction Chemicals has a global team of 5,700, with a production, sales and technical support network in over 50 countries. Continuous innovation and tailor-made solutions ensure our customers are more successful.

The leader in construction chemicals in the Middle East and Africa region, BASF Construction Chemicals has over 35 years’ experience in the Middle East with a wealth of local industry knowledge and expertise. This is underpinned by the strong, highly qualified and experienced global resource base that drives our worldwide operations.

BASF’s key application technologies for foundation engineering include:

**Smart Dynamic Concrete:**
Filling every detail of formwork or excavation, even in the presence of dense reinforcing, it also provides high early strength gains and watertight concrete.

**Sprayed Concrete:**
Provides ground support for tunneling, mining and slope stabilization.

**Injection:**
Micro cement, resin and mineral grouts are injected to prevent water ingress, stabilize soils and enable structural repairs.

**Waterproofing Systems:**
A full range of solutions for below ground civil engineering and building structures.

**Anchoring:**
Cementitious and chemical grouts provide high performance anchoring solutions for all applications.
Smart Dynamic Concrete

As foundations go deeper and structures become more complex, the right quality of concrete with the desired properties to consistently achieve a high performance is vital. At depth it is essential to optimize the placement and the dense reinforcing adds to the challenge. Smart Dynamic Concrete can offer the quality assurance needed. It provides high early strength gains with super slump retention – filling every detail of the formwork or excavation even in the presence of dense reinforcing, without the aid of vibration.

Concept
BASF’s Smart Dynamic Concrete concept upgrades high slump concretes to a higher performance level, introducing self-compacting characteristics while offering the same ease of production as standard concrete.

The essential components of the Smart Dynamic Concrete are a robust concrete mix with a low fines proportion:

MasterGlenium® superplasticizer, which provides the concrete with excellent flowability and high early strength, as well as improving engineering properties such as ultimate compressive and flexural strengths, bond to steel, modulus of elasticity, shrinkage, creep and impermeability.

MasterMatrix® viscosity modifying agent that achieves the right balance in the mix between fluidity, passing ability and resistance to segregation, thus enabling the production of a self-consolidating concrete.

MasterLife® CI 222 is a state-of-the art corrosion inhibiting admixture formulated to inhibit the corrosion of steel reinforcement in concrete.

MasterLife® WP 730 is a hydrophobic pore-blocking ingredient (H.P.I.) which can be used as an additional measure to improve durability of the concrete.
Smart Dynamic Concrete adds economical, ecological and ergonomic values to concrete:

<table>
<thead>
<tr>
<th>Economic</th>
<th>Up to 40% faster placing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to five times higher labor productivity</td>
</tr>
<tr>
<td></td>
<td>Easy to produce</td>
</tr>
<tr>
<td>Ecological</td>
<td>Less fines, less CO₂</td>
</tr>
<tr>
<td></td>
<td>Higher durability</td>
</tr>
<tr>
<td>Ergonomic</td>
<td>No vibration</td>
</tr>
<tr>
<td></td>
<td>No noise</td>
</tr>
<tr>
<td></td>
<td>Improved workability</td>
</tr>
</tbody>
</table>
Sprayed Concrete

Wet mix sprayed concrete is rapidly becoming an integral part of below ground structures. High performance fibre reinforced sprayed concrete optimizes the excavation process in rock and hard soils, providing ground support for tunneling, mining and slope stabilization. Wet mix sprayed concrete is durable with reduced health risks compared to dry mix applications and can be applied in a rapid, quality controlled and cost effective manner. It can be adapted to meet the needs of different environments and applications, with early and long term strength, extended workability and myriad other properties achievable through use of proven and advanced technologies.

Concept
BASF Construction Chemicals offers the key components that facilitate the design and application of sprayed concrete to meet the engineering specifications, practical requirements and environmental constraints.
MasterRoc® SA alkali-free accelerators provide low dust and rebound levels, high early strength gain, long-term strength development and enhanced durability. Rapid strength development is particularly useful when combined with an appropriate injection regime to control the ingress of ground water.

MasterGlenium® superplasticizers make the production of sprayed concrete mixes with low water to cement ratios possible while maintaining superior flow and workability.

MasterRoc® HCA stabilizer is a cement hydration control system which is designed to prolong the workability of the sprayed concrete mix, adding flexibility to site logistics.

MasterFiber® range of fibres increases the ductility of concrete providing optimization and speed of application enabling anchoring and tie backs to be installed faster and more cost effectively. In turn this enables a faster excavation and better utilization of labor and equipment.
Injection

BASF Construction Chemicals offers a complete range of injection products, including micro cements, resins and grouts that can be used to prevent water ingress, stabilize soils and enable structural repairs.
BASF Construction Chemicals backs up its broad range of injection products with expert technical support, assisting customers to select the right injection system and application approach, as well as providing site training and trouble shooting. We partner with suppliers of equipment and injection accessories to provide you with the best, most cost effective technology solutions.

MasterRoc® MP is a range of fast setting superfine cements for injection of rock and soil that have extremely good penetration to give excellent water tightness and durability. They are easier to handle, cost less than resins and can cope with most injection situations. Rapid setting allows uninterrupted excavation and enhanced productivity.

MasterRoc® MP 320 is a mineral grout system composed of colloidal silica, a natural, non-hazardous, ecologically friendly solution. Due to its low viscosity, the grout will penetrate finer fissures than any cement based product, stabilizing fine, silty sands.

MasterRoc® MP 355 is a series of polyurethane injection foams designed for water stopping, stabilization of jointed rock, sealing of running water, for filling voids and stabilization of loose rock.

MasterInject® 1335 and MasterInject® 1320 polyurethanes with superior flexibility and foaming characteristics that can act as a temporary waterstop or provide permanent sealing of live and static cracks in concrete structures against ingress of water, corrosive fluids and gasses.

MasterSeal® 901 is the industry standard for acrylate injection resins for the injection of pre-installed hoses or for permanent sealing in live cracks and joints.

MasterSeal® 590 is the perfect partner for BASF’s injection range enabling additional leak control during injection. It is a fast setting mortar used to plug water leaks in concrete and masonry.
Moisture penetration is one of the most critical challenges facing concrete structures today. Interior or exterior, above or below grade, unprotected structures suffer from water-induced damage, including deterioration and corrosion caused by alkalis, salts, acids and mold.

BASF Construction Chemicals provides waterproofing systems for below ground, civil engineering and building structures. Our Waterproofing Systems range includes cement based solutions, preformed geosynthetic membranes polyurethane and polyaspartic based liquid applied membrane systems. We also have specific solutions for constructions like parking decks, bridge decks, reservoirs and secondary containment as well as for basements, below-ground structures, tunnels and underwater structures.
Concept

BASF Construction Chemicals offers integrated and complete waterproofing systems. We incorporate the use of preformed or liquid applied membranes, as well as a variety of resin technologies to treat joints providing protection against ground and surface water and harmful substances of liquid and gaseous nature. Concrete admixtures enhance the water tightness of the concrete that supports the waterproofing systems, further improving the durability of structures.

Waterproofing System: This system presents a sustainable approach to waterproofing through an evolution in performance concrete construction incorporating the MasterSeal® product range. Applications include reservoirs, water tanks, canals, dams, sewage treatment plants, liquid storage vessels, basements, underground car parks, subways, vaults, marine structures and tunnels.

MasterSeal® 588, an elastomeric waterproof coating for concrete and masonry in water retaining structures subject to movement.

MasterSeal® 590, an ultra rapid setting durable mortar for plugging joints between concrete pours and active water leaks in concrete and masonry.

MasterSeal® 345 is a sprayable membrane for the waterproofing of underground concrete structures that may offer considerable cost and project time improvements over conventional sheet membranes. It is spray applied in a sandwich construction between layers of sprayed or cast concrete to create a composite waterproof structure. It has good bond strength characteristics to the substrate on both sides of the membrane and behaves elastically, preventing the development of water migration at the concrete-membrane interfaces.
Anchoring

Ground anchors help to transfer the loads from structures into the ground and are a critical part of the support structure for many large and deep excavations. They may be used for tensioning, to prevent tipping and sliding of structures, to secure an underpinning or prevent buoyancy. They may take many different forms, from grouted anchors to rock and soil nails, drilled or driven piles, reinforced concrete or injected grout. Whatever the anchoring method, the ease of application, time required for anchors to reach load bearing capacity, consistent achievement of final strength and the durability of the bond to steel and substrate are the most important considerations in selecting a solution. BASF can supply additives or complete solutions for all your anchoring requirements including emergency applications.

Concept
BASF Construction Chemicals has a full range of grouting products to provide high performance ground anchors, with specialized solutions for vibration dampening, underwater construction and high strength applications.

Our formulations include high performance properties such as early strength, extended working life at high temperatures, shrinkage compensating, corrosion protection and predictable performance.

MasterFlow® 190 is a shrinkage compensated pre bagged cementitious grout suitable for post tensioned structures, cable duct grouting and anchoring. Additional applications for geotechnical works include rock bolts, cable anchors and forepoling for underground structures and slope stabilization.
MasterRoc® FLC 100 is the industry standard for anchors and post tensioned cable grouting. It is a chloride free admixture in powder form which is added to cement to produce a pumpable, non-shrink, non-segregating, impermeable grout, providing high strength and high bond to steel. It protects cables against corrosion from aggressive agents and stress.

MasterRoc® MP 364 is a two component resin grout which is the answer where rapid excavation is necessary, providing the ability to tension the anchor within one hour after injection.

MasterRoc® TIX 10 is a shrinkage compensated cementitious grout for the encapsulation of fully bonded rock dowels in both underground and above ground applications.
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

MasterEase®
Solutions for reducing concrete viscosity

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 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

MasterTile®
Solutions for tiling systems

MasterTop®
Solutions for industrial and commercial floors

Master X-Seed®
Advanced accelerator solutions for concrete

Ucrete®
Flooring solutions for harsh environments