

MAKING GOOD CONCRETE BETTER.

Company Brochure Ha-Be Middle East





Promoting German Quality in Concrete Construction

MIDDLE EAST PRESENCE

In 2006, we established our Middle East Presence with a modern production and technical facilities within the Sharjah Airport International Free Zone. This factory is strategically placed in order to adequately service the requirements of clients all over the GCC region. In the meantime, we have also started our production unit in Doha, Qatar in April 2012 and have also commissioned our third production unit in Muscat, Oman in April 2013.

International Manufacturer of Concrete Admixtures

HA-BE BETONCHEMIE

We manufacture concrete admixtures, surface protection systems and concrete colours for the international concrete industry. We are working in more than ten different locations worldwide to vitalise the slogan „Making Good Concrete Better“.

Our company stands for technological concrete expertise for over 45 years. In the meantime, we emerged to one of the leading manufacturers of the European construction chemicals industry.

Ha-Be was founded in 1970 as a construction materials testing laboratory. Since then, we constantly expanded our business portfolio by offering concrete admixtures, concrete colours and concrete protecting products. Today, they are our main business segment. The building material testing department, however, has become an independent business unit of Ha-Be. Nevertheless, it remains crucial in the regard of customised formulation development and in solving concrete technological challenges.

We are convinced that long-term success is only possible with sustainable products. Therefore, we consider not only the economic, but also social and especially environmental factors in our product development. Many of our products are already a contribution to a sustainable and efficient use of concrete.

► Admixtures, Surface Protection & Colours

Ha-Be's assortment includes plasticisers and superplasticisers branded PANTARHIT® and ANTIPOR®, retarders, air entraining agents, accelerators, stabilisers, form release agents and curing compounds. In conjunction with hydrophobic agents, film-formulating and transparent impregnations, Ha-Be is able to offer a broad product portfolio. Having an own production plant, the admixture producer is capable of responding to customers' requirements in the short term and ensuring an on-schedule accomplishment. For coloured concrete, the product range includes liquid colours (slurries) and powdered pigments.

► German Product Quality

In line with the German company principles, Ha-Be has established a local management structure in the Middle East, comprising experienced technical and concrete industry personnel. This team is available for information and advice to clients, specifying authorities, and consulting engineers.

The high standard principles and procedures, established and proven over many years in Germany, have been adapted and transferred to the Middle East operations. These fully documented systems cover quality control of raw materials and finished products, production process monitoring, technical services and customer care. Ha-Be Middle East also enjoys the distinct benefit of supplementary research and development support from the established resources of the German central technical and research facilities.

► Our Strength: The Technical Services Department

For more than 9 years now, Ha-Be Middle East services the Middle Eastern market, supplying to numerous ready-mix, and concrete goods producers, as well as to a number of infrastructure projects, with a highly favourable response from our customers. The permanent presence of experienced concrete technology personnel enables Ha-Be Middle East to provide extended customer service and technical support in the planning and operational phases of projects and industrial concrete production alike.

► Our Special Service: Our own Logistics

Today's business requires an extremely flexible transport-service. Therefore, we offer and maintain our own logistics service, representing real added value for our customers. By having an own transport fleet, we ensure that all customer orders are delivered on time. Furthermore, we are able to meet your specific needs more efficiently and respond quickly to change.



Product-System Ready-Mix and Precast Concrete

CONCRETE ADMIXTURES

Regardless of it is ready-mix or precast concrete: Producing and installing concrete is a challenging job and every concrete placement is different. Therefore, we have an extensive product portfolio that includes plasticisers, water reducers and superplasticisers branded PANTARHIT®, retarders, air entraining agents, accelerators, stabilisers, form release agents, and curing compounds. Ha-Be is making good concrete better. That is not only a slogan, it is a promise.



Concrete Admixtures

READY-MIX AND PRECAST CONCRETE

Regardless of what specific concrete properties are required - with the special admixture system for ready-mix concrete and Ha-Be's application service, customers are able to meet the defined technical requirements efficiently. Admixtures for the precast industry have to serve the efficient production process on the one hand, and the improved surface requirements on the other one.

► Admixtures for Ready-Mix Concrete

Our system includes traditional PANTARHIT® plasticisers, and superplasticisers, as well as high performance superplasticisers of the latest PCE-technology. They ensure long slump retention, improve the workability, and increase compaction in concrete with low water/cement ratios. Therefore, manufacturers, contractors, and applicators achieve an economical and a technical benefit.

► Admixtures for Precast Concrete

Our special formulated high performance superplasticisers, named PANTARHIT® PC, cope with all challenges: Even at low temperatures and without external heat, they ensure a high strength, particularly at early age. In doing so, the PANTARHIT® PC product reduces stripping time. In conjunction with an optimised compaction, production expenditure can be reduced and productivity enhanced. The VARIOL line includes form-release and cleaning agents that ensure an easy and clean release of precast elements, and high-quality surfaces with less and minimised air bubbles.

Product-System Manufactured Concrete Products

CONCRETE ADMIXTURES

Regardless of it is semidry or wet cast products: Every concrete application is different. Therefore, we have a wide product portfolio that includes ANTIPOR plasticisers, stabilisers, swelling concrete admixtures. Ha-Be is making good concrete better. That is not only a slogan, it is a promise.



Concrete Admixtures

MANUFACTURED CONCRETE PRODUCTS

Paving stones, slabs and masonry blocks – most of the manufactured concrete products are being pressed and compacted. These products are manufactured within a highly efficient production process by having short cycle times and a good quality consistency. Wet cast elements are being casted instead. To ensure a smooth process, the concrete needs to have an excellent workability.

► Admixtures for Manufactured Concrete Products

Ha-Be's special ANTIPOR® plasticisers meet these requirements. They ensure an improved workability, increase the early strength, minimise second quality production, and attain an abbreviated curing time. In addition, they achieve a homogeneous, dense and smooth vertical structure that enhances concrete's visual attraction. In short: ANTIPOR® supports the proficient production of high-quality and durable concrete products.

► Admixture for Wet Cast

The innovative high performance superplasticisers PANTARHIT® PC have been developed to show a strong plasticising effect, minimise the compaction energy applied to concrete, and to ensure a high early strength. The good strength development may reduce curing times and improve productivity.

Product-System Projects

ADMIXTURES FOR DEMANDING PROJECTS

Each project has its own challenges. Whether building and transport engineering, or tunnel and underground construction: Ha-Be finds individual solutions in the short-term and in close contact and coordination with the concerned project engineers. Having own laboratories and an experienced application engineering service, Ha-Be supplies the right admixture system and technology.

Quelle: Wirtgen GmbH

Concrete Admixtures

ADMIXTURE SYSTEMS TO MASTER CHALLENGES

BUILDING AND CIVIL ENGINEERING CONSTRUCTIONS

Bridge constructions, high-rise buildings and industrial structures – Ha-Be's costumers profit from the company's high-quality products and its experienced application engineering service.

The concrete technologists and certified engineers give support in adjustments and purposeful application on site or within the plant to attain the ideal concrete results.

TRANSPORT ENGINEERING CONSTRUCTIONS

Modern transport routes play a chief part in connecting people, transporting products, and in transferring goods. To ensure a safe arrival, concrete applied in road, motorway and air traffic constructions has to meet high and

specific requirements. To fulfil them, Ha-Be developed a special range of products, which includes PANTARHIT® branded plasticisers, air entraining admixtures and curing compounds.



TUNNEL AND UNDERGROUND CONSTRUCTIONS

Shotcrete, concrete for casting the tunnel inner shell or precast tunnel segments – each underground construction project has its own technical challenges.

That is why Ha-Be has not only developed a special designed product portfolio, but also provides competent support by the exclusively specialised Ha-Be Tunnel Team.



Photo: Marti Deutschland GmbH



Photo: PERI GmbH



Photo: Golden Line Metro Doha

Hydrophobing Agents for Ready-Mixed Concrete and Precast Elements

NOT ONLY FOR PAVERS

With our hydrophobic admixtures PROTECT HCS (ST), PROTECT HWA (ST) and the water resisting admixture PROTECT HWR-80 (DM) products, we have developed three protection options specifically for the ready-mix and pre-cast concrete industry. These products generate a hydrophobic cement matrix and reduce the capillary suction that minimise water absorption in concrete and, as a result, minimise defects such as efflorescence and frost damage.

3-Step-Technology with 6x Effect

THE CONCRETE PROTECTION CONCEPT

Colourised concrete products and exposed concrete have high demands on their visual appearance and durability. Optical defects such as efflorescence, dirt and colour fades are especially visible on coloured concretes and can cause costly complaints. To minimise the emergence of such defects and increase the durability of the concrete, Ha-Be Betonchemie has developed the PROTECT system. It consists of a three-step concept for the optimisation of the microstructure, hydrophobic treatment and impregnation for the holistic, sustainable protection of concrete.

► What damages concrete?

One of the main causes of concrete damage and optical defects is through water absorption in hardened concrete. It penetrates the concrete through the porous structure and is transported through capillary suction from the surface to the inside of the concrete block. Water penetration often leads damage such as frost damage or visual defects such as efflorescence. Visual defects can also be caused by weathering factors such as solar radiation and even green vegetation. Other causes also include contamination from food, drinks, grease and oil.

► How is the Concrete protected?

To minimise damage and defects water absorption in the concrete must be reduced and the concrete surface must be protected against the penetration of substances such as food, drinks, grease and oil. In short – concrete requires permanent effective protection against water, grease and oil.

► Ha-Be's Three-Step-Technology

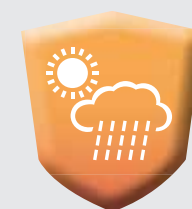
To solve this problem Ha-Be has developed the threesteps-technology. The three steps consists of, optimisation of the microstructure, hydrophobic treatment for fresh concrete and the application of waterproofing-over the concrete surface.

► Concept with Great Effects

In the optimisation process of the microstructure, the microstructure itself and the packing density of the concrete are analysed and optimised through concrete technology. In combination with mass hydrophobisation and an impregnation of one of the PROTECT-Series, concrete gains holistic 6x protection from weathering, food stains, water absorption, oil spills, efflorescence and frost.



PROTECTS
AGAINST
EFFLORESCENCE



PROTECTS
AGAINST
WEATHERING



PROTECTS
AGAINST
FOOD STAINS



PROTECTS
AGAINST WATER
ABSORPTION



PROTECTS
AGAINST
OIL SPILLS



PROTECTS FROM
FROST

Powder Pigments and Liquid Colours

COLOUR WITH A CONCEPT

The „Colourise your Concrete“ concept is a specially designed concrete technology service for concrete colouring. After choosing and defining a colour, the customer benefits from the company's technical service: In order to avoid unpleasant surprises on the construction site, Ha-Be works with samples first and develops a formula that considers concrete technology parameters such as concrete colour, cement type, aggregates, water/cement ratio and dosing amount.



Powder Pigments and Liquid Colours for the Concrete Industry

CONCRETE COLOURS

Ha-Be produces ready-to-use liquid colours and distributes high-quality pigments for the concrete industry. The assortment includes inorganic, synthetic pigments based on iron oxides, chromium oxides, cobalt, titanium and cobalt.

► Range of Colour Tones

Colours with a basis of iron oxide, chromium oxide, cobalt blue, titanium white and carbon are suitable for concrete colouring. These pigments cover a wide ranged palette of subtle shades and natural looking colours. A wide range of individual shades can be achieved through the mixing of these base pigments. Based on samples, individual concrete colours can be produced such as brake lines, concrete and natural stone or templates for standardised colour systems like RAL or PANTONE®.

► Quality

All Ha-Be pigments and slurries conform to EN 12878 – „pigments for the colouring of building materials based on cement and/or lime“ and are certified accordingly.



Officially Approved

OUR POLYPROPYLENE FIBRES

Our polypropylen fibres are available in the following length: 6 mm, 12 mm and 18 mm. They are officially approved by the General Building Inspectorate Approval, Approval Number Z-3.73-2073, DIBt, Berlin, Germany.



Officially Approved

POLYMER & STEEL FIBRES

We are able to offer individual solutions for various construction projects with a product range of polymer fibres, and different types of steel fibres. There are various fields of application for polymer fibres. Depending on the product and application, fibres increase the fire resistance of concrete, optimise the green strength, reduce shrinkage cracks or improve the resistance against impact stress. Steel fibres have significant advantages over the conventional mesh reinforcement: Steel fibres are distributed three-dimensionally in the concrete, causing an even tensile stress and a reduction of crack formation in the concrete.

► Polymer Fibres

Most common fields of applications of polymer fibres are:

- Shotcrete
- Precast, tubbing & tunnel inner linings
- Concrete goods
- Industrial flooring
- Agricultural buildings
- Trafficked areas of concrete and maritime structures and hydraulic engineering
- Foundations, slabs, floors and screeding

► Steel Fibres

In addition to the technological advantages of using steel fibres, customers benefit economically: Omitted working processes save time and ensure rapid construction progress and thereby a reduction of costs.

Most common fields of applications of steel fibres are:

- Floors, slabs and foundations
- Industrial flooring
- Basement walls
- Open spaces and roadways
- Shotcrete with steel fibres

Research and Development

ENSURED PRODUCT QUALITY

By having strict factory controls according to international quality codes during the whole production process, Ha-Be ensures a constantly high quality of its products.



Research and Development

ESSENTIAL – THE CONCRETE LAB

A consequent product development success is enabled through the close cooperation between the chemical and building material laboratory at Ha-Be. The application engineers, chemists and concrete engineers develop innovative and economical admixtures.

Workability, air void content or consistency – Ha-Be analyses all concrete technological parameters in its concrete laboratories. After successful examinations, the application engineering service tests the product under onsite conditions.

The experienced technologists and engineers pass on their knowledge to mixing plant supervisors, drivers, logistics managers, architects and administrati-

on agencies in regularly organised seminars. General standards, classification in various exposure classes and their practical consequences are some of the fields responded to in these lectures.

The accreditation as assessors on German courts approves the fundamental practical experience and underlines the credibility of Ha-Be's engineers and technologists.



Dosage and Spraying Technologies

BM'S APPLICATION TECHNOLOGIES

Ha-Be's product range is completed by the application technologies of its subsidiary BM-Anlagenbau und Dosiertechnik GmbH. BM is a strong partner starting with the project planning and construction to the realisation up to the implementation and long-term accompanying service.

The advantages of BM-sprayers at a glance:

- Easy handling
- Short set-up times
- Exact applying quantities
- High profitability
- Easy cleaning
- Strong reliability
- High capacity
- Any unwanted drops out of the blast pipes



Dosage and Spraying Technologies

OBTAINING EVERYTHING FROM ONE HAND

BM produces dosing systems for concrete admixtures and concrete colours, spraying technologies for surface protection and release agents as well as control programmes for this equipment. On request, BM and Ha-Be assemble the adequate equipment and integrate it into customer's existing production line.

► Dosing Systems

BM's gravimetric and volumetric dosing systems ensure an exact and efficient dosing of admixtures and colours. The subsidiary supplies mobile solutions for construction sites as well as stationary systems for plants with many mixers and production lines. BM is able to integrate their products fast, cost-efficient and easy into new facilities as well as into existing systems due to the modular product components.

► Spraying Technology

The BM spraying systems are planned and constructed to the latest edge of technology. This includes the innovative pulse-spray blast pipe system, which is equipped with an integrated volumetric measuring technology. The system allows adjusting variable application quantities without changing the blast pipes. The requested quantity is entered into the control system, which regulates the pulse frequency of the spraying pipes. This enables large pipes to spray small amounts. Being controlled by the volumetric measuring system, occurring variations due to e.g. blocked pipes are recognised immediately. By sending error messages, the responsible employee is able to react instantly and can therefore reduce the incidence of rectifiable rejects significantly.

Logistics

ARRIVING WITH COMPETENCE

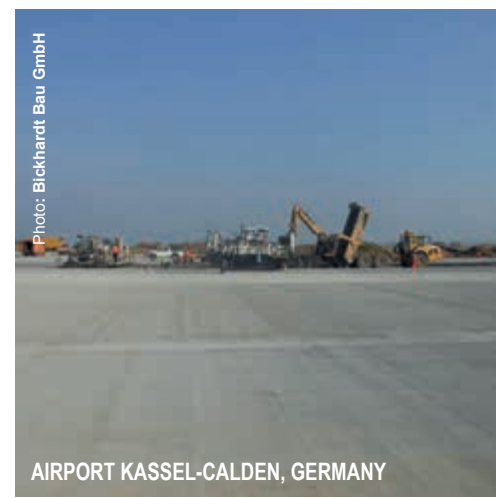
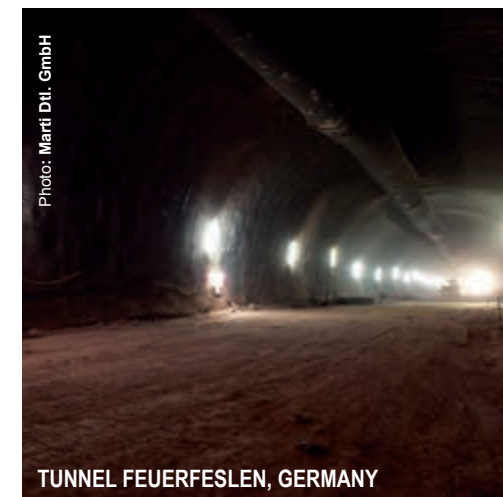
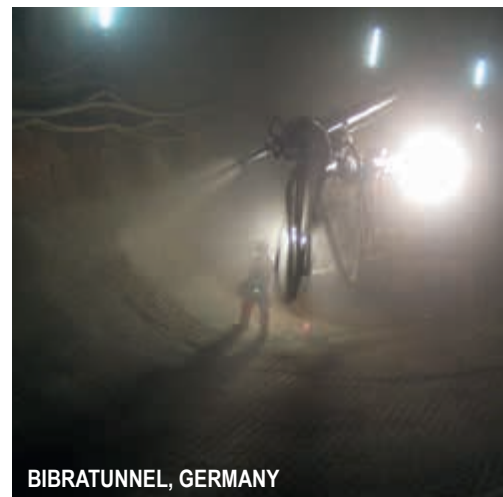
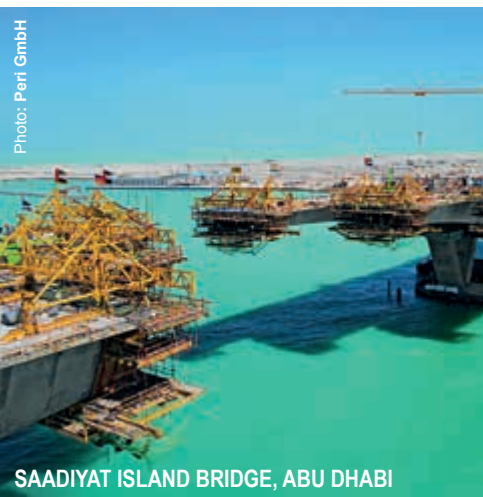
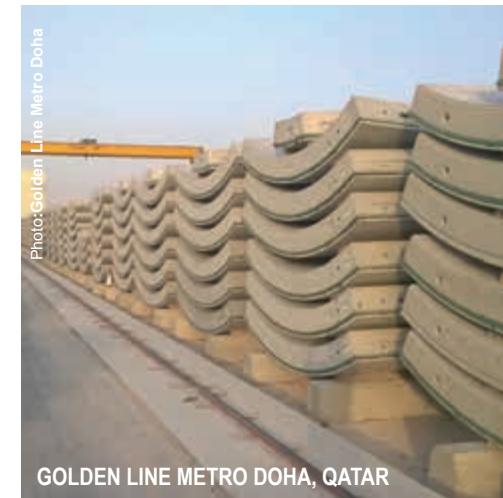
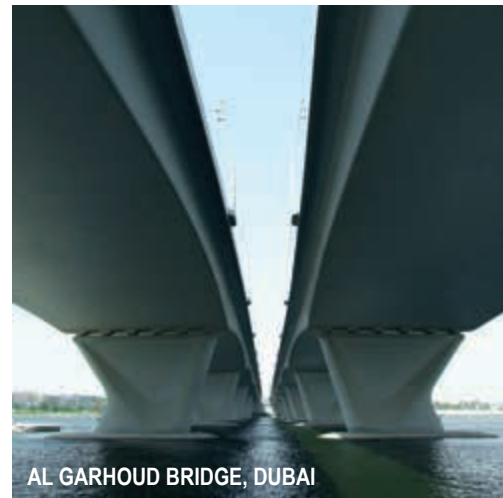
Ha-Be completes its services with its in-house transport fleet, consisting of pick-up trucks and bulk tankers. With this flexible line-up, we are able to deliver our products quickly and reliable to the requested destination. The company's personnel gets a regular training and therefore guarantees a clean and proper filling of customer's tanks.



References

HA-BE ADMIXTURES FOR YOUR SUCCESS

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Making good concrete better



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