

HA-BE PRODUCT SYSTEMS

for manufactured concrete products



Photo: iStock@onyyouqi



Overview of our product concept for MANUFACTURED CONCRETE GOODS

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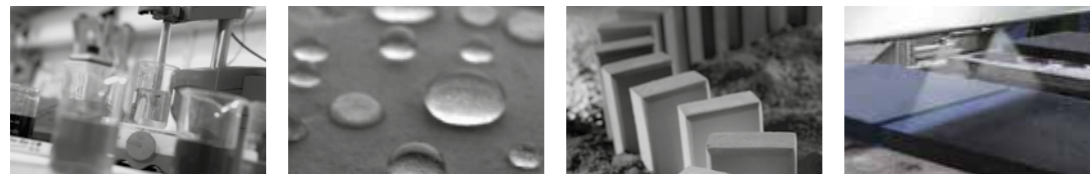
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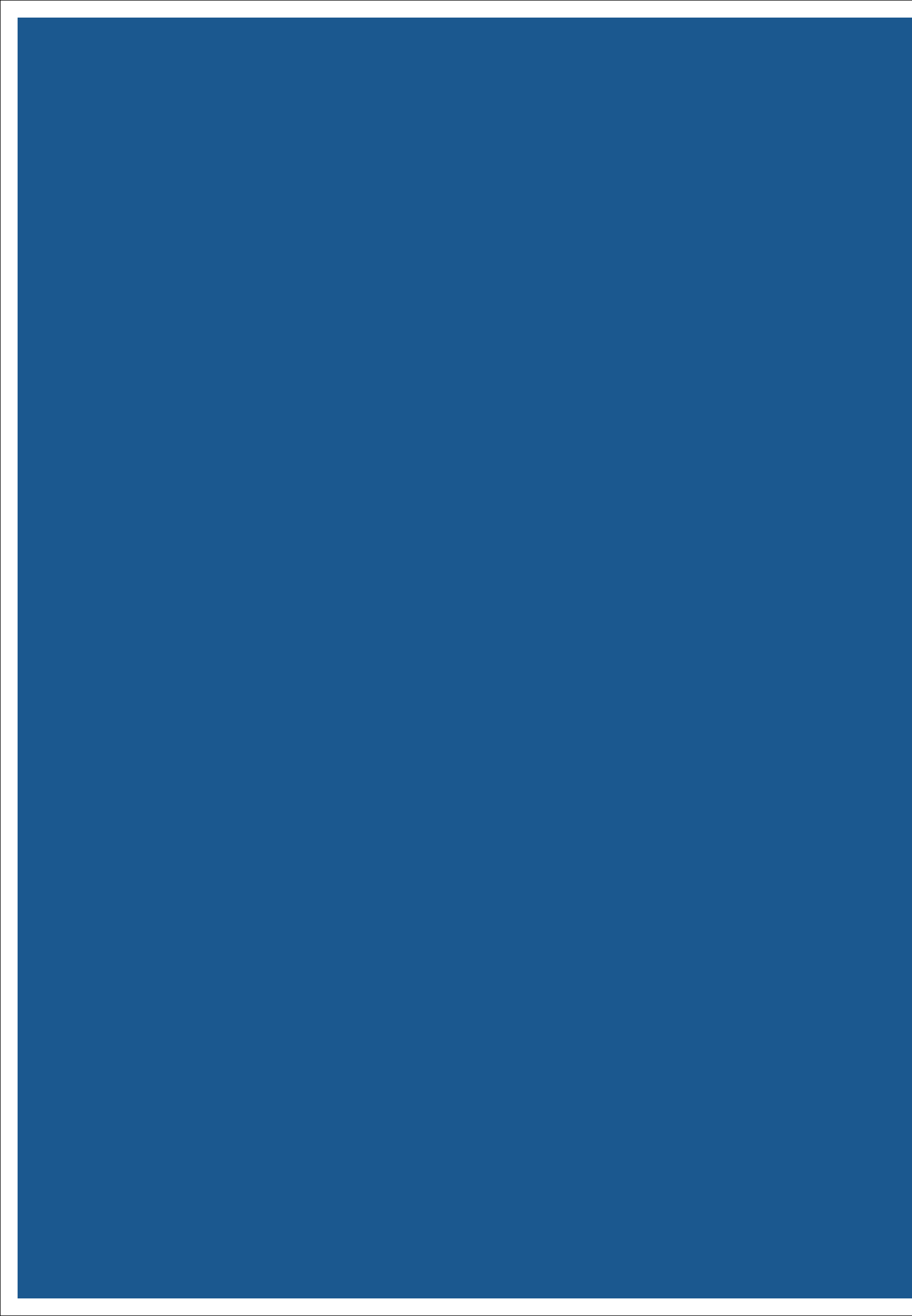
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Ha-Be Product System for manufactured concrete products

COMPONENTS OF THE SYSTEM



ADMIXTURES PROTECTION COLOURS APPLICATION



CONCRETE
ADMIXTURES

Ha-Be Product System
CONCRETE ADMIXTURES

CONCRETE
ADMIXTURES

The ANTIPOR® product line

FLEXIBLE SOLUTIONS

Whether single layer, double layer, or large-size slabs – our ANTIPOR® products offer you flexible solutions according to your requirements.

The targets we aim for are:

LESS
EFFLORESCENCE

1

STRIKING
APPEARANCE

2

PROCESS
OPTIMISATION

3

QUALITY
IMPROVEMENT

4

ECONOMICAL
EFFICIENCY

5

Ha-Be concrete admixtures

ADMIXTURES FOR CONCRETE PRODUCTS

As a manufacturer of concrete products, you always keep the area of application, your customers and the price segment of your products in mind. Our ANTIPOR® product line considers all the requirements you have: depending on the product system you choose, you will obtain the following benefits:

1. LESS EFFLORESCENCE

Many of our ANTIPOR® products apply a water-repellent effect, which provides additional benefits:

- ▶ Hydrophobisation of the entire concrete structure
- ▶ Reduced water absorption
- ▶ Less primary and secondary efflorescence

2. STRIKING APPEARANCE

Our ANTIPOR® products create a densified and homogeneous microstructure, which further ensures:

- ▶ Smooth and beautiful surfaces
- ▶ High hue intensity and colour brilliance
- ▶ Improved, closed side finish

3. PROCESS OPTIMISATION

The plasticizing properties of the ANTIPOR® line achieve the best possible compactibility of concrete and offers the following advantages:

- ▶ Optimisation of green strength/early strength development
- ▶ Reduced sticking to the stamp
- ▶ More efficient manufacturing process and consistent production

4. QUALITY IMPROVEMENT

The formulations of the ANTIPOR® line have been specially developed to significantly increase the quality of your concrete products. You will benefit from:

- ▶ Higher final strengths
- ▶ Optimisation of frost / de-icing salt resistance
- ▶ Improved durability

5. ECONOMIC EFFICIENCY

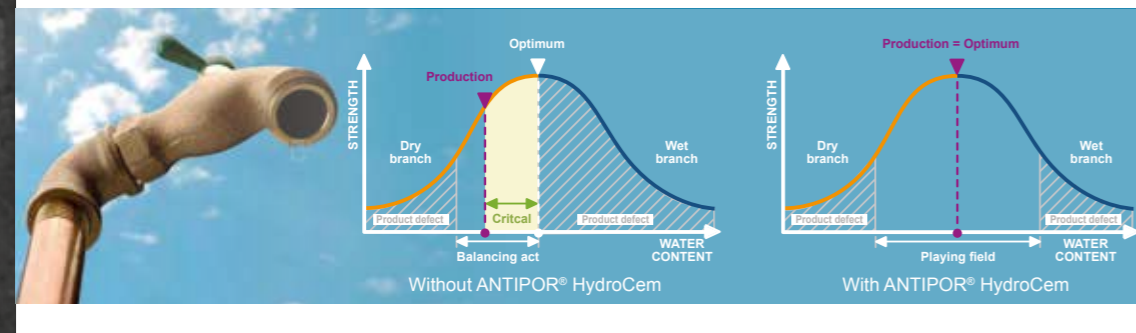
The ANTIPOR® line exploits the full potential of the hydration of the cement and thus contributes to a consistent production. For you, it offers the following advantages:

- ▶ Decreased machine cycle times
- ▶ Lower defect rate
- ▶ Higher energy efficiency

CONCRETE ADMIXTURES

The ANTIPOR® HydroCem technology WATER ADDITION AT NO RISK

ANTIPOR® HydroCem has been designed to limit the risk related to water addition and thus to allow concrete product manufacturers an efficient production. Manufactured concrete products keep dimensionally stable and deformations are minimised. Be at an advantage at this critical point of production by adding ANTIPOR® HydroCem.



Ha-Be concrete admixtures

SOLUTIONS FOR SEMI-DRY CONCRETE

Adding the optimum amount of water to semi-dry mixes is a balancing act: if the concrete mix is too dry, there is a lack of strength, but an excessively high amount of water, on the other hand, will bulge the concrete. Both may cause defects. Our ANTIPOR® HydroCem technology addresses exactly this challenge and helps to reduce the reject rate.

OBTAIN...

LOWER DEFECT RATE

Large-sized concrete products (e.g. high ridges), sophisticated concrete shapes as well as concrete produced with very dry mixes are particularly at risk. ANTIPOR® HydroCem increases the elasticity and the green strength of these products and helps to decrease the reject rate.

HIGHER STRENGTHS / REDUCTION OF CEMENT CONTENT

By adding the optimum water content, the full hydration potential of the cement can be exploited. The strength of the concrete increases, giving you the opportunity to minimise the cement content.

IMPROVED APPEARANCE

ANTIPOR® HydroCem improves the compaction of concrete and thus allows for the production of a denser and more homogenous concrete structure. Porous areas are minimised, side finishing improved and edges of concrete products are clearly defined.



CONCRETE
ADMIXTURES

The ANTIPOR® HP technology

STOP FACE DISPLACEMENTS

Two-step technology for a uniform face thickness

Step 1

The plasticizing effect starts when applying vibration energy. Enabling an easy, precisely and homogeneous distribution of face concrete within the mould, the pressing step can be skipped.

Step 2

After completing the vibration process, ANTIPOR® HydroCem modifies concrete's viscosity. The thixotropic effect allows concrete to draw back in seconds in order to reduce displacements of face concrete during core concrete filling.

Ha-Be concrete admixtures

TECHNOLOGY FOR HERMETIC PAVING SLABS

The production of large-sized products in hermetically pressed slab productions is subject to special requirements. The products out of our ANTIPOR® HP product line offer you optimum solutions to meet the technical challenges in particular.

BENEFIT FROM...

IMPROVED WORKABILITY

- ▶ Controlled application
- ▶ Optimised compaction
- ▶ Enhanced de-moulding

IMPROVED AESTHETICAL APPEARANCE

- ▶ Clear bevelled edges
- ▶ Smooth chamfered corners
- ▶ Homogeneous and uniform appearance

LOWER DEFECT RATE

- ▶ Uniform thickness/ reduced displacements of face concrete during core concrete filling
- ▶ Saving on resources
- ▶ Reduced energy consumption
- ▶ Cost-saving

CONCRETE
ADMIXTURES

Concrete laboratories & technical support

BENEFIT FROM OUR SERVICE



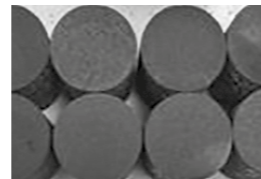
SUPPORT ON-SITE



CONCRETE LABS



PLANT TRIALS



TESTING SERVICES

Ha-Be concrete admixtures – our service

CONCRETE LAB & TECHNICAL SUPPORT

Limit your efforts and benefit from our service and support concept! Whether preliminary tests, concrete technological tests or trials on-site – we at Ha-Be offer a comprehensive range of services that is of real added value to you: you save time and money!

EXTENSIVE CUSTOMER SERVICE CONCEPT

Our regional sales representatives work closely together with our technical experts. Our extensive customer service concept offers you a reliable support on-site.

PLANT TRIALS – WE LEND YOU A HELPING HAND

Whether dosing the admixtures into the mixer or sampling – during plant trials and trials on-site, we lend you a helping hand. You can rely on our experienced concrete technologists.

YOUR ADDED VALUE – OUR CONCRETE LABORATORIES

The cooperation with our certified concrete laboratories within the Ha-Be group of companies offers you a real added value. We analyse and test crucial concrete technological properties and thus are able to increase the performance of your products.

CONCRETE TECHNOLOGICAL TESTS

Tests we are offering include, but are not limited to:

- ▶ Frost / de-icing salt resistance according to DIN EN 1338-1340, annex D
- ▶ Flexural strength according to DIN EN 1339 & 1340
- ▶ Tensile splitting strength according to DIN EN 1338+
- ▶ Water absorption capacity according to DIN EN 1338-1340



Ha-Be product concept
CONCRETE PROTECTION



CONCRETE
PROTECTION

Ha-Be waterproofing agents & sealers

THE PERFECT PRODUCT FOR YOU

From basic to premium protection

Our comprehensive product portfolio offers you tailored solutions according to your requirements – from basic protection through to high-performance concepts.

Time of effect

The time of hydrophobisation is of crucial importance, whenever an additional coating or impregnation shall be applied on the surface. Therefore, we offer both, products with immediate effect as well as products that only develop their effect over time.

Photo: iStock@BlackJack3D

Ha-Be concrete protection

INTEGRAL & WATERPROOFING ADMIXTURES

Be of advantage to architects, building material distributors, and private customers and stand out from your competitors! Improve the performance, appearance and durability of your products by using our PROTECT waterproofing agents and sealers. We have developed a wide product range, starting from basic protection through to premium finishing. Just the right level of protection for any requirement.

YOUR ADVANTAGES

- ▶ Integral protection effects the entire concrete matrix
- ▶ Works from the "inside" – with no regards on external factors such as abrasion
- ▶ Reduced water absorption

YOUR BENEFITS

- ▶ Less efflorescence
- ▶ High freeze-thawing salt resistance
- ▶ Increased long-term performance
- ▶ Improved sustainability

YOUR ADDED VALUE

- ▶ Highlighting the unique selling point and thus standing out from the competition
- ▶ Good marketing possibilities
- ▶ Reduced rejections



CONCRETE PROTECTION

Ha-Be impregnations and coatings

OUR PRODUCTS – YOUR ADVANTAGES

Advantages

- ▶ Less water absorption
- ▶ Protection against food stains
- ▶ Oleophobic effect
- ▶ Protection against weathering
- ▶ Prolonged colour retention
- ▶ "Easy to Clean" effect

Added value

- ▶ Striking appearance
- ▶ Less efflorescence
- ▶ High freeze-thawing salt resistance
- ▶ Increased long-term performance
- ▶ Contribution to sustainability
- ▶ Highlighting as a unique selling point and thus standing out from the competition
- ▶ Good marketing possibilities
- ▶ Fewer complaints

Ha-Be concrete protection

IMPREGNATIONS & COATINGS

Upgrade your concrete products with a special finishing! Our broad range of products does not only protect the surfaces of your concrete products, it also provides numerous different visual effects for attaining unique appearances. Whether natural look, semi-gloss or high-gloss – with our products you give your concrete the right look.

PRODUCT PORTFOLIO: FROM BASIC PROTECTION TO PREMIUM FINISHING

Choose the suitable surface protection for your concrete products! From basic protection through to premium finishing, we offer individual solutions for your project.

EFFECT: NATURAL, SEMI-GLOSS OR HIGH-GLOSS?

You want a natural look, a semi-gloss or a high-gloss colour enhancement? We modify the gloss level of our surface protection products according to your needs.

THE LOTUS EFFECT

The Lotus effect is commonly regarded as the visible evidence of hydrophobicity. Convince architects, building material distributors, and private customers by showing the benefits of an easy-to-clean, waterproofed surface!

APPLICATION ON WET AND DRY SIDE

Our product portfolio includes coatings of any gloss level for both the dry and wet side of concrete product production.

GOOD APPLICABILITY – PROCESS-SAFE APPLICATION

Our impregnations and coatings are specially designed for industrial applications and process-safe applicability. Avoiding e.g. clogged nozzles lead to a smoother production process and thus increase the productivity.



CONCRETE
PROTECTION

Our UV coating system

SUPER EFFICIENT

Our UV coating system consists of two products: the primer and the top coat. The application of the primer serves as a preparation for the open-pored and absorbent concrete surface. Furthermore, it is used to ensure a more economical use of the subsequent top coat. Combined, the two products result in a highly effective and powerful surface protection system.

Ha-Be concrete protection

UV COATING AS HIGH-END PROTECTION

The use of UV technology offers major advantages: in addition to a high level of hardness, the UV system impresses with a long shelf life. We have developed a particularly durable product system that provides a high-performance protection result.

YOUR ADVANTAGES...

YOU UPGRADE YOUR CONCRETE

- ▶ High-quality finishing
- ▶ High scratch resistance
- ▶ Long-lasting, attractive surface appearance

YOU SAVE TIME

- ▶ Short drying / fast curing times of the coating
- ▶ The concrete products can be stacked and packed directly after UV-hardening

YOU EXTEND THE SERVICE LIFE OF YOUR PRODUCTS

- ▶ Higher level of hardness
- ▶ Enhanced resilience
- ▶ Long-term durability



CONCRETE PROTECTION

Concrete lab & technical support
YOU CAN COUNT ON US!

CONCRETE LAB WEATHERING TESTERS SPRAY BARS CONCRETE TESTING

Ha-Be concrete protection – our service

CONCRETE LAB & TECHNICAL SUPPORT

How durable is a surface protection? Does it protect reliably against efflorescence and dirt? And does it adhere strongly enough to the underground? We will answer to all of these questions! Having modern testing facilities, we analyse the performance of surface protection systems applied on concrete products.

YOUR ADDED VALUE: WE APPLY FOR YOU!

Testing coatings, adjusting application quantities, and analysing results – our technical experts customise our protection systems according to your products using your dimensions. Our modern testing facilities allow high accuracy and do not notably vary from common plant facilities. All results are therefore trustworthy and transferable. For you, these tests have the following advantages:

- ▶ Illustration of the expected results
- ▶ Determination of the individual application quantities according to the absorption properties.

PRACTICAL ORIENTATION PROVIDES TRANSFERABLE CONDITIONS

All surface protection systems may be applied using the testing facilities – from impregnations through to product systems consisting of primer and top coat, and to UV coatings. As different surface protection products have to harden by different drying systems, our concrete laboratory has both a UV and a NIR drying device.

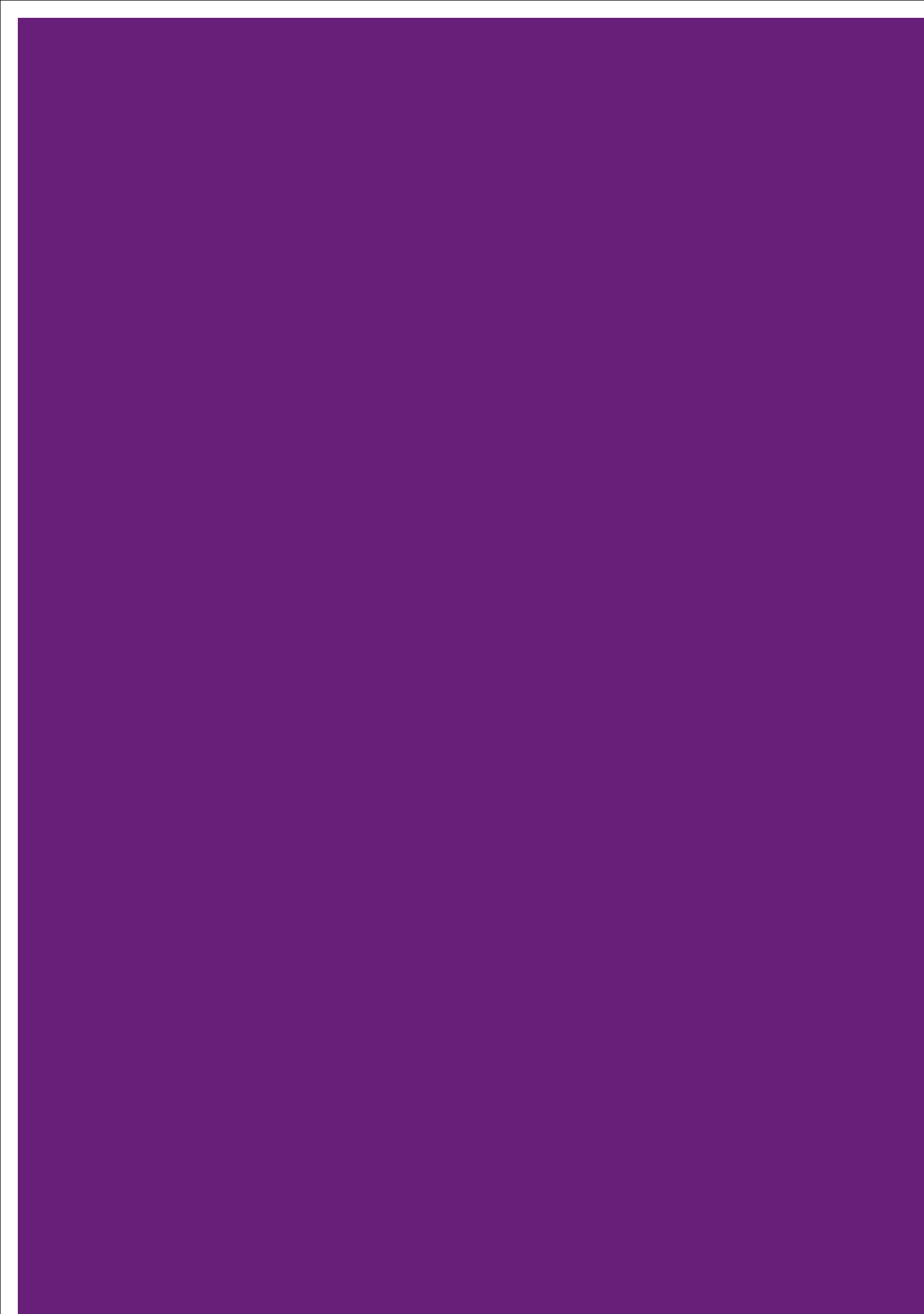
MOBILE APPLICATION TECHNOLOGY FOR FACTORY TESTS

In addition to the testing facilities in our concrete laboratory, we may also test the surface protection products on-site: in your factory itself. Therefore, we use mobile application devices such as a mobile spray bar. The technology of these mobile devices correspond to the one of commonly installed in plants and factories. Thus, they provide reliable and transferable results. Our experienced application engineers will support you here.

PROFESSIONAL TESTING SERVICES

Equipped with state-of-the-art testing facilities, our concrete laboratory provides profound analysis of different concrete technological testing services. In regards to surface protection, these include, but are not limited to:

- ▶ QUV weathering testers
- ▶ Natural weathering exposure
- ▶ Determination of water absorption
- ▶ Determination of stain resistance
- ▶ Determination of strength values
- ▶ Determination of skid resistance (SRT pendulum test)



CONCRETE
COLOURS

Ha-Be product concept
CONCRETE COLOURS



Photo: iStock@lunaranaja

Ha-Be concrete colours

PIGMENTS & GRANULES

Convincing by functionality is one thing. But your paving stones, concrete slabs, outdoor items, road construction products and slope protection also need to impress by shape and design. The colour is of crucial importance here. Whether black, anthracite, red, yellow or beige – our multi-faceted, high-quality pigments, granules and liquid colours provide a unique look to your concrete products.

ENDURING BRILLIANCE AND INTENSITY

Enhance the appearance of your concrete products by colouring them. Choose out of an extensive range of high-quality pigments and granules - whether iron oxides, carbon pigments, chromium oxide, cobalt blue or titanium white. Our special manufacturing processes add outstanding longevity to them – for concrete colours with enduring brilliance and intensity.

DURABLE, WEATHERPROOF AND UV-RESISTANT

Our concrete colours convince with maximum stability and weather resistance. Based on inorganic, synthetic raw materials, they are highly resistant to UV and weathering.

QUALITY FIRST

All our concrete colours comply with DIN EN 12878 and allow the standard-compliant colouring of your concrete products. It is our pleasure to advise you personally in colour selection, application and dosage.

CONCRETE
COLOURS



Ha-Be concrete colours

LIQUID COLOURS

In addition to pigments and granules, our product portfolio also includes high-quality liquid colours branded Ha-Be Color. Of course, they own the same high-quality standards as our pigments and granules. Gain considerable advantages from using our colour slurries:

COLOURING AT FULL POWER!

Liquid colours are suspensions of pigments, water and additives. During the manufacturing, the pigments optimally disperse and thus develop their full colour power – providing the concrete with a high level of colour brilliance.

MIXED COLOURS – DELIVERED READY-TO-USE

In contrast to pigments and granules, mixed colours are delivered ready-to-use and thus do not require additional equipment. This saves time and simplifies processes. Yet another advantage: as all pigments can be mixed together, a huge variety of individual shades and tints is feasible.

QUICK DISPERSION – SHORTER MIXING TIMES

Liquid colours are very easy to mix. They quickly disperse and mix with the concrete. This allows you to achieve shorter mixing times and optimise your production processes.

EXACT DOSAGE – UNIFORM COLOUR RESULT

Compared to pigments, liquid colours are much more accurately to dose, which, in turn, does not only lead to uniform results, but also limit and reduce the risk of colour variations.

NO INTERACTIONS WITH ADMIXTURES

Since we manufacture both admixtures and concrete colours, we are able to match up the raw materials of both product ranges. In doing so, we exclude potential interactions and ensure a reliable, perfect colour result.



Photo: iStock@ferrantraile

Ha-Be concrete colours

OUR COLOUR CHART

We offer a broad range of colours in liquid as well as in solid form. In addition to the standard colours, we also reproduce or design unique colours.

INDIVIDUAL COLOURS

You need a special colour blend? Therefore, we have initiated our „Colourise Your Concrete“-Concept. We match or design your specific colour considering the properties and ingredients of your concrete, i.e. the colour of the cement, grain sizes of aggregates, w/c-ratio and thus also limit the risk of any colour deviation. Contact us, we will be pleased to help you.

COLOUR CHART – STANDARD COLOURS

Our standard colours cover a wide range of muted, natural-looking shades, from light cream colours through to nuanced reds, yellows, browns, and to various black hues. Simply discover and enjoy our colour chart by scanning the QR-code below. Upon request, we are happy to help you on your colour choice.

Do you like to discover our colour range?
Scan QR-Code and learn more.



CONCRETE
COLOURS



CONCRETE COLOURS

Colour lab & technical support

WE ARE HERE FOR YOU!



COLOUR REPRODUCTION



DEVELOPING MIX DESIGNS



PLANT TRIALS

Ha-Be concrete colour – our service

COLOUR LAB & TECHNICAL SUPPORT

We support you in achieving the best possible quality. For this, not only the colour hue itself, but various concrete technological parameters need to be considered. Therefore, we initiated the „Colourise Your Concrete“-concept: we match or design your specific colour according to the properties and raw materials of your concrete mix design.

COLOUR REPRODUCTION SAVES YOUR TIME, MONEY, AND RESOURCES!

Use your resources efficiently and leave the time-consuming development of mix designs to us: our technical experts design your colour and take into account your specific concrete technological parameters. Using the previously determined raw materials, we test the colour and produce sample slabs. You will receive reliable results while saving time and money!

COLOURFUL SAMPLES – TRANSFERABLE RESULTS

When producing samples, we only use state-of-the-art stone presses that are able to copy the pressing processes of actual concrete production plants. Of course, all colour samples meet concrete technological requirements as well as the common standards of the concrete industry. In doing so, we obtain reliable results that can be transferred into industrial practice.

WE ARE HERE TO HELP!

Good concrete technology considers all parameters that may or may not have an impact altogether. This also includes dosing systems and plant technology. When it comes to colouring concrete, they are of crucial importance. Therefore, our technical experts personally supervise plant tests or trials on-site and thus support you to colourise your concrete accurately.



PLANT
ENGINEERING

BM Anlagenbau & Dosiertechnik GmbH
APPLICATION TECHNOLOGY

PLANT
ENGINEERING

Application technology

OUR PARTNER BM ANLAGENBAU



DOSING SYSTEMS



SPRAYING DEVICES



UV-HARDENING



NIR-DRYING

BM-Anlagenbau & Dosiertechnik GmbH

APPLICATION TECHNOLOGY

Our product systems for concrete products are completed by the plant technology provided by our partnering company BM-Anlagenbau & Dosiertechnik GmbH. In addition to its state-of-the-art spraying and dosing devices, the company is known for its drying systems for surface protection.

DOSING SYSTEMS

Whether volumetric or gravimetric, permanent or mobile, concrete colours or admixtures – BM offers a wide range of dosing equipment. These will be manufactured according to your requirements providing you real added value:

- ▶ Accurate dosing
- ▶ Improved cost-efficiency
- ▶ User-friendly operation
- ▶ Simple and cost-effective integration into existing production cycle

SPRAYING DEVICES

BM engineers and designs state-of-the-art spraying systems. These include, e.g. the innovative “pulse nozzle systems” with integrated volumetric measuring system. This offers significant advantages:

- ▶ An adjustable application quantity
- ▶ Improved spray pattern
- ▶ More efficient and accurate production process

NIR DRYING AND UV-HARDENING

Whether using UV-coatings or impregnations for surface finishing: BM offers efficient drying and hardening systems for both finishing concepts. Both technologies provide a high level of efficiency, flexibility, and productivity. Both are easy to install within an existing production line. You benefit from:

- ▶ Low installation costs
- ▶ Decreased energy consumption
- ▶ Saving time, space and money



Photo: iStock@GregorBlister

Ha-Be Betonchemie

MAKING GOOD CONCRETE BETTER.

It's more than a slogan. It's a promise we make every day by combining high-quality concrete chemistry with practical application technology. We master concrete technological challenges and find economic solutions for high standard demands.



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