



FIRE PROTECTION COATING FOR CONCRETE

TECHNICAL DATA SHEET HENSOMASTIK® B 3000

- Tested in compliance with the European standard EN 13381-3:2015, analogous to prEN 13381-3:2012
- Building material approval no. Z-19.11-1715 / external and in-house monitoring
- Indoor and outdoor applications
- Easy to process, low film thicknesses, no loads on surrounding structure, maintenance free
- BETON-CARBONSPERRE prevents contaminant and water penetration
- Fulfills the requirements under DIBt (October 2010) and AgBB (June 2012)



Mitglied der
DGNB
Deutsche Gesellschaft für Nachhaltiges Bauen
German Sustainable Building Council



LEED





HENSOMASTIK® B 3000

Benefits



Environment

- Water-based system
- Free of halogens, APEO (alkyl phenol ethoxylate), borates, fibres, and plasticisers
- Non-VOC according to ISO 11890-2, LEED confirmation

Germany: The analysed product fulfils the requirements in the 10/2010 DIBt reports on "Zulassungsgrundsätzen zur gesundheitlichen Bewertung von Bauprodukten in Innenräumen" ("Approval principles for the health assessment of building products in interior rooms") in conjunction with the LCI values issued in June 2012 by the AgBB (Committee for Health-related Evaluation of Building Products).

France: CMR substances: The tested product fulfils the requirements of the French directives DEVP0908633A of 30 April 2009 and DEVP0910046A of 28 May 2009.

VOC classification: The product fulfils **VOC emissions class A+**. The recommended classification is based on the French regulation for labelling building products, wall panelling, floorings, paints, and lacquers with respect to their emissions of volatile contaminants, including those of 25 March 2011 (décret DEVL1101903D) and of 13 April 2011 (arrêté DEVL1104875A).

Belgium: The analysed product fulfils the requirements set down in the "Royal Decree establishing threshold levels for the emissions to the indoor environment from construction products for certain intended uses" (draft December 2012).

Technology

- Coating for upgrading indoor and outdoor concrete beams, concrete supports, and ribbed ceilings for an enhanced fire resistance duration of up to 120 minutes
The bare concrete patches take the ablative fire protection coating system HENSOMASTIK® B 3000. The consumption is calculated as a function of the required fire resistance class and concrete coverage.
- Easy to process, visually appealing surface, maintenance free
- No loads on the surrounding structure, space saving = no headroom loss
- Suitable for areas with high emission levels, e.g. in underground car parks
- Low film thicknesses for considerable cost and building time savings: 1.313 – 3.435 mm
- Optional RAL, NCS, or custom colours or samples provided by the top coat HENSOTOP WB
- Optimised light efficiency: the brighter the chosen colour, the better ambient light is reflected from the coated surfaces, reducing lamp use and power consumption
- BETON-CARBONSPERRE prevents contaminant and water penetration

General

- External and in-house monitoring
- Low material consumption for high cost effectiveness
- No flaking when drilled afterwards for suspended loads and installations



Our **HENSOTHERM®** and **HENSOMASTIK®** fire protection coating systems are developed and manufactured exclusively at our company base in Börnsen near Hamburg.

Quality marks



Member of
DGNB
Deutsche Gesellschaft für Nachhaltiges Bauen
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TECHNICAL INFORMATION

Approval/classification

- Exova Warringtonfire WF report no. 339818
- Summary ref no. CT/339818 of 10 June 2015
- LEED confirmation
- Building material approval no. Z-19.11-1715

Application areas

- Indoor and outdoor applications
 - The fire resistance duration of concrete beams and columns can be improved by up to 120 minutes.
- Also possible on request are ribbed ceiling upgrades with an assessment report.

We recommend that you consult with the responsible planning authority or architect before installing the fire protection system. On request, a project based expertise can be drawn up that serves as a basis for the approval of individual cases.

The ambient conditions during the application must be documented in a report!

Product features

- HENSOMASTIK® B 3000 is a viscous, non-hygroscopic, ablative, fire-resistant coating.
- HENSOMASTIK® B 3000 greatly delays the build-up of heat in concrete. At temperatures over 330 °C, concrete and steel reinforcements expand at different rates.
- HENSOMASTIK® B 3000 prevents concrete from bursting off. The product complies with the requirements under DIBt (October 2010) and AgBB (June 2012).
- Water-based system
- Free of APEO (alkyl phenol ethoxylate), halogens, and borates
- No fibre or other particulate emissions
- VOC emissions class A+
- No loads on the surrounding structure, space saving, no headroom loss
- Only low film thicknesses needed: 1.313–3.435 mm depending on reinforcement rod depth and required fire resistance duration
- Easy to process, maintenance free
- Under the optimal conditions, a wet film thickness up to 1,500 µm thick can be applied in the one operation
- Optimal surface optics
- Colour: white, approx RAL 9010

Surface preparation / primer

Surface requirements

- The concrete surfaces must be rough, have good grip, and be free of dusts, oils, and greases
- Free of efflorescences and cement clouds
- The concrete must be dry (test as defined in ASTM D 4263) and/or residual moisture of max 4 % according to CM
- Primer: BETON-CARBONSPERRE*

Preparations on damaged concrete surfaces

The compatibility of the following products has been verified for the repair of various imperfections:

- Defects: Disbocret 505 Feinspachtel or Disbocret 506 Planspachtel (with 15–20 % sand filler)
- Cracks: Disbocret 505 Feinspachtel or Disbocret 506 Planspachtel

Application

HENSOMASTIK® B 3000 shall only be applied by trained staff!

Before the application make sure that:

- The primer **BETON-CARBONSPERRE*** must be completely dried!
- **HENSOMASTIK® B 3000** must be stirred thoroughly with a slow agitator!

HENSOMASTIK® B 3000 shall be processed preferably at a room temperature of $\geq +10$ °C and a relative air humidity of < 80 %.

The surface temperature shall be at least +5 °C higher than the determined dew point and in all cases above 0 °C.

It is mandatory to provide sufficient ventilation and extraction during the application!

Airless spraying

- Recommended nozzle sizes: 0.025" – 0.031" depending on the required coating thickness
- Recommended working pressure: 200 – 250 bar
- Discharge > 5.5 l/min
- Detach intake hose from airless sprayer
- Remove filters from airless pump and spraying gun
- Apply a wet film thickness not thicker than 1,500 µm in the first operation.
- Wet film thickness per subsequent operation: max. 1,500 µm
- Applied quantity according to expertise or test report in the ratio 1.00 mm dry film thickness \approx 1.4 mm wet film thickness \approx 2 kg/m²
- If necessary, dilute with max 5 % water

Brushing and rolling

- Apply with a long-bristled brush; Chinex brushes are recommended
- Rollers of synthetic material or lambskin

Drying times

The drying time depends on temperature and air humidity.

Material, room, and building temperatures of +20 °C and a relative air humidity of about 65 % result in the following drying times for about 2,000 g/m² or a 1.0 mm dry film thickness:

- dust-dry after approx. 6 hours
- ready for recoating after approx. 12 hours
- dried through after approx. 48 hours

Low temperatures, a higher air humidity, inadequate air circulation, and varying coating thicknesses can increase the above drying times.

* Please consult the respective technical data sheet!

Top coats

HENSOTOP top coats offer the possibility of colored design, protection against moisture and should be applied when surfaces, during the usage, are exposed to environmental influences. Do not apply the top coat before the HENSOMASTIK® B3000 fire protection coating is fully dried! At the earliest after 48 hours and after a positive fingernail test.

For HENSOMASTIK® B3000 the following top coat* is compatible: HENSOTOP WB

Storage and transport

- Storage and transport at min +5 °C and max +30 °C.
Protect against frost!
- Unopened packaging has a 12-month shelf life.
- Opened packaging must be sealed carefully!

Applications of HENSOMASTIK® B3000



Concrete beams



Concrete columns



Ribbed ceilings on request

Packaging

25 kg plastic bucket, other packaging sizes on request

Precautions for Safety Use

Use HENSOMASTIK® B3000 in accordance with all applicable local and national regulations. Giscode: M-DF01

Labelling and environmental protection

As regulations are often revised please request the current safety data sheet before using the product.

* Please consult the respective technical data sheet!

Our customer services will be pleased to assist you with your enquiries!

Complete product portfolios and further details can be downloaded from: www.rudolf-hensel.de

The information provided herein reflects the current state of our technical testing and experience with the use of this product. However, the buyer/user is hereby not relieved of their duty, at their own responsibility, to properly examine our materials for their suitability for the intended use based on the respective site conditions. Legal claims for damages arising from the use of this product for purposes other than, or in a manner that differs from, the description contained herein without our prior written approval are precluded and may not be asserted against us. In light of the circumstance that we have no influence over site conditions and various factors that could influence the performance and use of our product, a guarantee of results or liability, regardless of legal grounds, cannot be derived from this information or from verbal consultation provided by one of our employees unless we may be accused of intent or gross negligence. Our General Terms and Conditions apply for all other purposes. The most recent version of our technical data sheet is valid and may be requested from the Rudolf Hensel GmbH or downloaded at www.rudolf-hensel.de.

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