



# **BORNIT®-** **Profi 1K Express**

**Quick-drying, 1-component  
bituminous thick coat with high dry residue**

**KMB in compliance with DIN 18195 Edition: 2000-08  
With general building authority test certificate**



Data Sheet: 30<sup>th</sup> September 2005

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## **Product description**

BORNIT®-Profi 1K Express is a high-quality, one-component, polystyrene-filled, and polymer-modified bituminous thick coat ( KMB ).

The product is characterised by an especially fast rain-tightness and thorough drying. With its high proportion of solids, a high dry layer thickness (over 90 % of the wet layer thickness) is achieved, with less material needed.

BORNIT®-Profi 1K Express is solvent-free and environmentally sound.

After thorough drying, a highly flexible, crack-bridging and water-tight foundation sealing is achieved, which is resistant to any aggressive substances to be found naturally in the soil.

BORNIT®-Profi 1K Express was tested compliant with parts 4, 5, and 6 of DIN 18195 (Edition 2000-08) and meets the valid "Testing principles for the granting building authority test certificates for ... bituminous thick coats".

**With general building authority test certificate No.: P-2004-4-3536**

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## **Areas of application**

BORNIT®-Profi 1K Express is used for permanent, flexible external waterproofing of buildings in the area in contact with soil using filling or spraying methods. The product is suitable for use on horizontal and vertical surfaces.

BORNIT®-Profi 1K Express may also be used for intermediate sealing (under cement finish) of floor slabs, balconies and terraces as well as for affixing rigid-foam insulation boards to bituminous and mineral substrates in the area in contact with soil.

BORNIT®-Profi 1K Express adheres well to all dry and slightly moist mineral substrates as well as to bituminous substrates of sufficient stability (e.g. old cold and hot coatings or thick coatings).

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## **Product advantages**

- especially fast rain-tight and thoroughly dried (comparable to 2K thick coating)
- economical consumption due to its high proportion of solids and dry residue
- easy to apply with a trowel as well as spray-on with suitable tools
- highly-elastic due to high-quality polystyrene and polymer modifications
- immediately ready-to-use without preparation
- after thorough drying resistant to pressing water and crack-bridging
- no plaster coat required for fully and well pointed masonry
- affixes insulation boards to concrete, masonry and cured thick coatings
- solvent-free, thus environmentally sound



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<b>Technical data</b>	Type	One-component thick bituminous coat (KMB)
	Base	Polymer-modified bitumen emulsion with special additives
	Solvents	none
	Colour	black
	Density	approx. 0.80 g/cm <sup>3</sup>
	Consistency	pasty, stable
	Application	trowel, suitable spraying equipment
	Water-tightness	watertight at 0.75 bar after 72 hours
	Curing	2 to several days depending on air humidity, temperature, layer thickness and substrate
	Steam diffusion coefficient $\mu_{sd}$ – value (m)	approx. 8000 (according to DIN EN 12086) 26.3
	Storage	not below + 5°C
	Shelf life	<b>Must not freeze!</b> Min. 6 months
	Max. layer thickness	6 mm wet layer thickness
	Cleaning	when fresh using water after curing using BORNIT <sup>®</sup> -Bitumen Cleaner
	Dangerous substances according to the Working Materials Regulation	none
	Danger class according to VbF	none

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<b>Substrate</b>	<i>Step 1:</i>	The substrate must be free from ridges or sharp-edged unevennesses as well as soil.
	<i>Step 2:</i>	Unfilled or badly filled depressions like masonry joints, mortar pockets or surface defects larger than 5 mm have to be repaired with suitable mortar. It is not necessary to apply plaster to fully or well-pointed masonry. Voids smaller than 5 mm as well as pores in the substrate can be closed by applying a thick layer of bitumen coating in a scraping manner. Especially for concrete surfaces, application in a scraping manner is recommended to avoid blistering.
	<i>Step 3:</i>	The substrate must be solid, clean, dust-free and free from any separating substances. The substrate should be absorbent. It may be slightly damp, but never wet.
	<i>Step 4:</i>	An undercoat with <b>BORNIT<sup>®</sup>-Basement Primer</b> or <b>BORNIT<sup>®</sup>-Unibit</b> (diluted with water 1:10) is principally recommended. For very porous or highly absorbent substrates (e.g. porous concrete), an undercoat is absolutely necessary. For solidification of sandy substrates, priming with <b>BORNIT<sup>®</sup>-Solidificator</b> is recommended. Upon drying of the undercoat, the substrate is prepared for application of the thick coating.

Important: Thick bitumen coatings can be damaged during the construction phase by water affecting the backside of the layer. It has to be made sure in any case, that the coating is not damaged by water affecting the adhesive side. If necessary, water-impermeable intermediate layers of mineral waterproofing slurry (e.g. **BORNIT<sup>®</sup>-Slurry SF**, **BORNIT<sup>®</sup>-Slurry EL**) must be applied, which cannot be detached from the substrate by water pressure.

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## Application

For the application of BORNIT<sup>®</sup>-Profi 1K Express, basically DIN 18195, Edition: 2000-08 as well as the "Directive for planning and implementation of waterproofing for constructional elements with contact to the ground with modified thick bitumen coatings", version of November 2001, have to be observed.

The application of modified thick bitumen coatings (KMB) depends on the respective hydrostatic load at the object. Therefore, it has to be observed that the loading condition present is clearly indicated by the planner before commencement of work.

BORNIT<sup>®</sup>-Profi 1K Express is delivered ready to use and is applied to the substrate prepared as above with a serrated filling knife, smoothing trowel or suitable spraying equipment.

BORNIT<sup>®</sup>-Profi 1K Express must **not** be applied during frost or with imminent rain. Application should be executed with object and ambient temperatures higher than +5°C.

The application of the thick coating is executed according to DIN 18195 (2000-08), parts 3, 4, and 5, as well as the "Directive for thick bitumen coatings" in two work steps.

For waterproofing against ground dampness and non-banked-up seepage water (DIN 18195, part 4), applications can be made immediately on the still fresh previous layer.

For waterproofing according to DIN 18195, parts 5 and 6, the first waterproofing layer must have dried off before application of the second layer that much, that it is not damaged by the application.

For waterproofing against banked-up seepage or ground water (DIN 18195, part 6), an enforcement layer (**BORNIT<sup>®</sup>-Glass Fabric**) has to be included over the entire surface of the first waterproofing layer.

According to DIN 18195, concave mouldings have to be prepared minerally (**BORNIT<sup>®</sup>-Sealing Mortar**) as bottle-shaped concave mouldings or with a 2-component thick coating (**BORNIT<sup>®</sup>-Repabit, quick drying**) before waterproofing the surface.

As a deviating, yet innovative and secure problem solution, we alternatively recommend the use of **BORNIT<sup>®</sup>-Triangle Tape** (bituminous profile, for melting on).

The professional execution of waterproofing in the area of joints, connections and terminations as well as penetrations has to be especially observed.

***Protect the freshly applied coatings from rain and direct sunlight!***

Protect the waterproofing against damaging. Protective and drainage layers, however, must only be applied after complete drying of the waterproofing layer (2 to several days, depending on weather and substrate). For that, the regulations of DIN 18195, part 10 must be observed.

BORNIT<sup>®</sup>-Profi 1K Express can be used for affixing insulation panels.

Suitable protective layers are e.g. plastic burled films with slip sheet and non-woven fabric for filtration (**BORNI-Drain V+F**) as well as thermally or bituminously bound seepage panels. Subsequently, the excavation can be backfilled. For that, only materials according to DIN 18 195, part 10 should be used to avoid damaging of waterproofing and protective layer.

### Note:

Modified thick coatings (KMB) are not listed in DIN 18195 (2000-08) for the loading conditions „non-pressing water – high load“ and „groundwater“. According to VOB, part C, of DIN 18336, in this case the use of BORNIT<sup>®</sup>-Profi 1K Express has to be agreed in the specifications and the customer has to be informed about this deviation from DIN 18195.



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<b>Consumption</b>	<ul style="list-style-type: none"><li>• for the load cases ground dampness / non-banked-up seepage water (DIN 18195-4) as well as non-pressing water / moderate load (DIN 18195-5): approx. 3.5 – 4.0 l per m<sup>2</sup> → wet layer thickness 3.5 – 4.0 mm → dry layer thickness 3.1 – 3.6 mm</li><li>• for the load cases banking-up seepage water (DIN 18195-6) / pressing water (groundwater, depth of immersion &lt;3 m): approx. 4.5 – 5.0 l per m<sup>2</sup> → wet layer thickness 4.5 – 5.0 mm → dry layer thickness 4.1 – 4.5 mm</li><li>• Insulation board adhesion: approx. 2 l / m<sup>2</sup></li></ul>
<b>Layer thickness test</b>	<p>According to DIN 18195 (2000-08) part 3, a layer thickness test in the fresh state (wet layer thickness) as well as a test of the drying state must be executed at a reference sample located in the excavation pit (e.g. brick). For waterproofing according to DIN 18195 parts 5 and 6, the results of these tests have to be documented.</p> <p>Load case according to DIN 18195 parts 4 and 5: min. dry layer thickness: 3 mm Load case according to DIN 18195 part 6: min. dry layer thickness: 4 mm</p>
<b>Storage</b>	<p><b>BORNIT<sup>®</sup>-1K</b> must be <b>protected from frost!</b> It is necessary to avoid temperatures of over +30°C and direct sunlight. Shelf life in unopened, original packaging is at least 6 months.</p>
<b>Health and Safety</b>	<p>Do not pour the remains of the product into the sewers. Protect your skin from contact with the substance. For further information please refer to Material Safety Data Sheet.</p>
<b>Note</b>	<p>This data sheet replaces and annuls all previous technical information about the product. The information has been compiled according to the state-of-the-art of application technology. However, please note that deviations from the operation method proposed in this data sheet may be necessary depending on the condition of the construction object. Unless agreed otherwise in individual contracts, all of the information contained in the data sheet is non-binding and therefore does not represent the agreed properties and conditions of the product. We reserve the right to make changes to the information contained in this data sheet at any time. We recommend that you take a look at our website <a href="http://www.bornit.de">www.bornit.de</a> for information concerning any changes.</p>
<b>Packaging</b>	<p>Profidicht 1K Fix: ..... 32 litre bucket ..... 18 buckets each pallet</p>

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