



BORNIT® - Watertight Thick Coating



Waterproofing materials



- **Thick, strong, watertight –
Sealing buildings safely**



Foundation waterproofing made easy ... with the “thick coatings” of BORNIT®

1. Substrate priming

Any mineral substrates common in construction (plaster, brickwork, concrete, etc.) can be waterproofed with BORNIT®-Thick Bitumen Coating (KMB).

- The substrate must be free of ridges, smooth, clean, and free of separating substances. Slight residual moisture of the substrate is not a problem. Any recesses, surface defects, etc. are closed first (larger than 5 mm with BORNIT®-Sealing Mortar, smaller than 5 mm with thick bitumen coating).
- Principally, the substrate should be primed with BORNIT®-Basement Primer to produce an optimum bonding bridge for the thick coating.



2. Formation of a concave moulding

According to experience, most moisture penetration damages occur in the corner area between floor-slab and cellar wall. Therefore, BORNIT® developed a meltable bitumen profile for this problem zone, with which the concave moulding can be sealed quickly, flexibly, and securely.

- The long drying times are no longer applicable, and the subsequent waterproofing work with thick coatings, cold self-adhesive or weldable sheeting can take place immediately.
- A flame is simply applied to the 90°-side of the BORNIT®-Triangle Tape and the tape pressed into the groove. Once the first side has cooled off, the tape is uniformly heated until melting occurs and pressed into the molten pool. Blunt ends or corners are simply connected by melting.
- Subsequently, for edge melting, a flame is applied to the tape again. Done!

Alternatively, there is the possibility to form the concave moulding with BORNIT®-Repabit, a quick-drying, two-component bitumen repair compound.



3. Application of the thick coating

BORNIT®-Thick Coatings provide for secure and permanent waterproofing of buildings and have proven themselves over the years. All products have a general building authority test certificate and are manufactured according to the requirements of DIN 18195. They are solvent-free and thus environmentally safe.



- BORNIT®-1K (Thick Bitumen Coating)
... one component for immediate application without mixing. The high-quality additives (polystyrene and latex), provide for permanent flexible and crack-bridging waterproofing.



- BORNIT®-2K (Thick Bitumen Coating)
... is a fibre-reinforced two-component material. The waterproofing is particularly pressure-resistant and resilient. Therefore, also horizontal surfaces (basement floors, balconies, etc.) can be easily waterproofed.



- BORNIT®-2K Flex (Thick Bitumen Coating)
... is a polystyrene-filled two-component material. The thick coating is particularly easy to process, dries quickly, and provides for highly-flexible waterproofing against the hydrostatic load from the soil.



Processing

- Mixing -

BORNIT®-1K (Thick Bitumen Coating) can be processed directly from the package. For the two-component thick coatings, the powder component is continuously admixed with a slow-speed mixer to yield a homogenous, lump-free mass.

- Application -

Half of the required material is uniformly applied as the first layer with a scraper or smoothing trowel. In case of higher waterproofing requirements (according to DIN 18195 – Part 6), a BORNIT®-Glass Fabric is worked into this layer over the entire surface.

Depending on the load condition according to DIN 18195, the second layer is subsequently applied immediately after the first one or after sufficient drying of the first layer.

The required layer thicknesses depend on the hydrostatic load according to DIN 18195 – Parts 4 to 6 (see back page of the brochure).

The respective material demand is stated on the package.

- Protection -

Before filling the excavation pit, the waterproofing must be protected against damaging. Protective and drainage layers, however, must only be applied following complete thorough drying of the waterproofing layer.



Repair

For repairs at the thick bitumen coating as well as the waterproofing of buildings, the use of BORNIT®-Repabit is recommended. This is a fibre-reinforced, solvent-free, 2-component, bitumen-based repair compound. BORNIT®-Repabit is quick-drying.

BORNIT®-Repabit is available in a processing-friendly small package (3 kg).

Waterproofing of buildings with thick bitumen coating (KMB) – Important contents of DIN 18195 (2000-08)

DIN 18195 - Part 3: Requirements to the ground and working properties of materials

The substrate must be free of frost and free of separating substances. Edges must be bevelled, grooves rounded. The concave moulding can be formed with a 2-component thick bitumen coating. Surface defects and joints >5 mm have to be closed with mortar. Surface defects and joints <5 mm can be closed with waterproofing slurry or by applying a thick bitumen coating in a scraping manner. Priming has to be applied.

The application of the thick bitumen coating has to be carried out in two work steps according to the load condition with or without enforcement layers.

DIN 18195 - Part 4: Waterproofing against ground moisture and non-accumulating seepage water

The load condition known as non-pressing water so far (slightly permeable ground with drainage according to DIN 4095) is now called non-accumulating seepage water and the execution of waterproofing takes place like for the load condition ground moisture according to DIN 18195 – Part 4 of the new standard. Waterproofing for these load conditions can be executed with a thick bitumen coating with a dry layer thickness of 3 mm. The application of the two thick bitumen coating layers may take place immediately after one another. A fabric layer is not required.

DIN 18195 - Part 5: Waterproofing against non-pressing water

The load case non-pressing water exclusively refers to horizontal and slightly inclined surfaces as well as

to wall and floor surfaces in housing construction. For that, a distinction into moderate and high loads was made. Moderately loaded surfaces (e.g. balconies) can be waterproofed with a thick bitumen coating with a dry layer thickness of 3 mm and enforcement layers in critical areas (grooves, edges, etc.).

DIN 18195 - Part 6: Waterproofing against outside pressing water and accumulating seepage water

For the load case “accumulating seepage water”, waterproofing can be executed with a thick bitumen coating with a dry layer thickness of 4 mm and enforcement layers throughout. For waterproofing against pressing water (permanently pressing groundwater), thick bitumen coating is not specified in the standard. For waterproofing according to DIN 18195 – Parts 5 and 6, the first thick bitumen coating waterproofing layer must have dried sufficiently before the application of the second layer, so that it is not damaged by the application. The waterproofing layer principally has to be provided with a protective layer. This must only be applied after sufficient drying of the waterproofing. Furthermore, for waterproofing with a thick bitumen coating, according to DIN 18195 – Parts 5 and 6, the examination as well as documentation of wet layer thickness and thorough drying is required.

A comprehensive description and notes on the application of the BORNIT® products can be found in our data sheets.

Waterproofing against ground moisture and non-pressing water.

Waterproofing of structural elements against capillary-bound water present in the ground and transmittable by capillary forces, even contrary to gravity, as well as against not accumulating seepage water caused by precipitation for vertical and undercut structural elements. This only applies to highly permeable grounds or when a functional drainage is set up in compact soil.

Waterproofing against accumulating seepage water

Waterproofing against accumulating seepage water is waterproofing of buildings with foundation depths up to 3 m below top ground surface in slightly permeable ground without drainage, for which due to the type of soil and topography only stagnant water is expected. The lower edge of the basement level must be at least 300 mm above the dimensioning water level, determined over many years, if possible.



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