nexler® new generation of waterproofing


# NEXLER BITFLEX 1KP

## Thick-layer waterproofing compound (KMB) modified with polymers with a polystyrene filling

*Innovative technology, based on a fine-particle anionic emulsion*

## TECHNICAL DATA

| | |
|---|---|
| **Composition** | aqueous emulsion of asphalts, rubbers and performance additives, polystyrene filling |
| **Time interval between applying individual layers** | 6 - 7 h |
| **Resistance to rain** | after 6 - 7 h |
| **Bulk density** | 0,70 g/cm³ |
| **Watertightness** | class W2A |
| **Crack-bridging ability** | class CB2 |
| **Resistance to compression** | class C2B |
| **Reaction to fire** | class E |
| **Backfilling the excavation** | after 3 days, no later than after 3 months |
| **Durability of watertightness and reaction to fire** | passed |
| **Water resistance** | passed |
| **Flexibility at low temperature** | passed |
| **Dimensional stability at high temperatures** | passed |
| **Application temperature** | from +5°C to +30°C |
| **Consumption:**<br>- damp-proof insulation thickness of a bound coating 2 mm<br>- waterproof insulation (lagging water/flooding rainwater) thickness of a bound coating 3 mm<br>- waterproof insulation (pressurised water) thickness of a bound coating 4 mm<br>- scratch coating<br>- EPS, XPS board bonding | approx. 1,2 l/m²/mm<br>approx. 2,4 l/m²<br>approx. 3,6 l/m²<br>approx. 4,8 l/m²<br>1 - 2 l/m.²<br>1 - 1,5 l/m² |
| **Reference document(s)** | EN 15814:2011+A2:2014 |

## PROPERTIES

- Ready-to-use
- Very efficient
- Creates a coating resistant to high water pressure
- Polystyrene filling makes it easy to achieve the required insulation thickness
- For thick-layer application, up to 5 mm in 1 layer
- Forms an effective damp proofing insulation already in 2 mm of dry layer
- Eco-friendly, does not contain solvents or toxic substances
- Safe for use in contact with polystyrene
- Highly flexible, bridge-cracking
- Has a very good adhesion
- Resistant to substances naturally contained in the soil
- It can be applied at long intervals (after being opened and stored properly)
- Effective radon barrier


FINE-PARTICLE TECHNOLOGY | RESISANT TO HIGH WATER PRESSURE | THICK-LAYER | SOLVENT-FREE

## APPLICATION

- Vertical waterproofing and damp proofing of foundation and basement walls
- For waterproofing the horizontal offset of the foundation footing to ensure continuity of waterproofing
- Horizontal waterproofing and damp proofing under a foundation slab
- Protecting ground parts of the building
- For protecting building structure elements against ground moisture
- Bonding of EPS and XPS polystyrene boards
- Interlayer waterproofing e.g. on balconies (under screed)

ON THE FOUNDATIONS | SPRAY EQUIPMENT | TROWEL

## PACKAGING

**Poland**

- Packaging: 30 l, 1000 l
- Quantity per pallet:
  - 30 l - 18 pcs.

**Export**

- Packaging: 30 l, 1000 l
- Quantity per pallet:
  - 30 l - 18 psc.

## METHOD OF USE

### CONDITIONS OF USE

The temperature of the substrate and air during the works should be from +5°C to +30°C.

Works should not be carried out during precipitation and strong sunlight.

### SUBSTRATE PREPARATION

The surface must be properly prepared before applying **BITFLEX 1KP**. The substrate intended for product application must be bound, dry, seasoned, loadbearing, not frozen. If the substrate is contaminated with petroleum-based agents, these must be removed effectively. The surface should be cleaned mechanically, dust, tarnish, any loose pieces and layers, sharp protruding edges and impurities that worsen adhesion should be removed. If there are cavities in the substrate (honeycombing, gravel pockets and other unevenness), it should be repaired, filled and levelled. If they are less than 5 mm in size, (scratch) filling should be carried out; for larger cavities, a suitable levelling mortar should be used. **BITFLEX 1KP** can be used on a dry or slightly damp substrate. A damp substrate prolongs the setting time.

**BITFLEX 1KP** can be applied to existing coatings of dispersion bituminous masses. Prime the prepared substrate with a NEXLER BITFLEX Primer solution.

Filling (scratch) coating: Apply the compound (e.g. **BITFLEX 1KP**) to the primed substrate (NEXLER BITFLEX Primer) with the smooth side of a trowel and trowel it in the affected areas. Filling putty is not regarded as a coating waterproofing layer.

Edges and corners: The exterior right angles should be chamfered (bevelled), while the interior angles should be properly rounded by making facets. On mineral substrates, a facet can be made of mineral mortar e.g. NEXLER RENOBUD R 103 (radius 4 - 5 cm) or PMBC (KMB) compound e.g. **BITFLEX 1KP** (radius 2 cm). On bituminous substrates make a facet of PMBC (KMB) compound. A cat's tongue trowel is best suited for creating facets.

Walls made of small-gauge elements in buildings with a basements: On jointed masonry (e.g. concrete blocks), a levelling plaster should be applied. Prime the prepared substrate with a NEXLER BITFLEX Primer solution.

### PRODUCT CONTROL

Check the production date on the label before use. The product should not be incorporated beyond its shelf life. The product should not be objectionable (e.g. have lumps, fibres, discolouration) after opening. After mixing, the compound should be homogeneous and free of lumps and clumps resulting from under-mixing. Do not use a product that bears signs of freezing. The correct consistency of the product is not dry or rubbery. When properly mixed, the product forms a homogeneous coating when spread over the surface with a tool.

### PRODUCT PREPARATION

**BITFLEX 1KP** is a ready-to-use product. Before use, the product should be mixed until a homogeneous mass is obtained.

### APPLICATION METHOD

**Waterproofing of underground parts of buildings:** Depending on the water and ground conditions and the depth of the foundation of the structure, an appropriate thickness of the insulating layer should be selected. An according layer of **BITFLEX 1KP** is applied to the properly prepared and primed substrate using a trowel or suitable spraying equipment (with the spraying method, the thickness of a single layer applied should not exceed 3 mm). Waterproofing is recommended to be carried out in at least two working operations. Each operation should take place after the previous layer has dried. Particular care must be taken to ensure that the surfaces of the internal and external angles are thoroughly covered with the compound.

The coating should always be applied from the side of the wall that is exposed to water, so as to avoid negative hydrostatic pressure affecting the insulation. Where there are difficult water and ground conditions, it is advisable to infuse technical (mesh) fabric over the entire surface of the insulation as an extra precaution.

Carry out waterproofing after the facet has set (dried) completely. To ensure continuity of the waterproofing, the vertical waterproofing made of **BITFLEX 1KP** should be extended onto the horizontal insulation of the footing offset (primed bituminous felt insulation, sealing micro-mortar), maintaining an overlap of at least 10 cm.

The freshly applied coating must be protected from strong sunlight (e.g. by shading), flooding, rain and negative temperatures. Do not allow rainwater to penetrate the partition and go under the waterproofing layer from the substrate side.

Service penetrations: Any service penetrations, expansion joints or other areas exposed to uncontrolled cracks should be reinforced with technical fabric (mesh). It should be blended into the first layer of coating. Be sure to use cuffs to seal all types of installation penetrations. Sealing of installation passages with this product is only a supporting coating insulation of system seals (sleeves with flanges, sealing chains, bentonite cords), the use of which is necessary.

Backfilling the excavation: The time for the waterproofing to bind completely, allowing the trench to be backfilled, is approximately 3 days.

After binding, the waterproof coating should be protected against mechanical damage associated with backfilling the excavation. Therefore, it is recommended to use additional protection, if not in the form of waterproof thermal insulation boards, then PE, EPDM film or non-woven fabric. Dimpled foils should not be used to protect PMBC (KMB) compound due to the fact that dimples, under soil pressure, may locally press on the coating and damage it. The exception being profiled films with an integrated filtering non-woven fabric.

**Damp proofing of underground parts of buildings:** In the case of damp proofing, **BITFLEX 1KP** can be applied to the properly prepared and primed substrate in one layer. It is recommended that the thickness of the bonded coating be at least 2 mm.

**Waterproofing under a foundation slab:** When waterproofing underneath a foundation slab, the waterproofing should be carried out on a C20/25 (former B25) class base concrete. A separation layer of thermal insulation boards or, for example, PE film should be laid on top of the bound waterproofing layer, followed by a 4 cm concrete protective layer.

**Bonding of thermal insulation boards on foundation walls:** Apply thermal insulation boards after the waterproofing layer has fully set (dried). Apply **BITFLEX 1KP** compound in spots on polystyrene boards (10 - 12 palm-sized spots per a 0,5 m² board). Hydrophobized insulation boards should be sanded before bonding. Then wait approx. 15 mins (depending on the temperature conditions) before bonding the board. A sign that the waiting time was too long is a change in the colour of the compound from brown to black.

After the wait, the boards should be applied and firmly pressed against the levelled substrate. Begin bonding at the bottom of the excavation. Thermal insulation boards are recommended to be supported on the footing offset and, if this is not possible, to be supported during binding. The excavation can be backfilled after 3 - 7 days, after full bonding properties of the compound are obtained. When bonding thermal insulation boards in the plinth zone, it is recommended to attach them mechanically due to the possibility of non-standard loading of the wall - plinth, e.g. with a facade plate. Do not close the space between the polystyrene and the foundation wall tightly. During rain the unbound compound should be protected from rainwater by covering the gap between the polystyrene foam and the wall.

- **CONTROL OF PERFORMANCE**

Thickness of a layer should be checked by material consumption control on a dedicated surface. In addition, it is recommended to measure the thickness of the freshly applied sealing layer with special inspection plates, the measurement point should be filled with putty immediately.

After it has dried, a properly made coating should be a uniform, clean coating, without flakes and other defects. The coating should adhere closely to the primed substrate.

## TOOLS AND TOOL CLEANING

Low-speed stirrer, steel trowel, notched steel trowel, trowel.

Use pumps for spray application, e.g. WAGNER HC 970 or Inotec InoBeam M8 type.

Wash tools with water during work and after its completion, and wipe dry. If the product dries, clean with organic solvents or mechanically. Clean the spray equipment immediately after work, according to the equipment manufacturer's recommendations.

## STORAGE AND TRANSPORT

The shelf life of the product is 12 months from production date specified on the packaging. Store in dry and cool rooms at temperature above +5°C, in tightly sealed, original packaging. The product must be protected from heat and direct sunlight.

## NOTES

Works should be carried out in accordance with technical conditions, manufacturer's instructions, health and safety standards and regulations.

For information on how to deal with symptoms of disease, allergies or irritation of the skin or eyes, please refer to the Safety Data Sheet (www.nexler.com).

After works are finished, hand over the remaining content of the product and the container to authorised companies.

## GENERAL RECOMMENDATIONS

Technical data and information on the method of use are given for a temperature of 23°C ± 2°C and a relative air humidity of 55%. In other conditions, the setting (drying) time may change significantly.

The consumption of the product given in this sheet depends on the preparation of the substrate.

Do not use for tar materials. Do not use to polystyrene-polystyrene joints.

It is not recommended to use **BITFLEX 1KP** on building elements exposed to negative water pressure, as this may lead to separation of the insulating layer or formation of blisters on it. In places where such water pressure is expected to occur, a sealing layer of AQUAMINERAL 1K Ultra sealing micromortar should be applied.

## SAFETY INFORMATION

May cause an allergic skin reaction. If medical advice is needed, have product container or label at hand. Keep out of reach of children. Wash hands and exposed parts of the body thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Dispose of contents/container to according to the instructions of the manufacturer or person authorized to dispose of waste.

## IMPORTANT INFORMATION

Please refer to the detailed conditions of use of the product before use.

We guarantee the quality of our materials as part of our terms of sale and delivery. For buildings with special requirements that are not covered by this manual, we provide our Customers with our own professional advisory service.

The manufacturer has no influence on the improper use of the material, its use for other purposes or under conditions other than those described above. The guarantee only covers the quality of the delivered product. The correct and therefore effective use of the product is not subject to our control.

Neither the manufacturer nor his authorized representative may be held liable for any loss incurred as a result of improper use or storage of the product.

Employees of the company are authorized to provide technical information only and solely in accordance with this Technical Data Sheet. Information other than that contained in this sheet should be confirmed in writing. If you have any doubts, consult the manufacturer.

Once we have issued a new Technical Data Sheet, this manual is no longer valid.

## CONTACT DETAILS

NEXLER sp. z o.o.
Łużycka 6, 81-537 Gdynia, Poland
tel.: +48 58 712 94 44
www.nexler.com
e-mail: dt@nexler.com

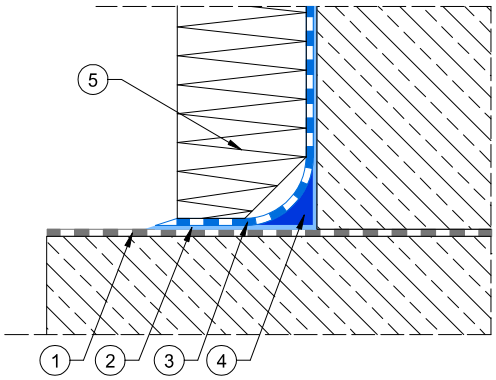
## ISSUE DATE

This Technical Data Sheet was issued on 04.04.2025.

Once we have issued a new Technical Data Sheet, this one is no longer valid.

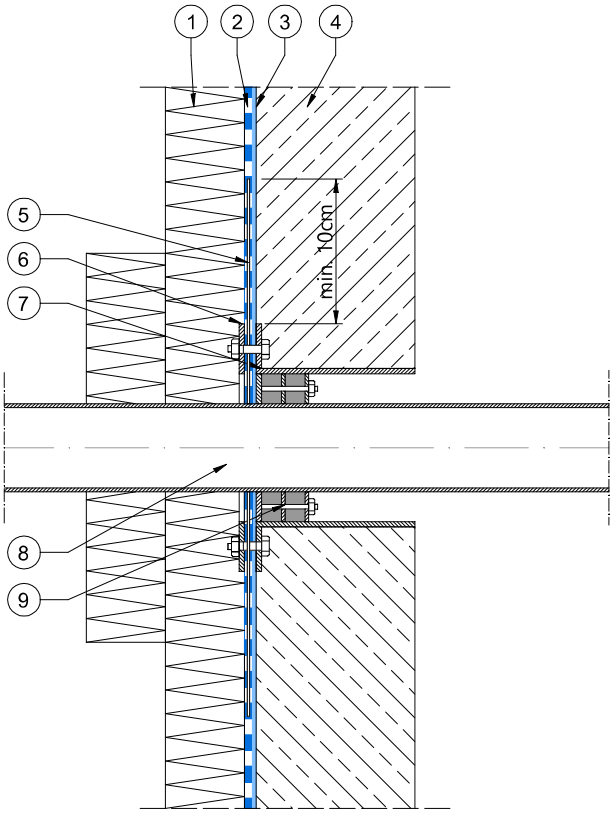
## DETAILS

**Detail of footing and foundation wall connection-waterproofing**




1. Horizontal insulation made of bituminous felt
2. Priming layer of NEXLER BITFLEX Primer
3. Waterproofing **NEXLER BITFLEX 1KP**
4. A facet made of **NEXLER BITFLEX 1KP** mass with a radius of 2 cm
5. EPS and XPS polystyrene boards, bondedby **NEXLER BITFLEX 1KP**

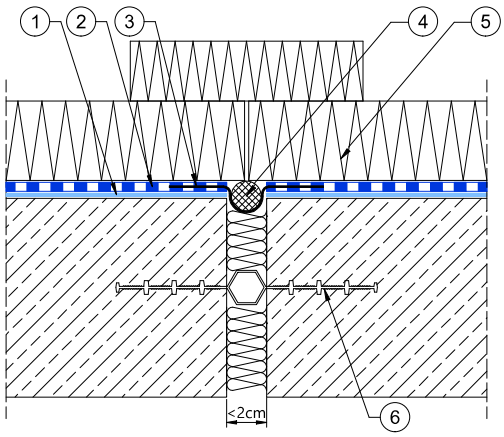
**Detail of pipe passage through foundation wall - waterproofing**




**NOTE:** Adjust the thickness of the waterproofing layers to the existing soil and water conditions

1. EPS and XPS polystyrene boards, bonded by **NEXLER BITFLEX 1KP**
2. **NEXLER BITFLEX 1KP** waterproofing
3. Priming layer of NEXLER BITFLEX Primer
4. Foundation wall
5. Sealing sleeve
6. Movable flange
7. Fixed flange
8. Installation pipe
9. Clamping seal

**Expansion joint detail - waterproofing insulation**




1. Priming layer of NEXLER BITFLEX Primer
2. Waterproofing **NEXLER BITFLEX 1KP**
3. NEXLER Sealing Tape
4. NEXLER Expansion Cord
5. EPS and XPS polystyrene boards bonded by **NEXLER BITFLEX 1KP**
6. Sealing insert