BESAPLAST® Kunststoffe GmbH

BESAMEMBRAN

Pre-Applied Bonded Waterproofing system for reinforced concrete structures

Product Data Sheet (PDS)



BESAPLAST® Kunststoffe GmbH

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1. INTRODUCTION

1.1 Subject of the Product Data Sheet (PDS)

This Product Data Sheet (PDS) specifies the requirements for execution and acceptance of waterproofing works on structures using the three-layer, permanently concrete-bonded polymer membrane Besamembran, including ancillary materials.

The PDS additionally defines:

- Requirements for execution of construction works,
- Performance requirements for construction materials, in particular material properties,
- Requirements concerning application methodology and assessment of proper execution, including determination of the scope of works.

1.2 Scope of Application of the PDS

This Product Data Sheet forms the basis of tender and contract documentation for ordering and execution of the works described in Section 1.1. This means that the person who prepares the project documentation and project-specific details in accordance with the detailed technical specifications for the execution and acceptance of the construction work may use this product data sheet in whole or in part, and may make changes, additions, deletions or supplements – in accordance with the work specified in the project, the client's requirements and the specific conditions of execution. These adjustments are necessary in order to clearly define the standard and quality of the work.

1.3 Scope of work within the scope of the product data sheet (PDS)

The work described in the specification covers all activities that enable and aim to seal external or internal non-deformable concrete substrates, horizontal and vertical surfaces with a membrane that adheres permanently to the concrete. The scope of application of the material includes, among other things, the sealing of the following elements: floor slabs, walls, vaults, civil engineering elements including tunnels, and other structures and parts thereof.

2. MATERIALS

2.1 Besamembran

Besamembran is a three-layer composite polymer membrane consisting of a robust polymer layer laminated on one side with a polyester fleece, designed to mechanically bond with fresh concrete.

The membrane forms a continuous and full-surface bond with the cast concrete, preventing lateral water migration between structure and membrane. In addition to waterproofing, it provides a barrier against gases such as radon, methane and carbon dioxide.

Product Characteristics

Essential Characteristics	Unit	Requirement
Visible defects		None
Length	m	25 (-0 / +5%)
Width	m	1,50 (-0 / +1%)
Straightness	mm	<= 30/10 linear m
Thickness	mm	1,300 (±5%)
Mass per unit area	kg/m²	1,150 (±5%)
Watertightness to DIN EN 1928		≥ 5,0 bar
Resistance to static loading DIN EN 12730: Method B	kg	≥ 20
Impact resistance on hard substrate to DIN EN 12691: Method A	mm	≥ 300 horizontal ≥ 150 vertical

2.1.1 Double-sided adhesive AAP40H tape

Double-sided adhesive tape manufactured from resin-modified rubber. Used for longitudinal bonding of membrane sheets and securing overlaps to vertical substrates (concrete, timber, steel). Equipped with a removable silicone release film, which must be removed after positioning. Applied in the fleece-free zone of the membrane.

2.1.2 AAP150-tape

Tape for creating cross joints, cut edges and details, equipped with a removable silicone film that must be removed before bonding to expose the self-adhesive butyl strip. The APP150 tape is bonded to the membrane layer. The APP150 tape must be free of holes, creases and damage. This is checked by visual inspection.

2.1.3 AAP10/7-sealing cord

A tape with a cross-section of 10 mm / 7 mm made of resin-modified rubber, for additional sealing of areas such as: membrane ends under aluminium rails, pipe penetrations through the membrane, sealing of rods and cables, connections with uneven surfaces, etc.

2.1.4 EPDM flange for sealing pipes, tubes, and round penetrations

The EPDM flange BesaCollar must be used to properly seal pipes, cables and all penetrations through the concrete slab. The diameter of the flange opening must be selected so that the diameter of the pipe or penetration is 35 mm smaller than the diameter of the flange opening. The vertical connection to the pipe or conduit must be secured mechanically with a clamp. The flange is connected to the Besa membrane using butyl tape or APP150 tape. Only the use of BesaCollars ensures a secure seal around pipes, cables and round penetrations. The flange ensures a tight connection both with the vertical surfaces of the pipe or cable and with the horizontal surfaces of the Besa membrane.

2.2 Liquid sealant based on a bitumen-rubber or butyl compound.

Highly plastic, easily spreadable waterproofing based on modified bitumen or butyl for permanent waterproofing and protection of components in contact with the ground, such as cellars, buildings without cellars, foundations, floor slabs, joints, pipe penetrations, etc., against damp substrates and rising water. It is also used to create protective, drainage and insulation layers.

Properties:

Based on modified bitumen and butyl compound technology, this liquid sealant combines excellent joint sealing properties typical of bitumen emulsions. The recommended consumption is approx. 2.3 kg/m^2 for a dry layer thickness of 1.5 mm and filling joints ≤ 5 mm. The solvent-free liquid sealant can be used without priming and adheres very well to damp substrates. It ensures continuous sealing on curved or irregular surfaces as well as on openings and penetrations in installations. Among other things, it is used to seal difficult transitions on concrete projections of the floor slab, to reinforce corners, to reseal anchor holes, small cable penetrations and penetrations by mounting brackets, etc.

3. EQUIPMENT

At the start of the work, the contractor should have the following equipment and tools at their disposal:

- for substrate preparation:
  - Hammers, wire brushes, bricklaying tools for substrate repair
- for laying the waterproofing:
  - Knives, welding equipment, measuring tapes, strips, rollers
- for applying the sealant:
  - Spatula, roller

Immediately after processing the materials, tools and equipment must be cleaned with solvent. Hardened materials can only be removed mechanically.

4. TRANSPORT



Seed membrane materials are packaged and delivered in cartons, sacks and containers. They can therefore be transported in any closed means of transport whose size is appropriate for the load quantity. The load should be protected from moisture. Liquid materials packed in buckets and containers must be protected from freezing. During storage and transport, the materials must be protected from weather conditions and damage.

5. INSTALLATION

5.1 Besamembran horizontal

The building control engineer approves the implementation and construction schedule submitted by the contractor, which takes into account all conditions under which the waterproofing work will be carried out.

Compliance with documentation

The waterproofing must be carried out in accordance with the approved project documentation. Any deviations from the project documentation that are made with the consent of the planner must be documented in the construction log and confirmed by the construction supervisor or substantiated by equivalent evidence. The use of other auxiliary materials is permitted, provided that they achieve the same effect and have been approved by the construction supervisor and the planner.

Conditions for laying the waterproofing

Sealing work must be carried out in good weather conditions. It is not permitted to carry out the work in rain, immediately after precipitation or in high humidity conditions that cause condensation. The sealing work must be carried out very carefully and by trained personnel. During the execution of the sealing work on the construction site, only the technological traffic required for this work is permitted. In the areas where this traffic takes place, the seal must be protected particularly carefully against damage. Other vehicle traffic is not permitted.

5.1.1 Surface preparation

Proper preparation of the substrate is essential for creating a dense horizontal waterproofing layer. The substrate must be level and smooth, free of interruptions and unevenness. Concrete, dimpled membranes or a well-compacted layer of sand can serve as a substrate for waterproofing. There must be no loose aggregate or sharp protrusions on the surface of the waterproofing substrate. The surface does not have to be dry, but standing water must be removed. The waterproofing substrate should have a suitable slope, be dimensionally stable and clean.

5.1.2 Horizontal installation of the Besamembran

The Besamembran membrane must be laid in strips with overlapping and covered with APP150 tape where necessary (see drawing P-01). The individual strips are joined lengthwise by gluing them together with APP40H double-sided adhesive tape (see drawing P-02). An alternative method for joining the Besamembran is hot air welding (see drawing P-03). When unrolling, the strips must be carefully pressed down with a roller to ensure complete adhesion and continuous watertightness between the layers. Without additional measures, Besamembran can be laid at temperatures of –5 °C and above. To facilitate installation at low temperatures and high humidity, the edges of the rolls and the adhesive strip on the tape can be gently warmed with a stream of warm air. This removes moisture and condensation, improving initial adhesion.

5.1.3 Besamembran

Roll out the membrane with the inactive layer facing the substrate. To facilitate installation, the membrane can be laid in cut strips. The end overlaps should be staggered to avoid layering of the layers. The subsequent strips must be laid so that the overlap width along the marked edge on the previous strip is 6 cm. All work must be carried out in such a way that the underside of the strip to be laid is clean, dry and dust-free before the overlap is created. When bonding adjacent strips, apply a strip of APP40H double-sided adhesive tape and remove the removable protective film from the overlap. The bonding should be carried out without creases or wrinkles over the entire surface.

5.1.4 Membran temperature

The Besamembran must be checked before laying the reinforcement, erecting the formwork and concreting. If the waterproofing is damaged, remove any dust and dirt from the damaged area and clean it with a damp cloth. Once the surface has dried, apply a patch of APP150 tape or fill the area with a rubber-bituminous or butyl-based sealant.

5.1.5 Concrete installation

Before starting reinforcement work, the quality of the fleece layer integrated with the membrane must be checked across the entire membrane surface. The concrete must be carefully poured and compacted so as not to damage the membrane. The concrete mixture is applied directly to the finished waterproofing system. The mixture should have a consistency that allows the cement paste to thoroughly penetrate the structure of the fleece in order to create a good bond between the waterproofing and the concrete. The concrete must be properly installed, compacted and treated. The insulated reinforced concrete structure must be constructed in accordance with the applicable standards with a minimum amount of reinforcement. The element should be made of concrete C20/25 to C40/50 of consistency class S3 to S4. Before concreting the foundation slab, contaminants should be removed from the Besamembrane, e.g. by washing with pressurised water (remove standing water afterwards) or with compressed air..

5.1.6 Shelling

The membranes can be used on temporary formwork, e.g. at the edge of slabs, in lift shafts, etc. After concreting, the formwork may only be removed once the concrete has reached sufficient compressive strength to ensure proper adhesion of the Besamembrane to the surface. It is recommended that the concrete achieve a minimum compressive strength of 10 N/mm^2 before removing the formwork supporting the Besamembrane. Premature formwork removal can lead to loss of adhesion between the membrane and the concrete. It can be assumed that a concrete mix with a specified final compressive strength of 40 N/mm^2 will generally require 6 days of curing at an ambient temperature of 4 °C or 2 days at 21 °C to achieve the above-mentioned minimum compressive strength.

5.2 Besamembran vertical

5.2.1 Surface preparation

Vertical sealing walls – Concrete, plywood, plastic panels or other materials that ensure a flat surface for the sealing membrane must be used to support the sealing membrane and clad the sealing wall. Levelling elements must fit together precisely to ensure adequate support. They must not deviate more than 12 mm from the intended alignment.



5.2.2 Vertical installation of the Besamembran

The membrane must be mechanically fastened vertically using suitable fasteners for the respective substrate. The membrane can be laid in strips of any length. The upper edge of the membrane must be fixed with a strip or mechanically fastened 50 mm below the upper edge. The fasteners can be driven in the non-fleece area before creating the overlap with the APP40H butyl tape. This ensures that the membrane is laid flat and that the overlaps are well connected. After applying the APP40H butyl tape to the non-fleece strip, the removable film layer must be removed immediately. All work must be carried out in such a way that the underside of the membrane to be laid is clean, dry and free of dust before the overlap is created. Press firmly to ensure a seal against water penetration. Roll ends and cut edges must be joined with an overlap of at least 75 mm. The surface must be cleaned of dust and dirt with a damp cloth.

After drying, lay the APP150 tape so that the overlap is exactly in the middle of the tape, then press down firmly. Remove the removable protective film from the tape (see, for example, drawing P-01). When laying Besamembran on surfaces where the formwork is to be removed later, or if stronger securing of the overlap is required, the exposed overlap edges can be bonded with APP40H butyl tape. To seal openings for pipes, piles, lighting system cables, shafts, etc., cut the membrane to size and press it firmly against the pipe passing through the wall to create a tight connection. Then select an EPDM flange with a hole diameter that matches the pipe or passage diameter. The flange is bonded to the membrane with APP40H or APP150 tape and pressed firmly with a roller.

5.2.3 Installation of the Besamembran on an existing wall

Alternatively, the Besamembran sealant can be applied to a suitably prepared concrete structure, e.g. a wall. The materials to be bonded must be dry, and the concrete must be free of loose particles, dust and grease. Then carefully spray the contact adhesive onto both surfaces to be bonded. The ideal distance

between the substrate and the spray can is 30 cm. Apply the adhesive in strips, avoiding overlap where possible. After 3 to 4 minutes, join both surfaces together and press or roll them firmly. If sprayed with overlap, the drying time must be at least doubled. For very porous substrates, check whether there is sufficient contact between the two adhesive layers. Apply an additional layer of adhesive if necessary. The membrane strips are joined by hot air welding or by means of double-sided APP40H tape / APP150 tape in accordance with drawings P-01, P-02, P-03.

5.3 Liquid sealant based on bitumen or rubber or butyl compound

The use of liquid sealants based on modified bitumen or butyl compounds is recommended for sealing joints, reinforcing corners and small penetrations for cables, etc. To apply the sealant, prepare the liquid sealant according to the manufacturer's instructions on the packaging. The liquid sealant has good adhesion to both primed and unprimed concrete as well as to dry metal surfaces.

- The Besamembran can be excellently bonded to self-adhesive bituminous waterproofing membranes based on solvents, bituminous aqueous dispersions and other compatible systems. After removing the formwork, the anchor points must be additionally sealed, either by sticking on a patch of APP150 tape or by applying a suitable rubber-bituminous sealant (from +5 °C). In winter conditions down to –5 °C, a suitable polymer-bituminous sealant must be used.
- The fastening clips must also be sealed with a suitable rubber-bituminous sealant (from +5 °C). In winter conditions down to –5 °C, a suitable polymer-bituminous sealant must be used..
- On concrete projections of the floor slab, waterproofing must be carried out using a suitable rubber-bituminous sealing compound (from +5 °C). In winter conditions down to –5 °C, a suitable polymer-bituminous sealant must be used. Alternatively, a self-adhesive membrane can be applied to the primed substrate with a 10 cm overlap on the previously laid Besamembrane..

5.4 AAP150-tape

Concrete surfaces must be clean and free of contaminants. All concrete residues and protrusions must be removed. On uneven concrete surfaces, apply a 10 mm thick layer of swellable sealant with a cartridge gun as a base for the swelling tape. The swelling tape must be fastened with 40–50 mm long masonry nails and washers with a diameter of 20 mm. Dowels with 6 mm nuts and washers with a diameter of 20 mm can also be used. The fixing dowels should be spaced at a maximum of 300 mm apart. The MS polymer adhesive should be applied to clean, prepared surfaces.

6. QUALITY CONTROL OF WATERPROOFING WORKS

The materials, substrate and layers applied must be inspected in accordance with the diagram below. A separate report must be drawn up for each of these activities, or a formal entry must be made in the site logbook.

6.1 Tests before the start of construction work

Materials:

The conformity of the delivered materials with the DTS must be checked. The usability data, the tightness of the containers and the conformity of the weight specifications must be checked..

Substrates:

The substrate for the waterproofing must be checked for compliance with the requirements (cleanliness, load-bearing capacity, repair of defects).

6.2 Inspections during construction work

All layers and elements are subject to testing:

- the proper execution of the waterproofing,
- the proper execution of the connections between the individual sealing membranes,
- the proper execution of the details on the components to be sealed,
- the proper installation of the inserts and sealing tapes.

6.3 Tests after completion of construction work

The finished sealing layer can also be examined using destructive testing methods, whereby samples are taken from the substrate surface and their thickness is measured in the laboratory..

7. Measurement

The units of measurment are:

- 1 m^2 – for waterproofing,
- 1 lfm – for expansion joints and construction joints,
- 1 piece – for detailed work and finisching touches.

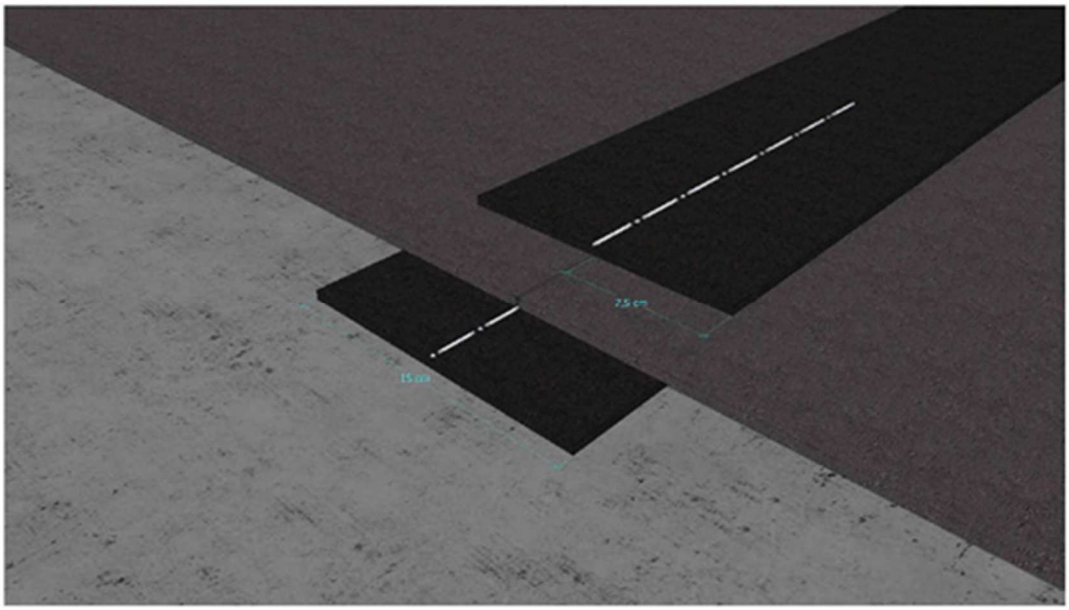
8. ACCEPTANCE

The work shall be deemed to have been carried out properly if all the technical processes specified in point 6 have been assessed positively. An acceptance report shall be drawn up on the acceptance work and attached to the acceptance documentation for the construction project, which shall include the execution of the waterproofing layer, the securing of the working joints, expansion joints and penetrations through the waterproofing..

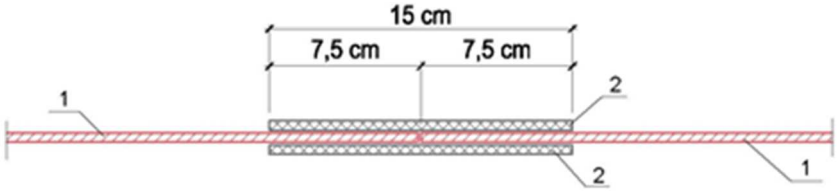
9. BASIS OF PAYMENT

Unless otherwise specified in the contract, each square metre of waterproofing, each running metre of expansion joints and working joints, each square metre of repairs and each additional waterproofing measure (piles, rods, pipes) shall be paid for at the prices offered by the contractor and accepted by the client. The price also takes into account overlaps, waste and material losses.

EXAMPLES OF APP JOINT EXECUTION

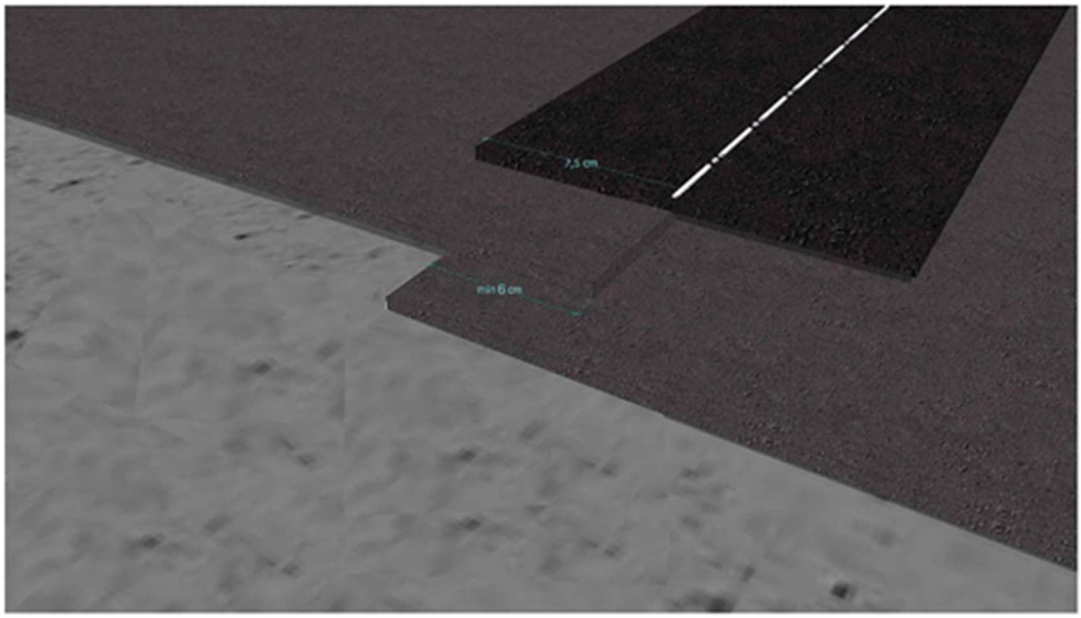


Drawing 1. CROSS-CONNECTION OF MEMBRANE STRIPS – VIEW

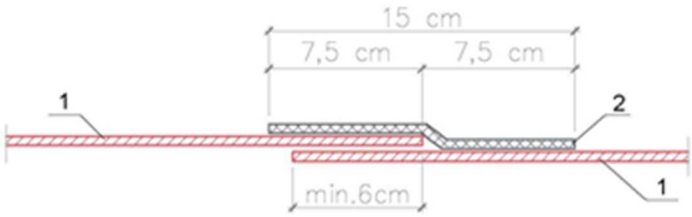


Drawing 2. CROSS-CONNECTION OF MEMBRANE STRIPS – CROSS-SECTION

1 Besamembran-waterproofing membrane
2 APP150-tape

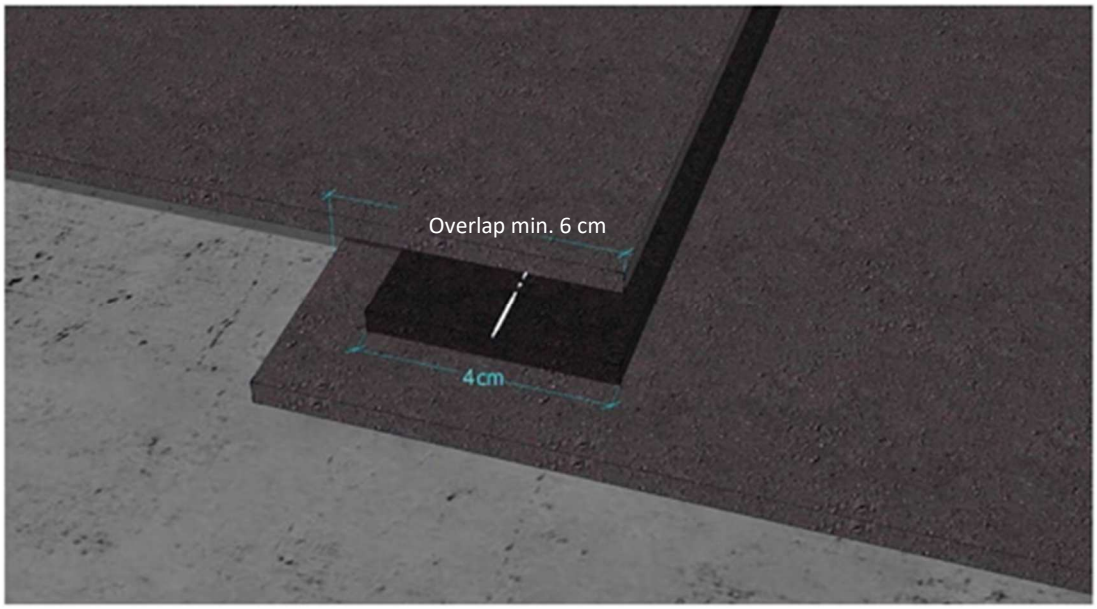


Drawing 1. CROSS-CONNECTION OF MEMBRANE STRIPS – VIEW

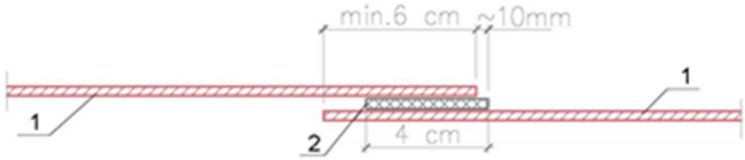


Drawing 2. CROSS-CONNECTION OF MEMBRANE STRIPS – CROSS-SECTION

1. Besamembran-waterproofing membrane
2. APP150-tape

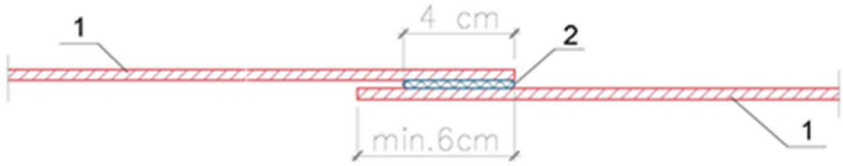


Drawing 1. LONGITUDINAL CONNECTION OF MEMBRANE STRIPS – VIEW

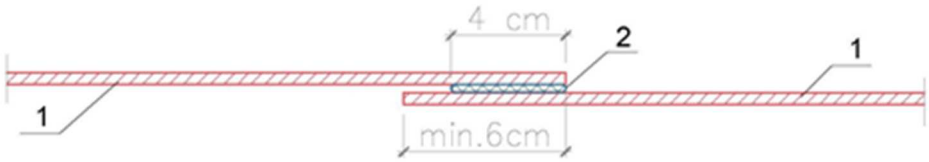


Drawing 2. LONGITUDINAL CONNECTION OF MEMBRANE STRIPS – CROSS-SECTION

1. Besamembran-waterproofing membrane
2. Tight overlap with 4 cm wide double-sided butyl tape

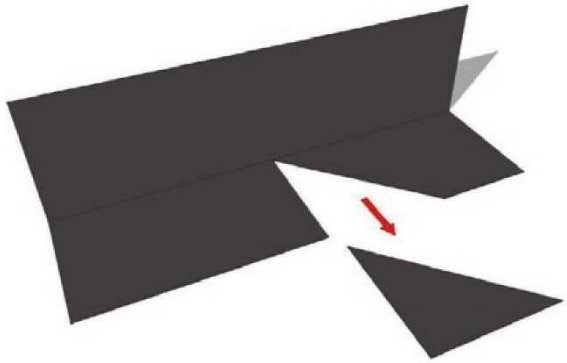


Drawing 1. HOT AIR CROSS CONNECTION OF MEMBRANE STRIPS – CROSS-SECTION

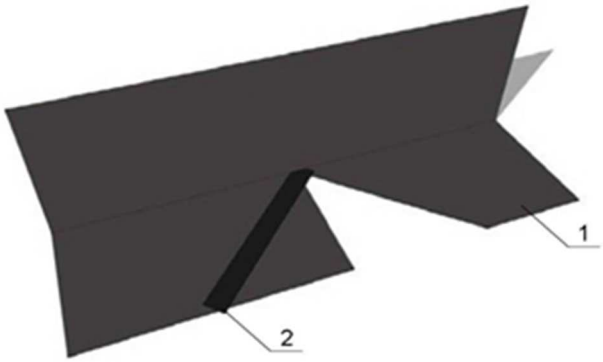


Drawing 2. HOT AIR LONGITUDINAL JOINT OF MEMBRANE STRIPS – CROSS-SECTION

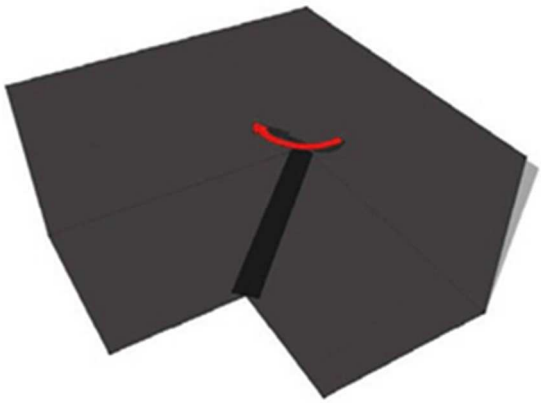
1. Besamembran-waterproofing membrane
2. Seam width 4 cm



Drawing 1. STEP 1 – CUTTING OUT A RIGHT-ANGLED TRIANGLE



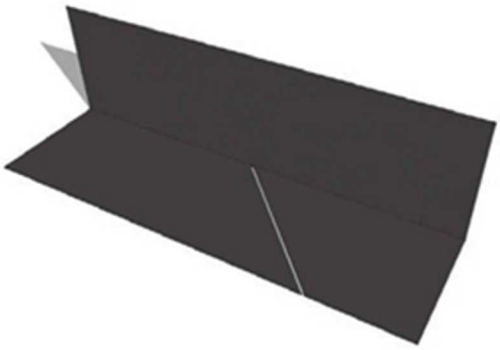
Drawing 2. STEP 2 – STICKING THE APP150 TAPE AT A 45° ANGLE



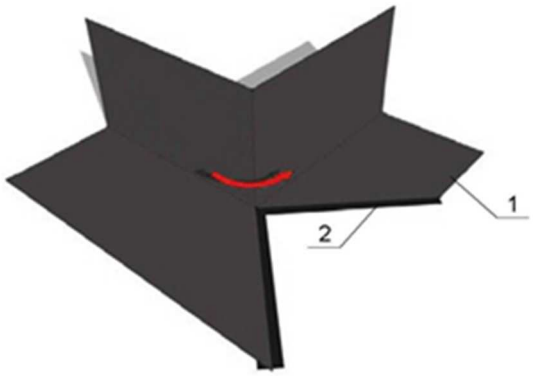
Drawing 3. STEP 3 – FOLDING THE MEMBRANE CORNER AND STICKING THE APP150 TAPE ONTO THE JOINT

1 Besamembran-waterproofing membrane
2 APP150-tape

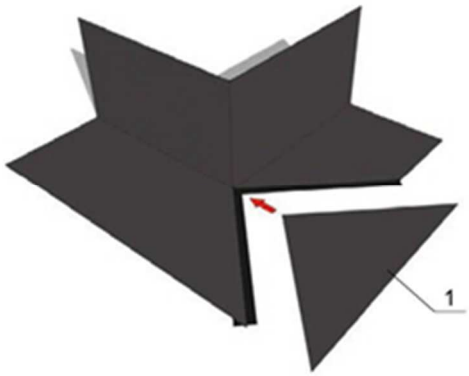
ATTENTION: The corner connections must be made in accordance with drawing P-01 – Cross connections.



Drawing 1. STEP 1 – CUTTING THE MEMBRANE



Drawing 2. STEP 2 – FOLDING THE MEMBRANE AND BONDING WITH APP150 TAPE

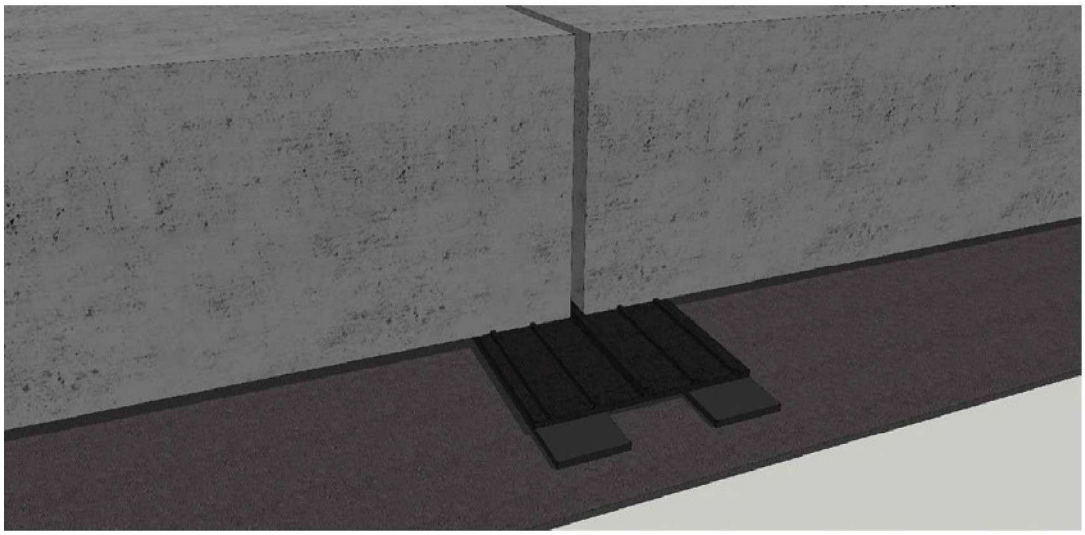


Drawing 3. STEP 3 – GLUEING THE TRIANGLE FROM THE APP MEMBRANE AND STICKING THE APP150 TAPE ON THE JOINTS

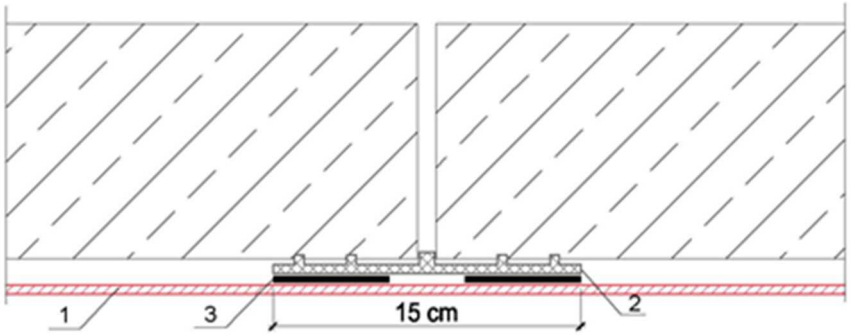
1 Besamembran-waterproofing membrane
2 APP150-tape

ATTENTION: The corner connections must be made in accordance with drawing P-01 – Cross connections.

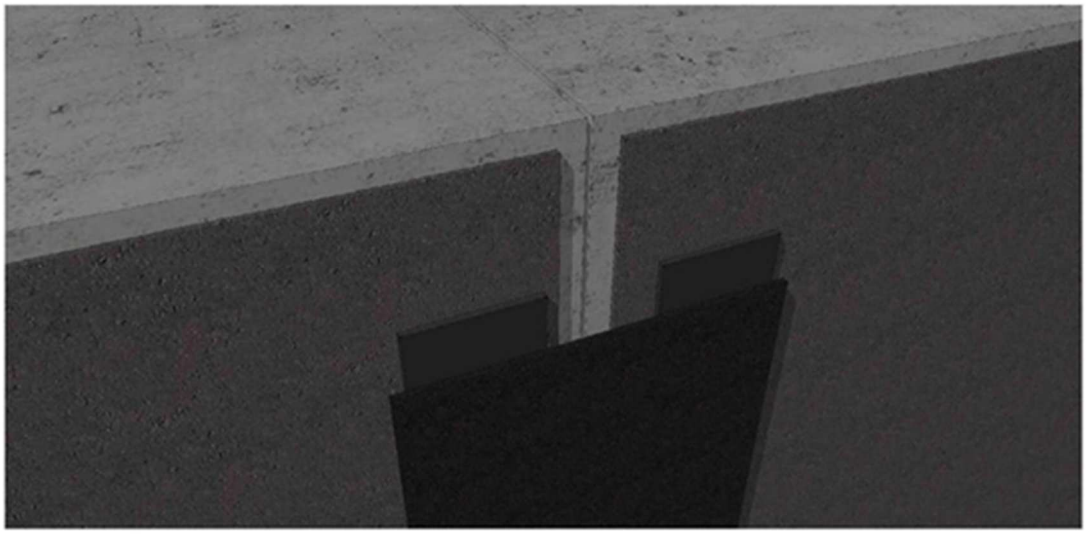
P-05	**EXECUTION OF THE OUTER CORNERS**	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY



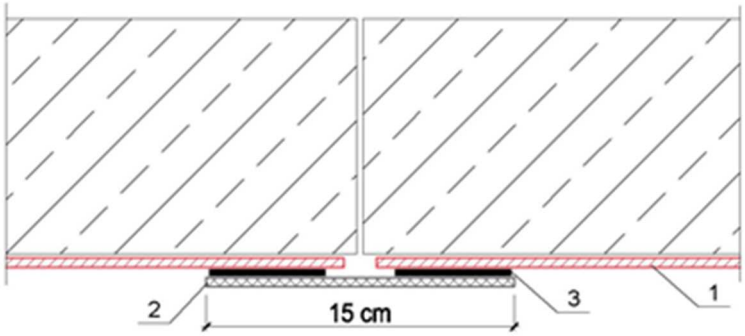
Drawing 1. SEALING THE EXPANSION JOINT – VIEW



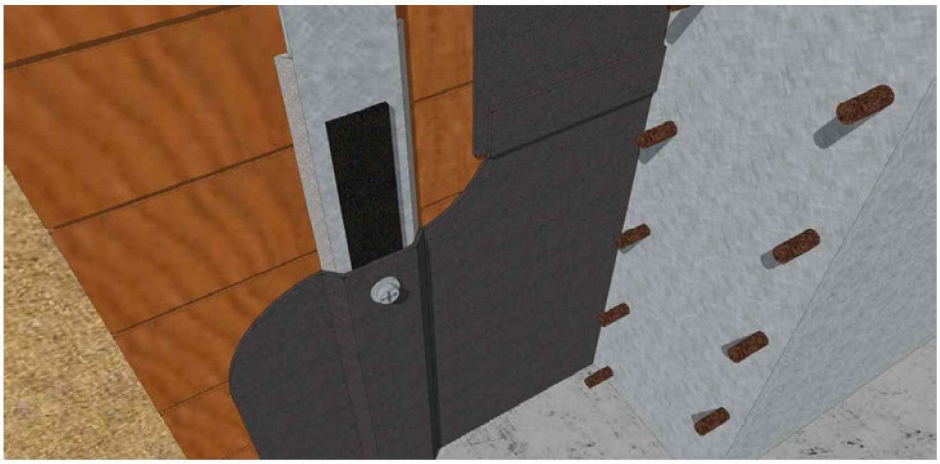
Drawing 2. SEALING THE EXPANSION JOINT – CROSS-SECTION



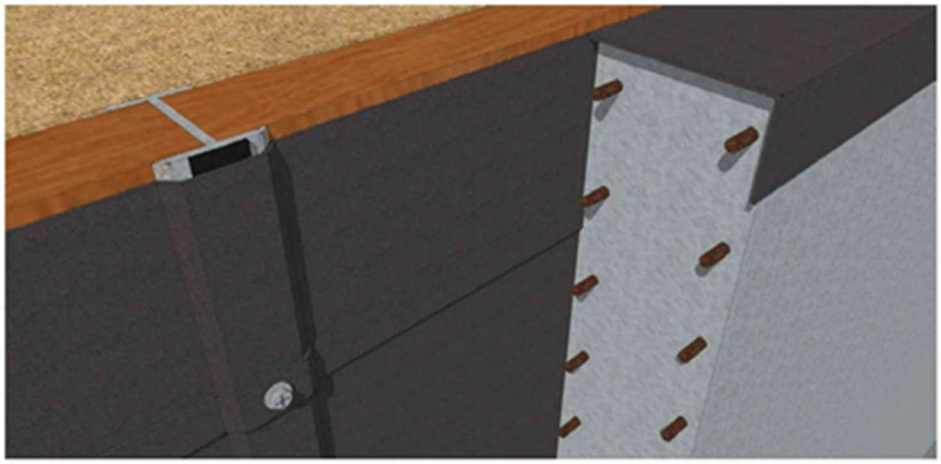
Drawing 1. WORK JOINT SEALING – VIEW



Drawing 2. WORK JOINT SEALING – CROSS-SECTION



Drawing 1.1. SEALING ON THE BERLIN SHORELINE – LOWER AREA

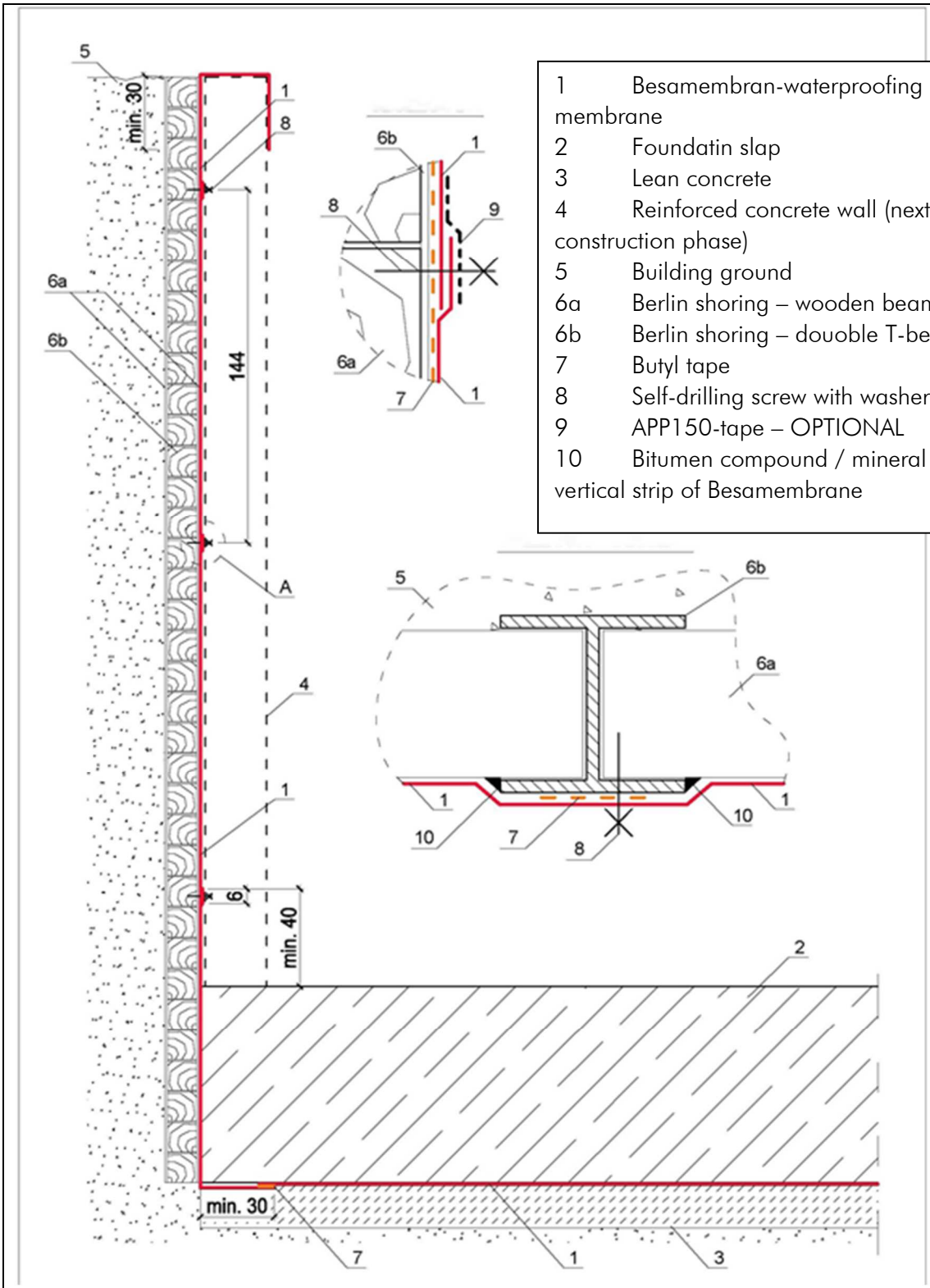


Drawing 1.2. SEALING ON THE BERLIN SHORELINE – UPPER AREA



Drawing 1.3. SEALING ON THE BERLIN SHORELINE – VIEW

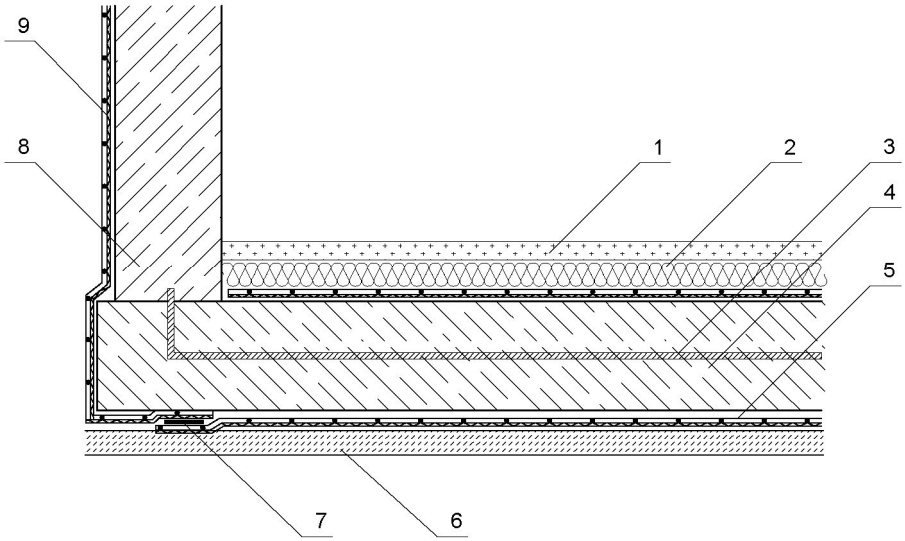
BV-01	**CONNECTING THE SEALING OF THE FOUNDATION SLAB TO THE WALL SEALING; INSTALLING THE MEMBRANE ON THE BERLIN SHORING - VIEWS -**	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY



1 Besamembran-waterproofing membrane
2 Foundatin slap
3 Lean concrete
4 Reinforced concrete wall (next construction phase)
5 Building ground
6a Berlin shoring – wooden beams
6b Berlin shoring – douoble T-beams
7 Butyl tape
8 Self-drilling screw with washer
9 APP150-tape – OPTIONAL
10 Bitumen compound / mineral filler or vertical strip of Besamembrane

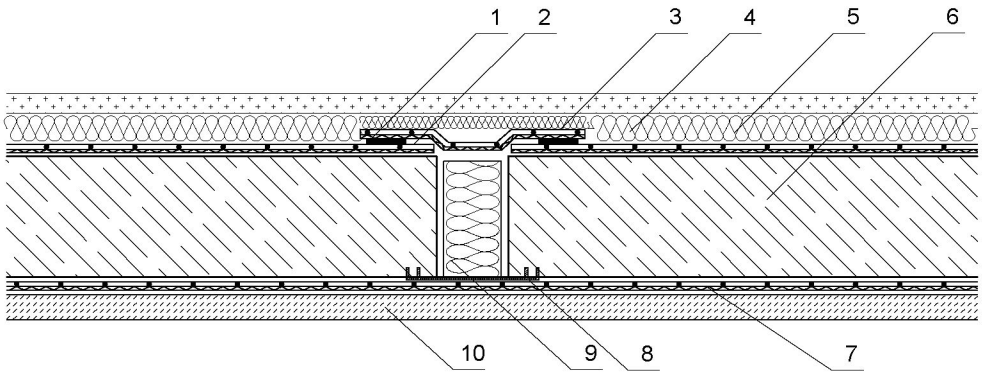
BV-02	CONNECTING THE FOUNDATION SLAB WATERPROOFING TO THE WALL WATERPROOFING, INSTALLING THE MEMBRANE ON THE BERLIN SHORING **- DETAILS -**	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY

EXAMPLE CONSTRUCTION DETAILS WITH BESAMEMBRAN



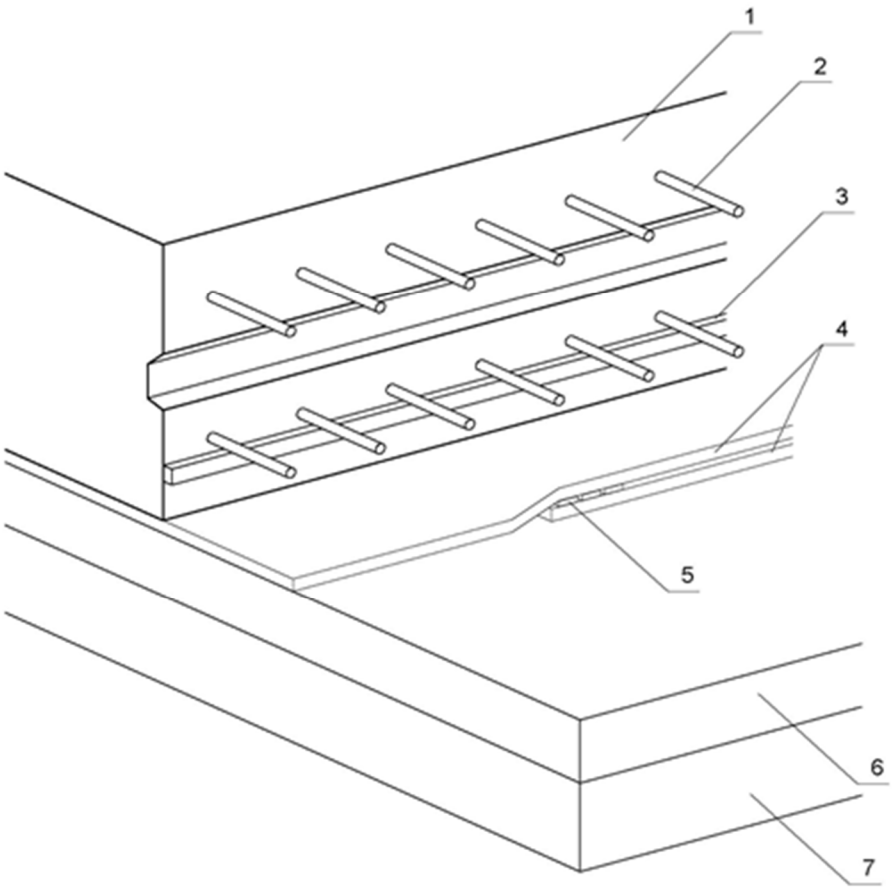
1 Floor layers
2 Thermal insulation
3 Seal
4 Base layer
5 Besamembran-waterproofing / BesaPro-moisture protection
6 Lean concrete
7 Seam
8 Foundation wall
9 Besamembran-waterproofing/ BesaPro-moisture protection

F-01	SEALING THE FOUNDATION SLAB – TRANSITION TO THE WALL	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY



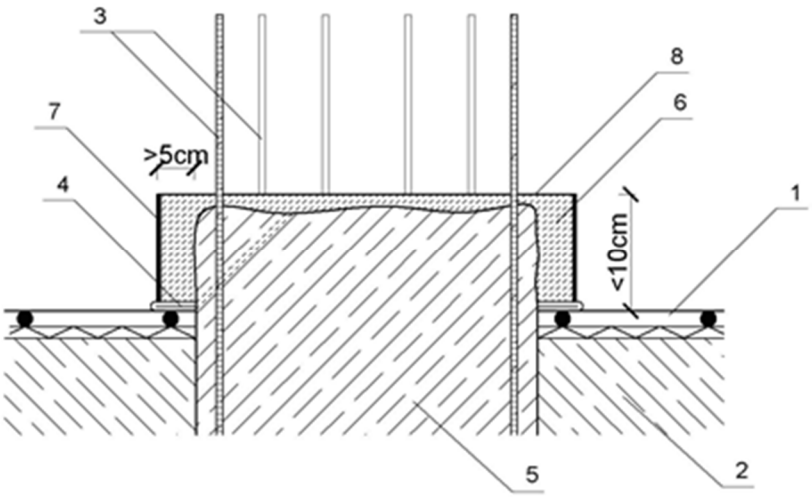
1 Seam / butyl tape
2 Besamembran-waterproofing / Besamembran-moisture protection
3 Joint seal
4 Thermal insulation
5 Floor layers
6 Base layer
7 Besamembran-waterproofing / BesaPro-moisture protection
8 Profile seal
9 Polystyrene
10 Lean concrete

F-02	FOUNDATION SLAB – EXPANSION JOINT TRANSITION	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY

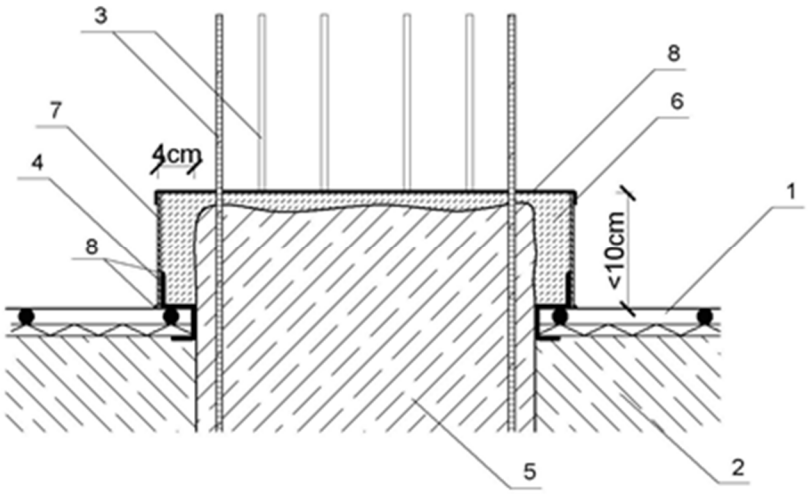


1 Foundation slab, min. 15cm
2 Reinforcement
3 Seal
4 Besamembran-waterproofing/ BesaPro-moisture protection
5 Seam / Butyl tape
6 Lean concrete
7 Consolidated substrate

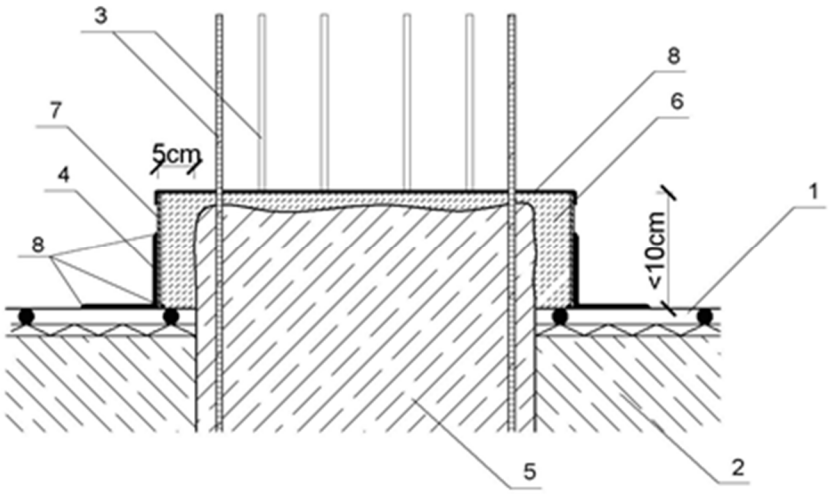
F-03	FOUNDATION SLAB WATERPROOFING	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY



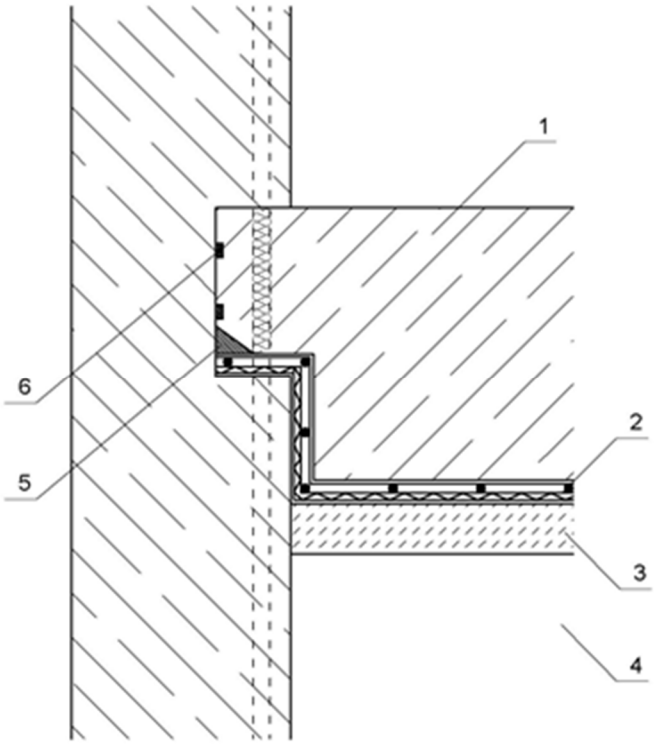
1 Besamembran-waterproofing / BesaPro-moisture protection
2 Base layer
3 Reinforcement
4 APP150-tape
5 Foundation pile
6 Concrete
7 Flange made of coated sheet metal
8 Bitumen seal



1 Besamembran-waterproofing / BesaPro-moisture protection
2 Base layer
3 Reinforcement
4 APP150-tape
5 Foundation pile
6 Concrete
7 Flange made of coated sheet metal
8 Waterproofing: bitumen-rubber-based sealing compound (Arbolex/Ubot 400)

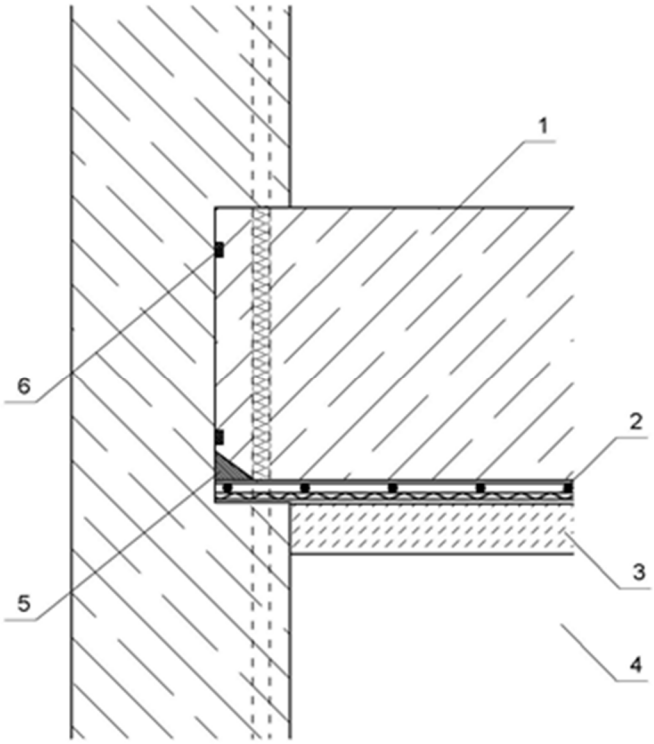


1 Besamembran-waterproofing / BesaPro-moisture protection
2 Base layer
3 Reinforcement
4 APP150-tape
5 Foundation pile
6 Concrete
7 Flange made of coated sheet metal
8 Waterproofing: bitumen-rubber-based sealing compound (Arbolex/Ubot 400)



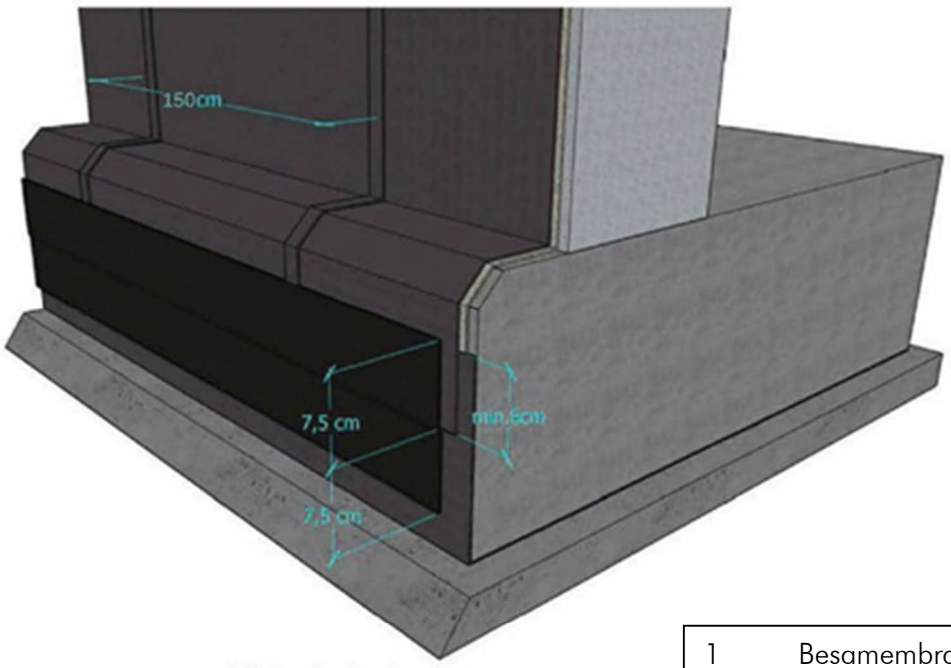
1 Foundation slab
2 Besamembran-waterproofing
3 Lean concrete
4 Sufficiently compacted subsoil
5 Cement mortar / rubber-bitumen compound
6 Seal / swelling tape, injection

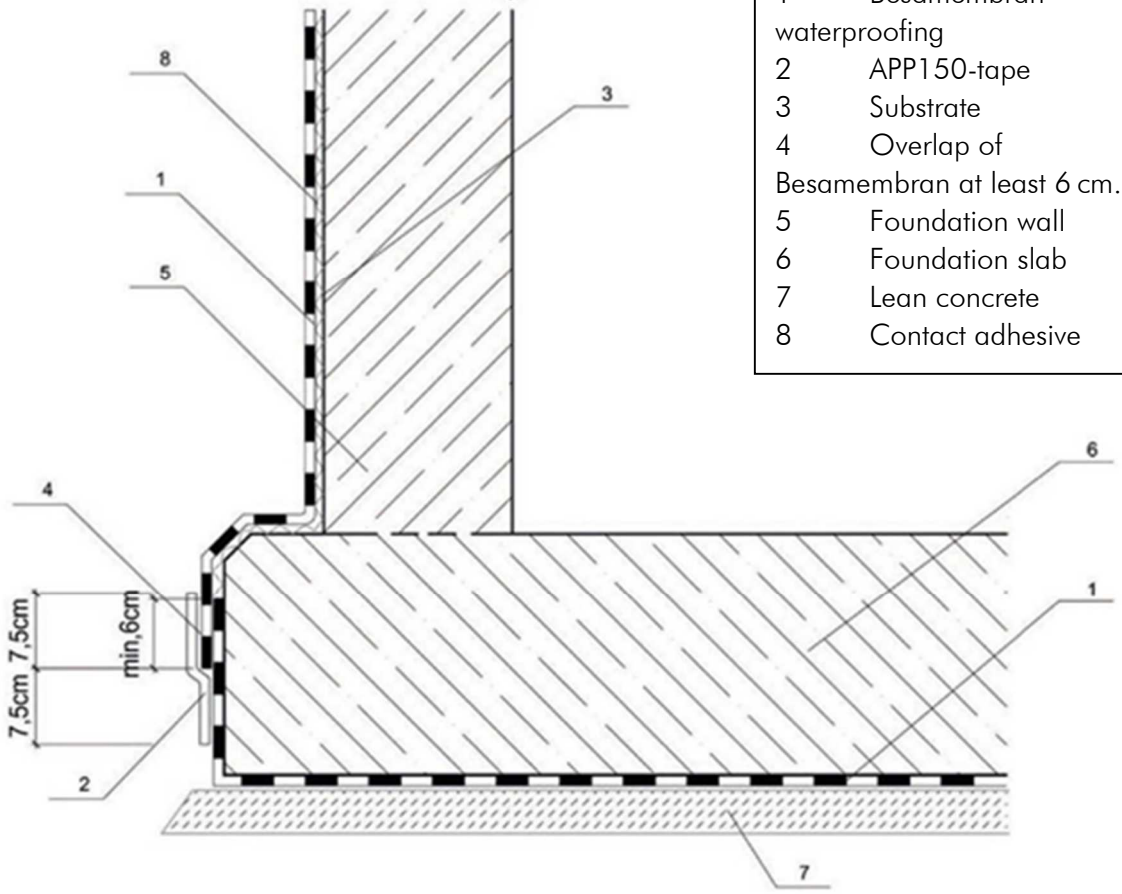
F-05	BESAMEMBRAN CLOSURE OF THE HORIZONTAL WATERPROOFING IN THE JOINT OF THE SLOTTED WALL **-VARIANT 1**	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY



1 Foundation slab
2 Besamembran-waterproofing
3 Lean concrete
4 Sufficiently compacted subsoil
5 Cement mortar / rubber-bitumen compound
6 Seal / swelling tape, injection

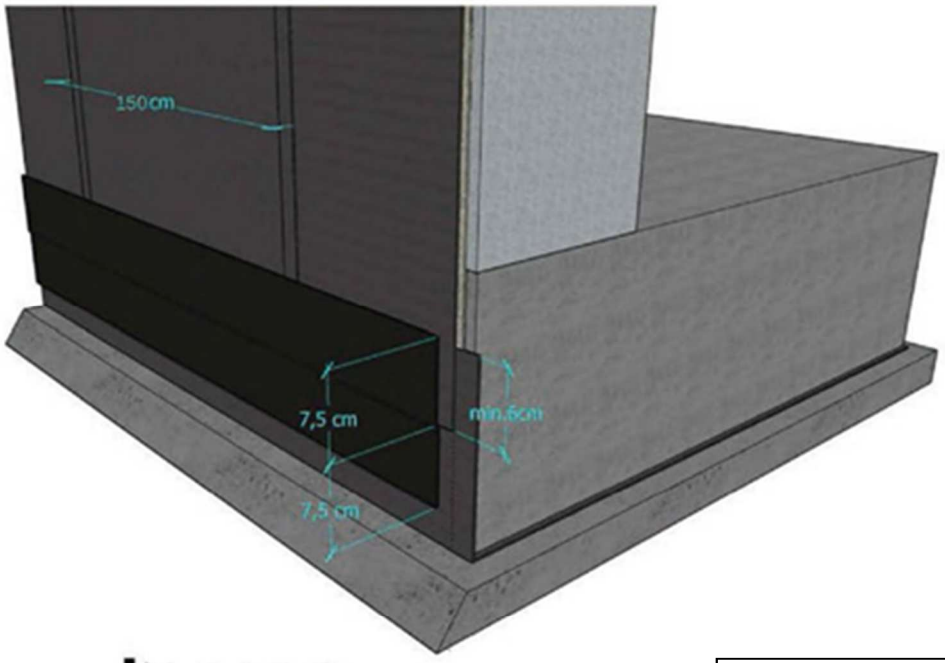
F-06	BESAMEMBRAN CLOSURE OF THE HORIZONTAL WATERPROOFING IN THE JOINT OF THE SLOTTED WALL **-VARIANT 2**	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY

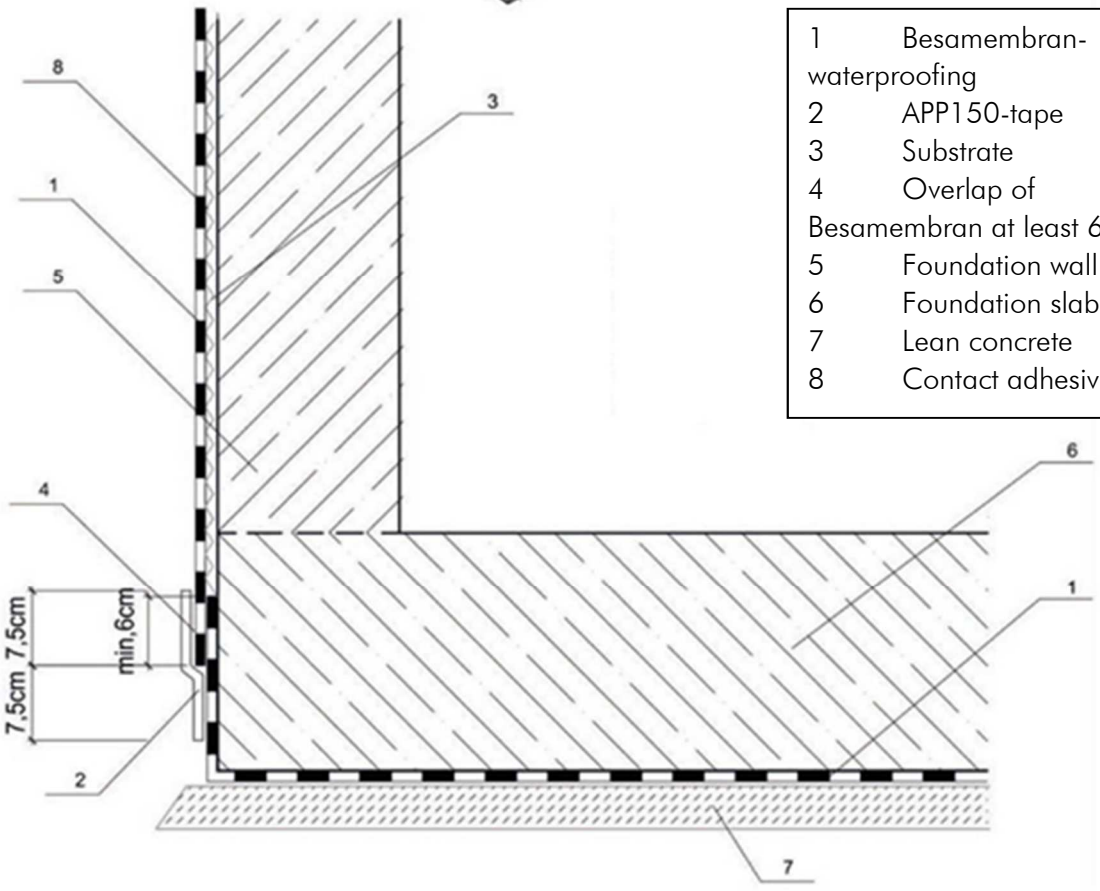




1 Besamembran-waterproofing
2 APP150-tape
3 Substrate
4 Overlap of Besamembran at least 6 cm.
5 Foundation wall
6 Foundation slab
7 Lean concrete
8 Contact adhesive

PF-01	BESAMEMBRAN WATERPROOFING ADHESED TO THE BUILDING STRUCTURE	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY





1 Besamembran-waterproofing
2 APP150-tape
3 Substrate
4 Overlap of Besamembran at least 6 cm.
5 Foundation wall
6 Foundation slab
7 Lean concrete
8 Contact adhesive

PF-02	BESAMEMBRAN WATERPROOFING ADHESED TO THE BUILDING STRUCTURE	**Besamembran-System**	BESAPLAST® Kunststoffe GmbH Einsteinstraße 15 • 46325 Borken • GERMANY

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