

Advice Sheet 6: [Waterproofing External Basement Walls with Self –Adhesive Membrane A Step by Step Guide using Bikuplan AW15](#)

Step 1- The Structure

Köster Bikuplan AW 15 is generally used for external waterproofing of basement walls where the basement slab has already been waterproofed, either with **Bikuplan** itself, or by another means e.g. by the addition of waterproofing add-mixtures to the concrete. In the case of waterproof concrete the **Bikuplan** overlaps onto the side of the slab. Sheet waterproofing systems will extend beyond the slab horizontally or up the side of the slab vertically depending on the system used. In both cases the **Bikuplan** will overlap onto the sheet system to provide a continuity of waterproofing.



Step 2 – Surface Preparation

The area to be waterproofed needs to be clean and dry. A suitable cleaning method would be high pressure water jetting. All internal angles should be rounded by installing a fillet of **Repair Mortar Plus** with the addition of 20% **SB Bonding Emulsion** to the mix water. All external 90 degree angles should be chamfered off at 45 degrees. Any voids should be filled with the same **Repair Mortar Plus / SB Bonding Emulsion** combination.



If the lower region of the basement wall / floor slab has already become wet and is still holding moisture then it is prudent to coat this area with one coat of **NB1 Grey** sealing slurry (1.5kg/sq.m.). This will keep any moisture locked within the substrate and will not allow it to interfere with the bond of the **Bikuplan**.

Step 3 - Priming

The **Repair Mortar** fillet should be left to cure for at least 24 hours before priming. All surfaces should be primed with **KBE liquid Film** diluted 1 to 2 with water (usage of **KBE Liquid film** approx 125g / sq.m). In case of colder conditions **KSK SP Primer** (Super Primer) is used instead (coverage approx 10sq.m./litre), this is applied undiluted. Allow either primer to fully dry before proceeding with membrane application.

Step 4 – Detailing

All internal and external corners and edges should have a re-enforcing layer of **Bikuplan** applied. We can supply **Bikuplan Fix-Tape 10 AW** in 350mm wide rolls for this purpose. Alternatively the



detailing membrane can simply be cut from the standard roll of **Bikuplan KSK AW15**. The detailing work is carried out in accordance with general waterproofing conventions. Full guidance and drawings are available in our *Bikuplan Application Guide*, which can be found at the end of this advice sheet.

Step 5 – Membrane Application

The **Bikuplan AW 15** is applied to the walls in overlapping vertical sheets. It is Self-adhesive to the substrate and itself at overlaps. The adhesive is activated by progressively removing the siliconised release paper. For application to walls it is advisable to cut the **Bikuplan** to length before removing the release paper. To start with fold back about 200mm of release paper from the top edge of the sheet being applied, stick the exposed adhesive to the wall and press into place firmly. Reach behind the remaining membrane and slowly peel down the release paper smoothing the **Bikuplan** to the wall. When the bottom of the wall is reached continue in the same manner over the repair mortar fillet and down onto the footings overlapping any previously applied horizontal membrane by at least 150mm. All side overlaps must be minimum 50mm onto the plastic backing of the previously applied sheet. All end overlaps must be minimum 150mm. The side edges of the **Bikuplan** membrane have a narrow strip of exposed adhesive with no backing, these are protected with a corresponding strip of release plastic. This release plastic should be left in place until just before you are ready to apply the next piece of membrane. This advanced feature ensures an adhesive to adhesive seal at all side overlaps. It is very important to remember to remove this release plastic prior to overlapping.



Step 6 – Rolling Overlaps and Checking

All overlaps must be firmly rolled with a hand roller; a small bead of adhesive should be visible between overlaps once this stage is completed. Entire membrane surface should be checked for bridging, blisters or other damage. Any imperfections should be patched with a 100mm overlap all around. Any bridging or blisters should be cut and flattened out prior to patching.

Step 7 – Mechanical Fixing

It is recommended that the top edge of the membrane is mechanically fixed at the end of the days work, even if the membrane feels firmly stuck. Suitable methods of fixing are flat headed nails or better still metal or plastic fixing profiles.

Step 8 - Protection

After application the **Bikuplan AW 15** should be protected from strong direct sunlight. The material needs no curing time and is instantly rainproof, but should be backfilled as soon as possible.

Bikuplan should always be protected

before backfilling, suitable protection layers could be polystyrene insulation sheets, bituminous protection boards or ideally a purpose made drainage / protection material such as Köster **SD Protection and Drainage Sheet**. Protection layer can be spot bonded with **Bikuplan Fix-Tape DS**, or mechanically fixed at the top edge (above ground level).



Köster Products referred to in this advice sheet:-

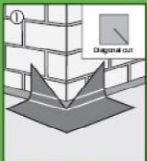
<u>Product Code</u>	<u>Product name</u>
10.31121	Bikuplan AW15 1050mm x 20m
10.31117	Bikuplan Fix-Tape 10AW 300mm x 20m
10.36	Bikuplan Fix-Tape DS
7.30	KSK Primer SP
5.03	Repair Mortar Plus
2.11	SB Bonding Emulsion
3.021	NB1 Grey
1.13	KBE Liquid Film
11.40	SD Protection and Drainage Sheet

**For further information or guidance on any Köster products, please contact Aquatecnic:-
Tel: 0845 2268283 (local rate) or 01387 270252 e-mail: info@aquatecnic.net
web: www.aquatecnic.net**

All information provided on aquatecnic advice sheets is designed to be a general guide to the procedures that may be suitable for any given waterproofing situation. They do not replace the manufacturer's official data sheets, which should always be read before work commences. Aquatecnic limited are always happy to provide project specific advice should this be required.

BIKUPLAN® KSK Waterproofing membranes

External corners / Internal corners Termination details



First place the prepared square with the diagonal cut freely on the corner.



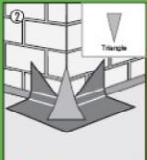
Place the prepared piece and press freely.



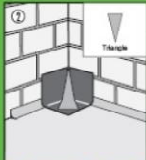
The upper terminations can be fixed with roofing nails or similar...



... Cover the rolls with a BIKUPLAN® KSK FIXBAND Flies.



Place the triangle with pointed end upwards directly on the corner.



Place the triangle with pointed end upwards directly on the corner.



Alternatively, termination can be achieved by applying a layer of KSK Liquid Film or KOSTER Bitumen Mastic.



Steel profiles are also suitable.



Place the prepared piece evenly and press freely (hand roller is recommended).



Place the prepared square freely (hand roller is recommended).



Lower terminations are finished by applying a layer of KSK Liquid Film or KOSTER Bitumen Mastic.



Waterproofed areas must be protected against sun light immediately after installation.

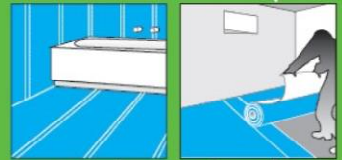


The above mentioned information and instructions are given to the best of our knowledge and belief based on tests and our long experiences in this field. A correct and successful application is not subject to our control. Therefore, a guarantee can only be given for the quality of our products within our normal business terms but not for a successful application. With this application guide previous ones are no longer valid.



External walls

Balconies, terraces and canopies



Bath- and wet rooms

Concrete floors

APPLICATION GUIDE

KOSTER
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BIKUPLAN® KSK

The modern waterproofing System for both in- and outdoor applications

- Cold applied, no further equipment required
- Self adhesive – fast and easy to install
- Clean and environmentally friendly application
- Instant waterproof
- 1 day basement waterproofing in accordance to DIN 18195



Few tools required.

Horizontal waterproofing

Attention:

Substrate:
Cleaned free of any contaminants that might affect the bonding process, e.g. without holes, free of ice, sharp edges. Holes must be repaired, holes filled with e.g. KOSTER Rapid Mortar.

Climate:
At temperatures below 5° C, all relevant substrates must be primed using KOSTER Primer SP (consumption approx. 100 ml / m²). At lower temperatures 2° C below daily using KOSTER KSK Liquid Film (for highly porous substrates prime instead). Allow full cure of the primer (and within the same day if possible), the membranes should be applied.

Application temperature:
BIKUPLAN® KSK SR: -10 °C up to +30 °C
BIKUPLAN® KSK ST: +5 °C up to +25 °C

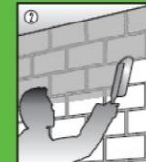


Before installation, place a flat of BIKUPLAN® KSK (Kaugelharter) concrete flat with RÜSTER Rapid Mortar.

Vertical waterproofing



Remove all surface contaminants which might affect the bonding otherwise.



Apply primer to the entire surface by brush or spray application.

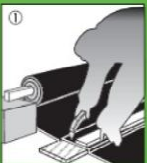
Details / Corners



All pipe penetrations, first cut a piece of BIKUPLAN® KSK triangular fillet to the required length.



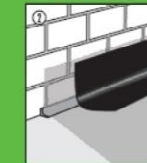
... then place it around the pipe penetration and press freely.



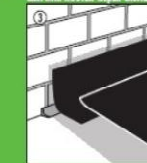
Cut using a straight edge.



Peel back release paper 1m.



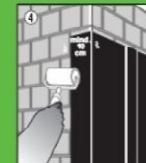
To reinforce the flow-to-wall connection, place a 20 cm strip of BIKUPLAN® KSK.



Attach the membrane onto the reinforcement strip.



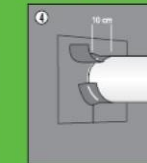
Place the first membrane after removing release paper.



The edge of the membrane must exceed the corner on both sides by at least 10 cm.



Place a roll of BIKUPLAN® KSK, press freely, avoid air entrapsments.



Seal the joint between the roll and the pipe with a BIKUPLAN® KSK fillet and strip.



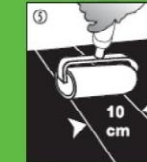
Stick exposed adhesive to substrate, follow the release paper back under the roll.



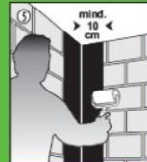
By peeling release paper evenly fix the membrane smoothly.



Adhere the membrane with 10 cm overlap.



Use a roller on the entire surface – especially the overlap.



Place a strip of BIKUPLAN® KSK at all internal corners.



Place the membrane on top of the installed strip to the internal corner with minimum 10 cm overlap.



When appropriate BIKUPLAN® KSK should be fixed to the brick work, chamfer edges and corners beforehand to avoid puncture of the membrane.