

KÖSTER Bikuthan® 2C

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2 component polymer modified bitumen thick film sealant with polystyrene light fillers for waterproofing building structures according to DIN 18195, parts 4 through 6

Features

KÖSTER Bikuthan® 2C is a solvent free, crack bridging, 2 component polymer modified bitumen thick film sealant with excellent adhesion to dry and slightly damp substrates. Already shortly after its application the material is rainproof. The polystyrene admixture ensures easy application. The material has been tested and received official approval by the building authorities.

Technical data

Base material	polystyrene and polymer modified bitumen emulsion / reactive powder
Density of the mixture	0.86 g / cm ³
Density of liquid component (A)	0.75 g / cm ³
Density of powder component (B)	1.23 g / cm ³
Cold resistance	0 °C (R = 15 mm, crack free)
Heat resistance	+ 70 °C no sagging
Waterproof (after full cure) according to DIN 1048 part 5	Waterproof up to 0.75 bar
Resistance to water	No discoloration
Crack bridging	> 2 mm
Building material class	Normally flammable (B2)
Curing time (depending on layer thickness, substrate, temperature and humidity)	1 to 3 days
Mixing time	min. 3 minutes
Pot life	approx. 90 minutes
Application temperature	min. + 5 °C
Substrate temperature	+ 5 °C to + 30 °C

Field of application

KÖSTER Bikuthan® 2C is a safe and long lasting external waterproofing for basement walls, foundations, slabs on grade, for waterproofing balconies and terraces with uninhabited substructures and for waterproofing wet and damp rooms.

KÖSTER Bikuthan® 2C complies with the DIN 18195; Waterproofing against ground moisture and non retained seepage

(part 4), waterproofing against unpressurized water on ceilings and wet rooms (part 5), and retained seepage (part 6).

Since waterproofing applications are carried out depending on the loading conditions, the loading conditions have to be determined by the planner prior to the application.

KÖSTER Bikuthan® 2C is also suited for waterproofing underneath screeds and for bonding insulation and drainage boards.

Substrate preparation

The substrate should be dry or slightly damp, (no visible water), frost-free, free of tar and oil and free of loose particles. Remove mortar residues, break edges, and vertical and horizontal inside corners and transitions should be rounded out by installing fillets. Mineral substrates always have to be primed with KÖSTER Polysil® TG 500 (approx. 100 – 130 g / m²) by spray application. Strongly absorbent surfaces may require up to 250 g / m².

Priming is not necessary on polystyrene substrates.

Surface roughness and irregularities up to 5 mm are filled with a scraped layer of KÖSTER Bikuthan® 2C. Allow the scraped layer to dry far enough so that it will not be damaged by the application of the waterproofing layer. Scraped layers do not count as waterproofing layers.

If defects are deeper than 5 mm, level them beforehand with KÖSTER Repair Mortar mixed with 20 % KÖSTER SB Bonding Emulsion in the mix water.

Fillets

Fillets (leg length 4 – 6 cm) using KÖSTER Repair Mortar (Consumption per m: approx. 2.5 kg) must be applied at least 24 hours prior to beginning the waterproofing application in the wall / floor junction. When waterproofing polystyrene materials, the fillet (leg length: 2 cm) is made with KÖSTER Bikuthan® 2C. The area waterproofing can always only be applied after the fillet has fully cured.

Application

While applying KÖSTER Bikuthan® 2C the general principals set forth in the DIN 18195 and the Data Sheet "Guidelines for the planning of waterproofing for building members in ground contact using polymer modified bitumen thick film sealants" are to be adhered to.

Add the powder to the liquid component slowly while continually mixing both components intensively using a slow rotating stirring device until the material becomes a paste like, lump-free, homogeneous mass (mixing time is minimum 3 minutes).

The application of KÖSTER Bikuthan® 2C is dependent on the loading conditions:

DIN 18195 part 4 (Ground water and non-retained seepage)

Two layer application, fresh-in-fresh. Install reinforcing with KÖSTER Glass Fiber Mesh in Fillets, corners and details.

DIN 18195, part 5 (Non-pressurized water)

Two layer application. The first layer must be completely dry before application of the second layer. Install reinforcing with KÖSTER Glass Fiber Mesh in fillets, corners and details as well as in all floor areas.

DIN 18195 part 6 (Retained seepage)

Two layer application. The first layer must be completely dry before application of the second layer. Install reinforcing on all areas.

KÖSTER Bikuthan® 2C is always applied in two layers using a toothed plastering trowel or steel float. Scraped layers for levelling the substrate (surface preparation) are not considered a waterproofing layer. The waterproofing layers have to be free of flaws, even and in the required thickness. The actual layer thickness must nowhere be less than the required minimum layer thickness and in no case exceed it by more than 100 %. The waterproofing layer of the wall area has to extend at least 10 cm onto the front of the floor slab or foundation. External waterproofing must overlap the existing horizontal waterproofing in all areas by 15 cm. The pot life is approx. 90 minutes at a temperature of 20 °C. Do not apply the material at temperatures below + 5 °C. Do not expose the material to frost, rain or water or direct sunlight until it has fully cured.

The minimum dry layer thickness is:

According to DIN 18195, part 4 (Ground water and non-retained seepage):	3 mm
According to DIN 18195 part 5 (Non-pressurized water)	3 mm
According to DIN 18195 part 6 (Retained seepage)	4 mm

Embed KÖSTER Glass Fiber Mesh at corners, fillets and all areas in danger of cracking.

Waterproof expansion joints by applying KÖSTER Special Joint Tape overlapping the joint areas with the thick film sealant. Avoid water seeping in behind the coating. Allow the waterproofing to fully cure before stressing the material (weather dependent, at the earliest after 24 hours).

Pipe and cable penetrations

When waterproofing against ground moisture and non-retained seepage, apply KÖSTER Bikuthan® 2C in a fillet shape around the cable feed through or penetration and embed KÖSTER Glass Fiber Mesh into it. When waterproofing against non-pressurized water and retained seepage (DIN 18195 parts 5-6) generally loose or fixed flange systems should be used. It is necessary to make sure that the material of the installed parts is compatible with the waterproofing material. The same applies when waterproofing against pressurized water.

Protection and drainage layer

Prior to backfilling, the fully cured coating must be protected from mechanical damage. We recommend the use of KÖSTER Protection and Drainage Sheet 3-400. Polystyrene drainage boards and perimeter insulation are bonded by full surface bonding. In order to avoid vertical movement when backfilling the excavation pit, the surface of the protection or respectively drainage boards should be covered with a gliding layer of e. g. polyethylene. All cases allow for bonding with KÖSTER Bikuthan® 2C. Avoid stress at single spots only. Dimple sheets, corrugated boards and the like are not suitable protection layers. Drainage is required. Make sure not to damage the fillets when backfilling and compacting non-cohesive soils.

In case of horizontal waterproofing on floor areas, embed KÖSTER Glass Fiber Mesh between the waterproofing layers. Install two gliding layers of polyethylene foil prior to applying the screed.

Consumption

Loading condition:

According to DIN 18195, part 4 (Ground water and non-retained seepage):	Min. 4.0 l / m ²
Wet layer thickness	4mm

The information contained in this technical data sheet is based on the results of our research and on our practical experience in the field. All given test data are average values which have been obtained under defined conditions. The proper and thereby effective and successful application of our products is not subject to our control. The installer is responsible for the correct application under consideration of the specific conditions of the construction site and for the final results of the construction process. This may require adjustments to the recommendations given here for standard cases. Specifications made by our employees or representatives which exceed the specifications contained in this technical guideline require written confirmation. The valid standards for testing and installation, technical guidelines, and acknowledged rules of technology have to be adhered to at all times. The warranty can and is therefore only applied to the quality of our products within the scope of our terms and conditions, not however, for their effective and successful application. This guideline has been technically revised; all previous versions are invalid.

According to DIN 18195 part 5 (Non-pressurized water) Min. 4.0 l / m²

Wet layer thickness 4mm

According to DIN 18195 part 6 (Retained seepage) Min. 5.0 l / m²

Wet layer thickness 5mm

Cleaning of tools

Clean tools from fresh material with water. If the material has already cured, clean tools with KÖSTER Bitumen Remover.

Packaging

28 l combi-package (hobbock). Powder component is inside

Storage

Store the material cool and frost free; in originally sealed containers it can be stored for 6 months.

Safety precautions

The powder component contains cement. Avoid skin contact.

Technical guidelines cited

KÖSTER Polysil® TG 500	Art. No. 4.011
KÖSTER Repair Mortar	Art. No. 5.030
KÖSTER Bitumen Remover	Art. No. 9.03
KÖSTER Special Joint Tape	Art. No. 10.37
KÖSTER Glass Fiber Mesh	Art. No. 11.01
KÖSTER Protection and Drainage Sheet 3-400	Art. No. 11.40

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