

# KÖSTER

## Deuxan® Professional

Technical guideline / Article number **1.17**

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- Industry classification "Deuxan" registered at the German patent office, K 50 863

### Crack-bridging, sprayable, non-sagging, 2 component, polymer modified bitumen thick film sealant for waterproofing of buildings according to DIN 18195, part 4 - 6

#### Features

KÖSTER Deuxan® Professional is a two-component, polystyrene-foam-free, fibrated, polymer modified bitumen thick film sealant for safe waterproofing of building structures according to DIN 18195, part 4 - 6. The coating bridges cracks in the substrate safely and resistant to pressurized water. KÖSTER Deuxan® Professional is especially suited to be applied with spraying machines.

#### Technical data

Material base	Bitumen / rubber with a reactive powder
Density of the mixture	1.07 g / cm <sup>3</sup>
Heat resistance	+ 70 °C
Elongation at break	approx. 100 %
Water permeability after full cure (according to DIN 1048, part 5)	waterproof at 5 bar
Curing time at 20 °C	approx. 24 hours
Min. temperature during curing	+ 2 °C
Mixing time	min. 3 minutes
Pot life	approx. 90 minutes
Application temperature	+ 5 °C to + 35 °C
Substrate temperature	+ 5 °C to + 30 °C

#### Field of application

KÖSTER Deuxan® Professional is designed for the safe and permanent waterproofing of basement walls, foundations, floor slabs etc., for waterproofing of balconies and terraces under screed which do not have inhabited sub-structures as well as for wet- and damp-rooms.

The relevant standard is the DIN 18195:

- part 4: Waterproofing against ground moisture and non-retained seepage
- part 5: Waterproofing against non-pressurized water
- part 6: Waterproofing against retained seepage.

Since the application of a waterproofing is carried out depending on the water-loading condition, the loading condition has to be determined exactly by the planner prior to the application. Even though it is not anchored in the DIN 18195, KÖSTER Deuxan® Professional has proven itself successfully for many years also in waterproofing against pressurized water (Consumption min. 6 kg /

m<sup>2</sup>). The coating is also suited for waterproofing under screeds and for bonding of insulation- and drainage-boards.

#### Substrate preparation

The substrate should be dry or slightly damp, frost-free, free of tar and oil and free of loose particles. Remove protruding mortar residues, break edges; 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 / m<sup>2</sup>) by spray application. On polystyrene substrates, priming is not necessary.

Surface patterns and unevenness up to a depth of max. 5 mm are closed with a scraped layer of KÖSTER Deuxan® Professional.

Open cavities which are deeper than 5 mm like e. g. mortar pockets, open butt- and horizontal-joints must be closed level beforehand with KÖSTER Repair Mortar. Prior to the application of the waterproofing layer made of KÖSTER Deuxan® Professional, the scraped layer must have dried far enough so that it is not damaged by the application of the next layer.

#### Fillets

Fillets (leg length: 4 – 6 cm) in the wall / floor junction must be applied at least 24 hours prior to the beginning of the application of the waterproofing using KÖSTER Repair Mortar (Consumption per m: approx. 2 – 3 kg). When waterproofing polystyrene materials, the fillet (leg length: 2 cm) is made from KÖSTER Deuxan® Professional. The subsequently applied area waterproofing can in both cases be applied only after full cure of the fillet.

#### Application

Regarding the application of KÖSTER Deuxan® Professional, DIN 18195 has to be observed. Further, the leaflet of the Deutsche Bauchemie e.V. "Guideline for the design and the application of waterproofing of construction members with ground contact using polymer modified bitumen thick film sealants" has to be observed.

Add the powder to the liquid component in portions and use a slow rotating mixing machine to intensively mix the components with each other until a paste-like, lump-free, homogeneous consistency is reached (mixing time: min. 3 minutes).

The waterproofing layer must be free of defects, uniform and in the required layer thickness. The actual layer thickness must nowhere be less than the required minimum layer thickness and must 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. The external waterproofing must in all areas be connected to the existing horizontal waterproofing. Do not expose the material to frost, rain and water as well as to direct sunlight until it has fully cured.

The minimum dry layer thickness must be:

- 3 mm thick in case of waterproofing against ground moisture and non-retained seepage as well as non-pressurized water (wet layer thickness 4.0 mm = 4.0 kg / m<sup>2</sup>). Embed KÖSTER Glass Fibre Mesh at corners, fillets and areas strongly in danger of cracking.
- 4 mm thick in case of waterproofing against retained seepage (wet layer thickness 6 mm = 6 kg / m<sup>2</sup>). Embed KÖSTER Glass Fibre Mesh into the first layer.

Seal expansion joints by applying KÖSTER Bikuplan® Special Joint Tape in the joint areas of the thick film sealant. Avoid water seeping in behind the coating. Allow the waterproofing to cure fully before stressing the material (depends on the weather, but at the earliest after 24 hours).

#### **Feed throughs / penetrations**

In case of waterproofing against ground moisture and non-retained seepage (DIN 18195, part 4), apply KÖSTER Deuxan® Professional in a fillet shape around the feed through or penetration and embed KÖSTER Glass Fibre Mesh into it. When waterproofing against non-pressurized water and retained seepage (DIN 18195, part 5 – 6), generally lose- / 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 damages. We recommend use of our KÖSTER SD Protection and Drainage Sheet. Polystyrene drainage boards, perimeter insulation, etc. can be spot-bonded in case of "ground moisture" and "non-retained seepage". A full surface bonding is

required if the waterproofing is subjected to "retained seepage" and "pressurized water". In order to avoid vertical movement during filling of 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 Deuxan® Professional. Avoid stress at single spots only. Bumpy foils, corrugated boards or the like are not suited as protection layers. A drainage according to DIN 4095 or similar is required.

Make sure that the fillet is not damaged when backfilling and compacting with cohesionless soil.

#### **Horizontal waterproofing layers**

In case of horizontal waterproofing of floor areas, embed KÖSTER Glass Fibre Mesh into the waterproofing layer in order to ensure a minimum layer thickness. Install two gliding layers of polyethylene foil prior to applying the screed.

#### **Cleaning of tools**

Clean tools with water immediately after use. If the material has already started to dry, clean tools with KÖSTER Bitumen Remover.

#### **Consumption**

Loading condition

Ground moisture, non-retained seepage and non-pressurized water

min. 4.0 kg / m<sup>2</sup>

Retained seepage

min. 6.0 kg / m<sup>2</sup>

#### **Packaging**

32 kg hobbock (powder component is inside the packaging)

#### **Storage**

Store in a cool and frost free place; in closed originally sealed packages, the material can be stored for approx. 6 month.

#### **Safety instructions**

The powder component contains cement.

Avoid contact with the skin.

#### **Technical guidelines cited**

KÖSTER Polysil® TG 500	Art. No. 4.011
KÖSTER Repair Mortar	Art. No. 5.030
KÖSTER Bitumen Cleaner	Art. No. 9.03
KÖSTER Bikuplan® Special Joint Tape	Art. No. 10.37
KÖSTER Glass Fibre Mesh	Art. No. 11.01
KÖSTER SD Protection and Drainage Sheet	Art. No. 11.40

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.