

KÖSTER

KSK SY 15

Technical guideline / Article Number
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- Radon impermeability test – University of Saarland

Cold self adhesive bitumen membrane with HDPE top foil (moisture barrier type A and ground water barrier type T)

Features

KÖSTER KSK SY 15 consists of a highly tear resistant, 2-layer cross laminated polyethylene foil with a plastic bitumen / rubber adhesive and sealing compound. It is cold applied and therefore no hot air or propane gas welding is required for application. Due to its high ductility it can easily be applied to difficult details. The sealing membrane is highly flexible, immediately waterproof, resistant to driving rain, and crack bridging. KÖSTER KSK SY 15 is radon proof.

Resistance to continued tearing lengthwise

/ crosswise according to DIN EN 12310-1 $150 \text{ N} \pm 50 \text{ N}$

Cold bending properties according to DIN EN 1109 $\leq -30^\circ \text{C}$

Resistance of the joint seams to shearing
according to DIN EN 12317-1 $130 \pm 30 \text{ N} / 50 \text{ mm}$

Field of application

KÖSTER KSK SY 15 is suitable for waterproofing horizontal and vertical surfaces of structures and/or structural members according to DIN 18195 such as foundation plates, wet rooms, basement floors, balconies, terraces, etc.

KÖSTER KSK SY 15 is also suitable for waterproofing polystyrene elements.

Technical data

Thickness according to DIN EN 1849-12	1.5 mm
Length according to DIN EN 1848-12	20 m
Width according to DIN EN 1848-21	1.05 m
Straightness according to DIN EN 1848-1	$\leq 20 \text{ mm} / 10 \text{ m}$
Flammability according to DIN EN 13501-1	Class E
Tensile strength according to DIN EN 12311-1	$250 \pm 50 \text{ N} / 50 \text{ mm}$
Elongation at break according to DIN EN 12311-1	$200 \pm 50 \%$
Waterproof 60 kPa according to DIN EN 1928	passed
Resistant to static loads DIN EN 12730 procedure B	$> 20 \text{ kg}$
Resistance against artificial aging according to DIN EN 1296 and 1928, procedure. B (test pressure 60 kPa)	passed
Resistance against chemicals according to DIN EN 1847 and 1928 procedure B (Test pressure 60 kPa)	
- 10 % NaCl	passed
- Lime milk	passed
- 6 % Sulfuric acid	passed
Resistance to water vapor diffusion μ	$< 130,000$

Substrate preparation

The substrate has to be clean, dry, even, and without sharp corners, ridges, gaps, or voids. It can be mineral, polystyrene, or wooden. In case of basement walls made of masonry, the joints have to be closed flush. As a primer a thin coat of KÖSTER KBE Liquid Foil is applied to the substrate (Consumption: approx. 250 – 500 g / m²). The priming layer must be allowed to dry completely. Apply the membrane on the same day.

In case of strongly absorbent substrates, (e. g. porous concrete), a second primer coat may be necessary.

At wall / floor, wall / wall junctions and on offset foundations, fillets with a leg length of 4 – 6 cm must be installed using a cement mortar such as KÖSTER Repair Mortar. It must be fully cured before the KÖSTER KSK SY 15 membranes are installed, (min. waiting time: 24 hours).

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.

Application

When cutting membranes always use a sharp knife. To avoid having the knife stick to the membrane wet the blade repeatedly. Avoid cutting the material when it has been exposed to heat or direct sunlight. Remove the backing paper after cutting the membrane.

Cutting membranes to length is facilitated by laying a piece of wood or straight edge on top of the membrane along the course of the cut as a guide and cutting support. Do not apply KÖSTER KSK SY 15 at temperatures below + 5 °C.

Horizontal waterproofing

On top of the fillet, an approximately 30 cm wide strip is applied as corner reinforcement. Apply the vertical and horizontal layers on top of the strip. Roll out membranes or pre-cut pieces in a length of approx. 50 – 80 cm, remove approx. 30 – 50 cm of the backing paper at the beginning of the membrane and press the exposed adhesive layer onto the substrate beginning from the middle. Avoid trapping air and creating creases. Pull the backing paper through from under the roll and pull it off while unrolling the membrane. Firmly press the applied membranes onto the substrate. Use the KÖSTER Rubber Hand Roller on the overlaps and edge areas. Overlap the membranes 10 cm. Connections to metal are achieved using a strip of KÖSTER Fix-Tape 10 ALU. All inside corners are to receive a fillet.

Cover roofs after waterproofing with a geotextile and cover with a screed or round gravel 16 / 32, 5 cm thick.

Vertical waterproofing of basement walls

1. All interior and exterior corners are reinforced by applying pre-cut membrane pieces approximately 30 cm wide. Remove the backing paper just before applying the membrane to the surface.
2. For waterproofing of the especially demanding internal and external corners use specially cut pieces of membrane. Refer to the KÖSTER KSK application guidelines on the packaging for details.
3. Waterproof wall surfaces beginning approx. 30 cm above ground level, proceeding downwards to the wall floor junction and on to the side of the foundation. Pre-cut the membrane to the required length. Apply the membrane by removing the protective paper and pressing the membrane onto the substrate. Overlap the edge of the previously applied membrane by 10 cm.

All overlapping areas of the membranes must be firmly pressed together using a KÖSTER Rubber Hand Roller. Remove the backing paper from the self-adhesive edge before applying the next membrane.

4. In order to avoid water infiltration behind the membrane, seal all exposed edges of the waterproofing layers as well as around pipe penetrations and other junctions and endings with KÖSTER KBE Liquid Film. Mechanically fix the upper ends of the membranes with large headed zinc coated nails, (5 pieces / m), or with a fixing profile. In case of rough substrates or porous concrete, a second coat may be needed after the first coat has fully dried. Embed KÖSTER Glass Fiber Mesh into the KÖSTER KBE Liquid Film around pipe penetrations.

5. Protect the KÖSTER KSK SY 15 with KÖSTER Protection and Drainage Sheet 3-400 against damage due to backfilling.

The construction pit should be backfilled immediately after full cure of the KÖSTER KBE Liquid Film. Horizontal areas must be covered within two weeks of their application.

Special field of application

KÖSTER KSK SY 15 is radon and methane proof. The previously stated application directions are suitable for carrying out radon and methane proof layers.

Cleaning of tools

Clean cutting tools with KÖSTER Universal Cleaner.

Packaging

21 m² rolls, width: 1.05 m, length: 20.00 m.

Storage

Do not expose rolls to low temperatures or direct sunlight. Store rolls standing upright. Protect from pressure and moisture.

Technical guidelines cited

KÖSTER KBE Liquid Film	Art. Nr.	1.13
KÖSTER Repair Mortar	Art. Nr.	5.030
KÖSTER Fix-Tape 10 ALU	Art. Nr.	7.30
KÖSTER Universal Cleaner	Art. Nr.	9.01

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KÖSTER Glass Fiber Mesh	Art. Nr.	11.01
KÖSTER Protection and Drainage Sheet 3-400	Art. Nr.	11.40
KÖSTER Rubber Hand Roller	Art. Nr.	12.10

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