



KÖSTER KD System

Technical Data Sheet W 219

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-Official testing certificate of Law Engineering Inc., Atlanta, USA – Adhesive tensile strength and water permeability (negative and positive side)

Negative side waterproofing against pressurized water

Features

The environmentally friendly KÖSTER KD System stops active water ingress and safely seals off pressurized water from the negative side. It is resistant to salts which are harmful to the building structure and to aggressive substances which are present in the ground. Salts will not detach the fully cured KÖSTER KD System coating from the substrate.

The system consists of 3 products:

KÖSTER KD 1 Base

Fast curing mineral sealing slurry with excellent resistance to aggressive ground water and high water pressure.

KÖSTER KD 2 Blitzpowder

Highly reactive powder with extremely short setting time. With application of the dry powder, active water leaks are sealed within seconds.

KÖSTER KD 3 Sealer

Extremely low viscosity silicifying liquid. The active ingredients penetrate deeply into the substrate and react to form an insoluble compound. The pores are plugged and permanently sealed through the mineralization process.

Technical Data

KÖSTER KD 1 Base	
Density of the fresh mortar	1.6 kg / l
Compressive strength (7 days)	> 13 N / mm ²
Flexural tensile strength (7 days)	> 3.5 N / mm ²
Setting time (+ 20 °C, 65 % rel. humidity)	approx. 5-15 min.
Water demand (7,5 package)	2,4 - 2,7 l
Water demand (per kg)	0,33 - 0,36 l / kg
Largest aggregate size	· 0,2 mm
KÖSTER KD 2	
Setting time (when sealing active leaks)	approx. 20 sec.
Largest aggregate size	· 0,2 mm
KÖSTER KD 3 Sealer	
ensity (+ 20 °C) Blitzpowder	1.2 g / cm ³
Reaction time (+ 20 °C, 65 % relative humidity)	2 - 3 hours

KÖSTER KD System
Waterproof against pressurized water up to 7 bar (negative side)

Fields of Application

For waterproofing basements from the inside, waterproofing manholes, as well as for all other waterproofing against non-pressurized and pressurized water from the positive or the negative side on mineral substrates.

KÖSTER KD 2 can also be used for sealing and closing cracks prior to the use of injection resins.

Substrate

The substrate must be sound and solid, free of oil and paint as well as free of loose particles. Screed, plasters, and the like must be removed

down to a solid material base, (masonry/concrete). Masonry joints must be raked out 2 cm deep. Dry substrates must be wetted thoroughly repeatedly prior to the beginning of the system application. Fill holes and open joints with KÖSTER Repair Mortar or with KÖSTER Waterstop.

On porous concrete, Autoclaved Aerated Concrete, or on soft brick, a sound plaster made of KÖSTER Repair Mortar has to be applied. Unsuitable substrates are:

- plasters containing lime,
- paint coatings,
- building materials containing gypsum.

Application

The three components of the KÖSTER KD System are applied according to the instructions below in case of area waterproofing against pressurized water from the negative side. If active leaks (from dripping leaks to flowing water) have to be waterproofed, first the flow of water has to be stopped before the area waterproofing can be applied. For this purpose, KÖSTER KD 2 can be used.

Stopping active leaks

Depending on the intensity of the active leak, a sufficient amount of dry powder is applied by hand directly to the active leak without adding any extra water. In case of small active leaks where water slowly drips from the wall, the powder is rubbed firmly onto the surface until the leakage is stopped.

In areas with stronger leaks including an active water spout, a larger amount of KÖSTER KD 2 is pressed into a ball between both hands, compressing as much air out as possible.

The "ball" is firmly pressed onto the leak. After a few seconds the leak should be stopped.

We suggest using smooth rubber gloves when processing KÖSTER KD 2.



Leaks... ..stopped... ..in seconds!

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After stopping the active leaks, the area can be waterproofed. Mix as much KÖSTER KD 1 Base as can be applied within 5-10 minutes with water into a viscous, spreadable mass (slurry). Apply the slurry onto the substrate using a KÖSTER Brush for Slurries.



Then immediately rub KÖSTER KD 2 Powder into the fresh, moist slurry by hand until the surface is dry.



Without waiting, brush on KÖSTER KD 3 Sealer Liquid with a KÖSTER Brush for Liquids.



Immediately afterwards and again after approx. 30 minutes, repeat step 1, (application of the KÖSTER KD 1 Base).



Area waterproofing

After stopping the active leaks, the area can be waterproofed: Pre-wet the application area until the surface near pores are saturated. The three components of the KÖSTER KD System are applied according to the instructions below in case of area waterproofing against pressurized water from the negative side. The maximum total thickness must be less than 4 mm.

Application of a finish layer on walls

A layer of plaster key made from a KÖSTER Restoration Plaster (50 % area coverage) can be applied after 24 hours.

After another 24 hours, KÖSTER Restoration Plasters can be applied.

Application of the next layer on floors

Prior to installing screeds, apply a cementitious bonding bridge made from 25 kg KÖSTER NB 1 Grey mixed with 6 l of water and 1.5 kg KÖSTER SB Bonding Emulsion. Apply the bonding bridge with a KÖSTER NB 1 Brush for slurries.

Sealing of joints, cracks, and pipe penetrations

Elastic sealing (with KÖSTER Joint Sealant FS):

1. Prior to the application of the area waterproofing, cut grooves into the masonry/concrete along the course of cracks, connections, etc. Width and depth should be approx. 3 cm or more in cases where strong movements or high water pressure is expected.

2. In the course of applying the area waterproofing, the KÖSTER KD System is applied also into the grooves which were cut to open cracks and connections.

3. After a minimum of 24 hours after application of the KÖSTER KD System, the side-flanks of the joints (only these) are primed with KÖSTER FS Primer 2C. Cover the back of the joint with tape or a foam cord, as bonding to three flanks has to be absolutely avoided.

4. Fill the joints after approx. 3 hours curing time with KÖSTER Joint

Sealant FS-V according to the Technical Guideline.

Plastic sealing (with KÖSTER KB Flex 200 Sealing Paste):

1. Proceed in the same way as with elastic joint sealing, but with a minimum joint depth of 10 cm.

2. Proceed with the KD System in the same way as with elastic joint sealing.

3. After a minimum of 24 hours after the application of the KÖSTER KD System, the prepared areas are filled with KÖSTER KB Flex 200 to approx. 10 mm below the surface.

4. Level off the sealed crack flush with KÖSTER KB Fix 5.

Aftertreatment

In case the substrate sucks the water from the freshly applied material too quickly or it dries prematurely from sun, wind, or heat, mist spray the KD System so that it remains dark.

Consumption

KÖSTER KD 1 Base: approx. 1.5 - 2.5 kg/m²; KÖSTER KD 2 Blitz Powder: approx. 1.0 - 2.0 kg/m²; KÖSTER KD 3 Sealer: approx. 0.5 kg/m²

Cleaning

Clean tools immediately after use with water.

Storage

Store the material dry and frost free. In originally sealed containers it can be stored for a minimum of 12 months.

Safety

Wear protective gloves and goggles when processing the material. Observe all governmental, state, and local safety regulations when processing the material.

Related products

KÖSTER KB-Fix 5	Prod. code C 515
KÖSTER FS Primer 2C	Prod. code J 139 200
KÖSTER Joint Sealant FS-V black	Prod. code J 231
KÖSTER KB-Flex 200	Prod. code J 250
KÖSTER Restoration Plaster Grey	Prod. code M 661 025
KÖSTER Restoration Plaster White	Prod. code M 662 025
KÖSTER Restoration Plaster White/Fast	Prod. code M 663 025
KÖSTER Restoration Plaster White/Light	Prod. code M 664 020
KÖSTER KD 1 Base	Prod. code W 211
KÖSTER NB 1 Grey	Prod. code W 221 025
KÖSTER KD 3 Sealer	Prod. code W 313
KÖSTER KD 2 Blitz Powder	Prod. code W 512
KÖSTER Repair Mortar	Prod. code W 530
KÖSTER Waterstop	Prod. code W 540 015
KÖSTER SB Bonding Emulsion	Prod. code W 710
KÖSTER Brush for Liquids	Prod. code W 912 001
KÖSTER Brush for slurries	Prod. code W 913 001

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