



KÖSTER Hydrosilicate Board

Mineral hydrosilicate tile system for mold remediation and prevention on interior surfaces

Features

KÖSTER Hydrosilicate Boards are hydrophobic, fiber free, breathable, mineral based boards for the renovation of mold infested mineral based interior building materials.

KÖSTER Hydrosilicate boards have a high resistance to aging, are insulative and non-flammable. KÖSTER Hydrosilicate boards are free of synthetic additives, regulate moisture, reduce condensate formation, and promote a healthy indoor climate.

The high alkalinity and the dry surface of KÖSTER Hydrosilicate Boards impede a renewed growth of mold. Even after high moisture penetration the boards dry evenly without changing their shape or quality.

KÖSTER Silicate boards are made from natural raw materials and therefore do not emit any harmful substances or gases. The KÖSTER Hydrosilicate Board System is composed of the boards and the respective KÖSTER Hydrosilicate Adhesive SK.

Technical Data

The KÖSTER Hydrosilicate Board system consists of the following components:

KÖSTER Hydrosilicate Board: 50 mm thick KÖSTER Hydrosilicate Boards for wall surfaces

KÖSTER Hydrosilicate Board: 25 mm thick KÖSTER Hydrosilicate Boards mainly for jambs and soffits around windows and doors. The application is the same as with the 50 mm thick boards

KÖSTER Hydrosilicate Adhesive SK: KÖSTER Hydrosilicate Adhesive SK is used for the gluing of the KÖSTER Hydrosilicate boards, gluing the butted boards, and as a spackle/plaster for the installed boards

KÖSTER Hydrosilicate Board:	
Material	Hydrosilicate
Color	greyish
Size	60 cm x 38 cm
Thickness	25 and 50 mm
Bulk density	max. 150 kg/m ³
Weight / Board *	Approx. 1.6 kg
Porosity	> 90 %
pH value	Approx. 9.5
Thermal conductivity (DIN EN 12667) *	Approx. 0.0473 W / m ² K
Compressive strength (DIN 51057) *	Approx. 0.7 N / mm ²
Bending strength (DIN EN 12089) *	Approx. 150 kPa

Form change after submerged storage	None
Water absorption	2.1 – 2.4 kg /m ² * h 0.5
Sorption moisture	< 5 %
Fire classification (DIN 4102)	Non-combustible, A1
WVT rate (μ) (DIN 5261)	Approx. 5
*Values are for the 50 mm thick KÖSTER Hydrosilicate Board	

KÖSTER Hydrosilicate

Adhesive SK:

Base material	Cement
Color	White
Bulk density	Approx. 1.4 g / cm ³
Solid density	Approx. 1.7 g / cm ³
Pot life (+ 20 ° C)	Approx. 45 min.
Compressive strength	Approx. 12 N / mm ²
Bending tensile strength	Approx. 3.5 N / mm ²

Fields of Application

KÖSTER Hydrosilicate boards are applied to the inside of exterior and interior walls. There they absorb excess moisture in the air, store it, and steadily and uniformly release it back into the room. By increasing the surface temperature of the room the possibility of condensate formation is reduced. Due to its high porosity, the boards also have a very large surface area, favoring the fast evaporation of moisture. These factors all combine to create a comfortable room climate.

Substrate

A stable, clean, and even mineral substrate is required for the application of KÖSTER Hydrosilicate Boards. All bond inhibiting materials such as wallpaper, gypsum, paints, and insulation have to be removed before application. Absorptive substrates are primed with KÖSTER Polysil TG 500, with a consumption of at least 130 g / m². Highly absorptive substrates may require up to 250 g / m². Roughness and irregularities in the substrate up to 5 mm are leveled with KÖSTER Hydrosilicate Adhesive SK. Irregularities greater than 5 mm are leveled with mortar, for example KÖSTER Repair Mortar Plus mixed with 20% KÖSTER SB Bonding Emulsion in the mix water. Apply the system only after the substrate leveling has completely cured. All moisture rising through- or entering through the back of the wall to be rehabilitated must be stopped.

Application

The KÖSTER Hydrosilicate Boards are cut to the desired size using a hand saw. They can also be cut on a flat, stable surface using a utility knife pulled along a straight edge guide. The boards are then broken over a flat edge.

For gluing, the KÖSTER Hydrosilicate Adhesive SK is mixed with a slowly rotating electrical mixer (under 400 rpm) into a homogenous, lump free consistency. When mixing the adhesive, first put ¾ of the water into a mixing vessel of sufficient size for mixing both components.

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.

Slowly add the powder component while continually mixing. Add the remaining water as required to reach the desired consistency. Each bag of KÖSTER Hydrosilicate Adhesive SK requires approximately 5.2 liters of water. The mixing time is three minutes.

Apply the adhesive to the substrate with a notched trowel. The notches should be at least 8 mm x 8 mm. The trowel ridges must fully cover the board area, and the butted board joints completely glued. Glue the KÖSTER Hydrosilicate Board to the wall and adjust it as needed. The boards are staggered along their joints at least 10 cm. All board edges are to be fully bonded.

Do not push the boards against the wall too firmly. In case a board breaks, the crack can easily be repaired by completely troweling the crack over and smoothing it with KÖSTER Hydrosilicate Adhesive SK. Larger defects and breakouts should be repaired with board material cut to size. For jambs and soffits around windows and doors, use the thinner, 25 mm KÖSTER Hydrosilicate Boards. A mason's float is used to evenly distribute the contact pressure when pressing these boards into place.

After the KÖSTER Hydrosilicate boards have been applied and the KÖSTER Hydrosilicate Adhesive SK has dried, the surface can be sanded smooth with a float or sandpaper with a P80 grit size. Vacuum the surface to remove dust.

Exterior corners should be protected by installing a corner profile. These can be affixed with KÖSTER Hydrosilicate Adhesive SK. Subsequently, the whole area is plastered with a layer of KÖSTER Hydrosilicate Adhesive SK, in a maximum thickness of 2 mm. Embed the KÖSTER Glass Fiber Mesh in the center of the plastered layer. The stiffening adhesive can be floated smooth. If a very smooth surface is desired, the surface can be re-plastered and sanded.

With normal room conditions and good air circulation, the surface can be painted over after 24 hours. All successive paints must be open to vapor diffusion, such as KÖSTER Silicone Paint White.

Consumption

4.38 Boards / m²

KÖSTER Hydrosilicate Board: approx. 1 m² / m² (4,38 Boards / m²)
 50 mm: approx. 2,74 m² / Package (12 Boards)
 25 mm: approx. 3,42 m² / Package (15 Boards)

KÖSTER Hydrosilicate Adhesive SK: approx. 3 kg / m² as adhesive (dep. on substrate)
 approx. 1,7 kg / m² / mm Layer thickness by trowel

Cleaning

Clean tools immediately after use with water.

Packaging

M 670 025 15 pcs. (3.42 m²) per package (600 x 380 x 25 mm)
 M 670 050 12 pcs. (2.74 m²) per package (600 x 380 x 50 mm)

Storage

KÖSTER Hydrosilicate Board: When stored in a dry location min. 2 years

KÖSTER Hydrosilicate Adhesive SK: When stored in a dry and frost-free location min. 1 year

Safety

KÖSTER Hydrosilicate Adhesive SK contains cement and is therefore alkaline. Wear gloves and safety goggles.

When sanding KÖSTER Hydrosilicate Boards wear respiratory protection. Observe all governmental, state, and local safety regulations when installing the material.

Other

Use only KÖSTER Hydrosilicate Adhesive SK to glue KÖSTER Hydrosilicate Boards. Use only paints, wallpaper, and plasters that are open to vapor diffusion on top of KÖSTER Hydrosilicate Boards. Never use latex paints or synthetic wallpaper.

Related products

KÖSTER Polysil TG 500	Prod. code M 111
KÖSTER Hydrosilicate Adhesive SK	Prod. code M 170 020
KÖSTER Silicone Paint White	Prod. code P 260 010
KÖSTER Glass Fiber Mesh	Prod. code W 411
KÖSTER Repair Mortar	Prod. code W 530 025
KÖSTER Repair Mortar Plus	Prod. code W 532 025
KÖSTER SB Bonding Emulsion	Prod. code W 710

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