



# KÖSTER Hydrosilicate Board

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

### Características

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.

### Dados Técnicos

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Material                              | Hydrosilicate                         |
| Color                                 | Creamy White                          |
| Size                                  | 58 cm x 38 cm                         |
| Thickness                             | 25 and 50 mm                          |
| Weight / Board *                      | Approx. 1.6 kg                        |
| Porosity                              | > 90 %                                |
| pH value                              | Approx. 9.5                           |
| Thermal conductivity (DIN EN 12667) * | Approx. 0.0473 W / m*K                |
| Compressive strength (DIN 51057) *    | Approx. 0.7 N / mm <sup>2</sup>       |
| Bending strength (DIN EN 12089) *     | Approx. 150 kPa                       |
| Form change after submerged storage   | None                                  |
| Water absorption                      | 2.1 – 2.4 kg / m <sup>2</sup> * 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

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

### Campos de aplicação

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.

### Substrato

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 / m<sup>2</sup>. Highly absorptive substrates may require up to 250 g / m<sup>2</sup>. 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.

### Aplicação

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 ¼ of the water into a mixing vessel of sufficient size for mixing both components. 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. 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 mortar, in a maximum thickness of 2 mm. The stiffening adhesive can be floated smooth. If a very smooth surface is desired, the surface can be re-plastered and sanded.

By 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.

As informações contidas nesta ficha técnica baseia-se nos resultados da nossa pesquisa e na nossa experiência prática em campo. Todos os dados dos ensaios mencionados são valores médios que foram obtidos sob condições previamente definidas. A aplicação adequada e, logo eficaz e bem sucedida dos nossos produtos não está sujeita ao nosso controlo. O instalador é responsável pela correcta aplicação tendo em consideração as condições específicas do local de construção e os resultados finais do processo de construção. Isto pode requerer ajustes às recomendações aqui mencionadas para casos normais. As especificações feitas pelos nossos colaboradores ou representantes que excedam as especificações contidas nesta ficha técnica requerem confirmação por escrito. As normas válidas para ensaios e aplicação/ instalação, orientações técnicas e regras reconhecidos da tecnologia têm que ser respeitadas em todos os momentos. A garantia poderá e será apenas aplicada à qualidade dos nossos produtos dentro do âmbito dos nossos termos e condições e na sua aplicação eficaz, adequada e bem sucedida. Esta diretriz foi tecnicamente revista; todas as versões anteriores são inválidas.

## Consumo

4.54 unidades / m<sup>2</sup>

## Limpeza

Clean tools immediately after use with water.

## Embalagem

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| M 670 008 | 8 un. (1.76 m <sup>2</sup> ; ) por embalagem<br>(580 x 380 x 50 mm)  |
| M 670 016 | 16 un. (3.52 m <sup>2</sup> ; ) por embalagem<br>(580 x 380 x 25 mm) |

## Armazenamento

When stored in a dry location min. 2 years

## Segurança

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.

## Outros

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.

## Produtos relacionados

|                                  |                               |
|----------------------------------|-------------------------------|
| KÖSTER Polysil TG 500            | Número do artigo M<br>111     |
| KÖSTER Hydrosilicate Adhesive SK | Número do artigo M<br>170 020 |
| KÖSTER Silicone Paint White      | Número do artigo P<br>260 010 |
| KÖSTER Repair Mortar             | Número do artigo W<br>530 025 |
| KÖSTER SB Bonding Emulsion       | Número do artigo W<br>710     |

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KÖSTER Portugal • Rua da Boavista, n.º 291, 1º • 4050-107 Porto • Tel. 222 076 130 • Fax 222 076 139 - E-Mail: geral@koster.eu -  
Internet: www.koster.pt