

SILCA 250KM / SILCACON

Issue: November 2024 (subject to technical changes)

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User Information

(taking into account German regulations)
Other national regulations must be observed

1. General Situation/Introduction:

SILCA 250KM insulation boards are used in the following areas:

- a. To protect walls against high temperatures when positioned behind a heating element/insert. Both combustible and non-combustible walls have to be protected against high temperatures in order to avoid fires or long-term damage.

SILCA 250KM boards are asbestos-free, high-temperature insulating boards which are specially approved by the DIBt (German Institute for Building Technology), Berlin, for this form of application. The insulating thickness depends on the performance of the oven. Insulating thicknesses are specified by the element manufacturer according to the type of mineral wool board. The alternative insulating thickness using **SILCA 250KM** can be determined using our diagrams. Furthermore, TROL regulations have to be observed in Germany; these may also require an active back ventilation. **In addition to the correct choice of thickness, it is important to observe the heating element/insert manufacturer's instructions with regard to spacing within the stove (distance between heating element and thermal insulation). Furthermore, it is important to ensure that there is adequate hot-air conduction. The heating element manufacturer's details on required circulating and hot air ventilation grilles must be observed.**

- b. **SILCA 250KM** boards can also be used as external, constructional facing boards if radiant heat is no longer required. We recommend a **thickness of 5-6 cm** and fastening with adhesive and screws using dry wall screws with a large thread.

2. Processing the boards:

The boards can be processed using standard woodworking tools or machinery, e.g. with a handsaw, jigsaw, circular hand saw or wet saw. Although the boards are physiologically harmless, we recommend using a dust extractor when processing the boards.

3. Board installation:

Behind the heating element in hot areas

Use **SILCADUR-HFS Adhesive** for gluing the boards onto walls to be protected as this has been approved by building supervisory authorities. Please see the mixing details which are included with the

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boards for further information on using the glue (application, moistening the boards etc.).

Working with the boards usually results in dust. This dust can be bound using **SILCADUR-HTI** and it also adds some strength to the surface.

NB: **Only use SILCADUR-HTI inside the heating chamber.** It is not suitable for use as primer on exterior surfaces.

Constructional use in outside areas

Our **SILCACON** system has been developed for constructional and decorative applications with **SILCA 250KM** boards (5-6 cm thick) and consists of a primer, adhesive and smoothing lime mortar.

SILCACON Adhesive is recommended for gluing in exterior constructional areas. We recommend additional fastening in place with screws when gluing boards.

First of all, surfaces for gluing / processing have to be treated with **SILCACON Primer** (diluted with water between 1:1 and 1:3).

Once the surface of the **SILCA® 250KM** has been pre-treated with **SILCACON Primer HFS**, it can be processed further. We recommend **SILCACON adhesive** when installing natural stone or tiles on the calcium silicate board. If you want to design the surface decoratively with plaster, we recommend **SILCACON smoothing lime plaster** as a two-layer stove plaster with a layer thickness of 1 mm each. The high-quality stove plaster has been modified and is used as a base plaster with the **SILCATEX-SE fabric** for reinforcement. After corresponding drying, **SILCACON smoothing lime plaster** is applied as a second layer and the surface is designed according to the requirements.

SILCACON smoothing lime plaster results in a smooth, light-coloured and firm surface and serves as a base for following paint coats with mineral paints in accordance with DIN 18363.2.4.1. or for **SILCACON painting plaster**. For preparation, the content of the bag is mixed homogeneously in approx. 7 litres of cold and clean water using a mixing device. Depending on the ambient temperature, the processing time is up to approx. 2 hours. At a layer thickness of 1 mm, approx. 1 kg of **SILCACON smoothing lime plaster** is required per m². If desired, the surface can be sanded after complete drying.

Surfaces finished in this way can then be painted with a mineral paint if required.

Detailed instructions for use of the individual products can be found on the respective packaging. Alternatively, we will be pleased to send them to you on request.