

Bonding Instructions for SILCA® 250KM

For use as thermal insulation and frost-resistant masonry according to National technical approval no. Z-43.14-117 and the applicable regulations of the German Association of Tiled Stove and Hot-Air Heating System Builders.

Ground Preparation:

In case of new buildings, the brickwork must be dry to ensure that excessive humidity in the core of the wall is no longer existent. The surface to be insulated must be free from soiling, loose particles, mortar burrs and anti-seizing agents. The ground must be dry, clean, slightly absorbent and - if possible - even and must show good bearing performance. **Gypsum-containing subsurfaces are not suitable for glueing applications without appropriate pre-treatment.**

Laying of Insulation Boards:

SILCA® 250KM insulation boards can be cut, drilled or milled on conventional woodworking machines.

Minimum thickness of **SILCA® 250KM insulation boards** must be 60 mm when used as single-layer bonding in frost-resistant masonry and 30 mm in multi-layer bonding.

Exclusively **SILCADUR - HFS** adhesive is to be used for bonding **SILCA® 250KM insulation boards**. The adhesive is to be stored in a dry and frost-protected place. The adhesive may be applied only at temperatures of $\geq 10^{\circ}$ C. Prior to use, mix the adhesive thoroughly, bags must be kneaded. The correct application consistency is already set at the factory. The surfaces to be glued must be free from grease and oil. Remove any dust. Due to high capillary activity, moisten the adherend of the insulation boards with water before applying the adhesive. This is best done by a water brush, sponge or similar tool. The applied water should be 300 – 400 g/m².

A toothed spatula with triangular-shaped teeth, 4 mm high, is recommended for applying the adhesive. When bags are used, a run of adhesive of appropriate length is to be laid. The quantity applied should be adequate to ensure that the adhesive between the boards can flow when pressed. In general, assembly tools are not required.

SILCA® 250KM insulation boards are to be bonded with staggered joints, covering the whole surface and with full joints. The offset must be at least 100 mm. The thickness of the joint must not exceed 4 mm.

SILCADUR-HFS adhesive is to be used exclusively for bonding **SILCA® 250KM insulation boards**. The insulation boards must not be filled or plastered with the adhesive. Parts broken out of the boards are to be replaced only by **SILCA® 250KM** insulation board material, since the filling of defective spots with adhesive results in the development of thermal bridges. Cavities must not be filled with **SILCADUR-HFS adhesive**.

The setting time of **SILCADUR - HFS** adhesive is approx. 24 hours, depending on room temperature. The thermal load is allowable after three days at the earliest.

Cleaning of the devices is possible with water as long as the adhesive has not cured. Flexible tools such as toothed spatula may also be cleaned mechanically when the adhesive is dry.

For wall mounting observe the following:

On solid surface without any detaching layers, point-bonding of **SILCA® 250KM insulation boards** can be effected. The adhesive points of approx. 100 mm diameter should be in grid spacing arrangement of maximum 30cm.

SILCA® 250KM insulation boards must not be bonded on walls with gypsum plaster board covering B or F to DIN 18180. In this case, the boards must be drilled before and fixed with suitable insulation nails or similar. The distance of the fasteners must be 30 cm at maximum.

Depending on the individual case of application and where appropriate, an active air ventilation has to be provided.

Subject to technical changes.

