

Insulating board

SILCA® 250KM

Over the past years CASITHERM / SILCA has been the only German producer of calcium silicates to show that with innovative products you can continuously improve both the safety and productivity in the assembly of fireplaces. Our guarantee is the close contact to specialist craftsmen and the specialized trade and our treasure trove of experience obtained in the course of time, not least in the insulation in the industrial sector.

For many years furnace constructors inside and outside Europe have relied on the **SILCA® 250KM** calcium silicate insulation board authorized by the **Deutsche Institut für Bautechnik Berlin** (German Institute for Civil Engineering), **national technical approval no. Z-43.14-117**. The test results for the determination of the equivalent thicknesses according to the technical rules of the tiled stove and air heating building trade are shown in the following diagrams.

SILCA® 250KM is a real European champion. Thus the VKF Vereinigung Kantonalen Feuerversicherungen (Association of Swiss Cantonal Fire Insurance Underwriters) issued the **Swiss Fire Prevention Approval no. 15202**, the biggest Scandinavian research institute **SINTEF** issued **certificate no. 120-0238**, and for sure our **SILCA® 250KM** insulation board also achieves the results required by the new Austrian standard **Ö-Norm B8311** in its issue 2013-12-15. Across the borders this means safety and untroubled pleasure in the building and heating of domestic fire places. According to standard EN 14 306:2010 **SILCA® 250KM** received the certificate no. 0432-CPD-420002242/2-6.



Material designation SILCA® 250KM

Approval in Germany	National technical approval no Z-43.14-117 valid for fireplace and tiled stove construction
Approval in Switzerland	Fire Prevention Approval no. 15202
Approval SINTEF NBL	120-0238 (50 mm)
CE-Certificate	0432-CPD-420002242/2-6
Reaction to fire	Non-combustible A1 at DIN EN 13501-1
Bulk density (± 10%)	250 kg/m ³
Porosity	approx. 90 %
Compressive strength	> 1,4 MPa
Thermal resistance (board thickness 40 mm)	≥ 0,5 m ² K/W
Thermal conductivity λ at 200 °C	< 0,1 W/m K
Thermal expansion at 500 °C	< 0,2 %
Standard dimensions in mm	3.000x1.250, 2.000x1.250, 1.250x1.000, 1.250x500, 1.000x625, 625x500
Standard thicknesses in mm	30 - 100

The properties indicated are typical values obtained in serial testing and determined by acknowledged test methods. Product specific spreading of results should be taken into account. The indications do not represent guaranteed properties and cannot be used for any warranty claim. Subject to technical modifications.

SPECIAL FEATURES

- space saving due to thin insulation thickness
- non-combustible
- environmentally compliant construction material
- physiologically safe
- fire protecting wall and thermal insulation in one single construction material
- large-size boards
- easy handling and assembling
- easy disposal as building waste
- applicable for insulation and construction

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SILCA® 250KM replaces both, fire protecting wall and thermal insulation, in only one construction material and not only for this reason guarantees more favorable results than comparable products. The required thickness of the insulation layer is determined on the basis of the assembly instructions of the stove manufacturers, the technical rules TR-OL and further national regulations. Depending on the individual case of application and where appropriate, an active air ventilation has to be provided.

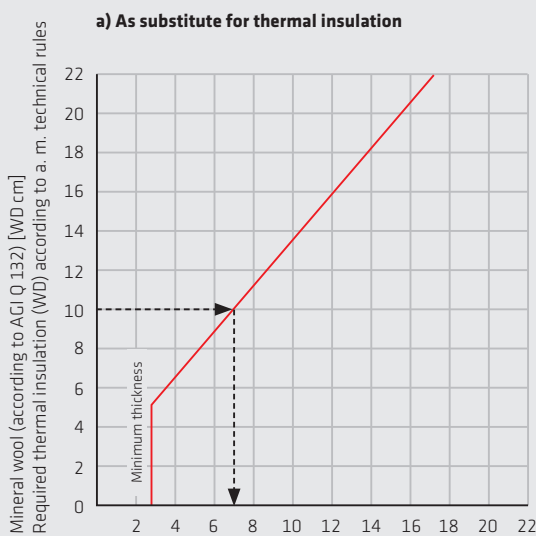
The main components of the SILCA calcium silicate boards are lime and sand. These are physiologically safe and Classified as environmentally compliant construction material. This is guaranteed by our modern production facilities, permanent quality control, external supervision and certification according to DIN EN ISO 9001: 2008. The environmental compatibility is certified by the environmental product declaration according to ISO 14025 and EN 15804 issued by the Institut Bauen und Umwelt e.V. (German institute for construction and environment), declaration nro. EPD-CSP-2013111-D.

The boards are pressed on one of the world's largest filter presses for the production of calcium silicates to a dimension of **3.000 x 1.250 mm**. The standard dimensions are **1.250 x 1.000 mm, 1.250 x 500 mm and 1.000 x 625 mm**. The standard thicknesses range from 30 mm to 100 mm. A further quality feature of the SILCA calcium silicate boards is the firm and dust-free moulding skin. Therefore, a further field of application is the lining of fireplaces.

Apart from the standard dimensions individual cuts can be produced directly in the plant on demand. **SILCA® 250KM** can be treated with standard wood machining tools and also be screwed on assembling. For further information on the assembly of our light construction **flue shaft SILCA® LC90** we refer to our special brochure.

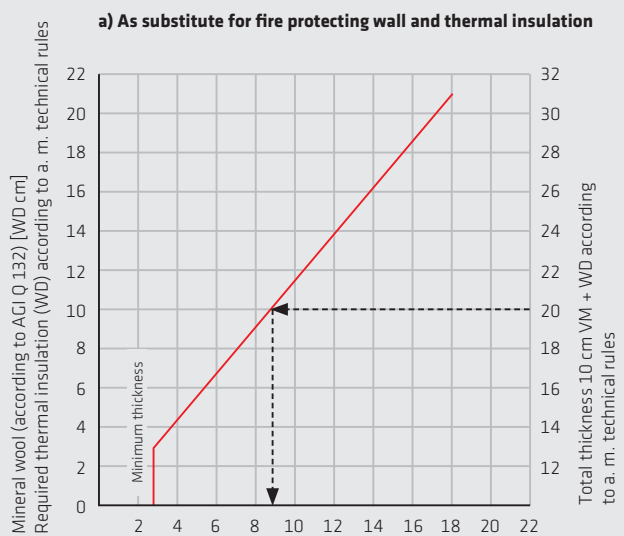


For application according to the regulations of the tiled stove and air heating trade



Example:
Required thermal insulation (WD) with mineral wool (according to AGI Q 132) according to manufacturer instruction: 10 cm

Corresponds 7,3 cm SILCA® 250KM



Beispiel:
Required thermal insulation (WD) with mineral wool (according to AGI Q 132) according to manufacturer instruction: 10 cm
Required fire protection wall (VM) according to technical regulation: 10 cm
Total thickness according to DIN 18892: 20 cm

Corresponds 8,9 cm SILCA® 250KM

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SILCA U160 is a moulded part out of **SILCA® 250KM** for the protection of wires and sensitive components inside modern fireplaces. The open cross-sectional area dimensioned 40 x 80 mm allows the subsequent installation or exchange of major connection assemblies. The height of the moulded part of 625 mm facilitates a simple installation into the existing **SILCA® 250KM** insulation.

