silca
refractory solutions

SILCARAPID® 850CB
CONSTRUCTION BOARD

SILCARAPID® 850CB
EASY, FAST, GOOD - RAPID

SILCA is the international service and sales company of the Calsitherm Group, specializing in high-temperature materials and lightweight thermal insulation in various applications. As the only German manufacturer of calcium silicate, we have demonstrated in the past years that through innovative products both safety and productivity during installation of fireplaces may further be improved. This is guaranteed by means of close cooperation with specialist tradesmen and retailers as well as through the wealth of experience that SILCA GmbH has been able to gain over the years, not least in insulation in the industrial sector. The manual furnace construction is diverse and demanding and requires optimised solutions

for the most varied requirements. For the manual construction of fireplaces, SILCA GmbH expands the existing systems SILCA® 250KM / SILCACON and SILCAHEAT® 600C with a further versatile system that is easy to implement and quick to realise.

With the **SILCARAPID® System** SILCARAPID® 850CB enables multiple options in fireplace design. The quick and safe installation simplifies and reduces the effort for the same. The new calcium silicate board convinces with its smooth and firm surface. Subsequent time-consuming plastering of the surface is not necessary any more with SILCARAPID® 850CB.

Due to its thinness, large size and resilient quality, SILCARAPID® 850CB facilitates a precise installation and an even heat distribution. Stainless steel or phosphated screws, nails or staples are recommended for the installation.

The construction board SILCARAPID® 850CB meets the requirements of the technical rules for Stove and Air Heating Construction TR-OL and DIN EN 14306. The calcium silicate board is non-combustible, externally monitored by MPA NRW (Materials Testing Agency of North Rhine-Westphalia) and CE certified. SILCARAPID® system can be easily combined with the insulation board SILCA® 250KM and the construction board for fireplaces SILCAHEAT® 600C. Please also refer to our comprehensive brochure on domestic fireplaces and chimneys.

The main ingredients of the SILCA calcium silicate boards are lime and sand. This is ensured by modern production facilities, ongoing quality controls, external monitoring and certification according to DIN ISO 9001: 2015.

Sample installation SILCARAPID

SILCARAPID® 850CB
Construction board

SILCARAPID® 850CB

SILCARAPID® 850CB is a new type of calcium silicate board with a smooth surface. A subsequent time-consuming plastering is not necessary any more. The 17 mm thin, very strong and self-supporting construction boards allow numerous alternatives for cladding sophisticated fireplaces.

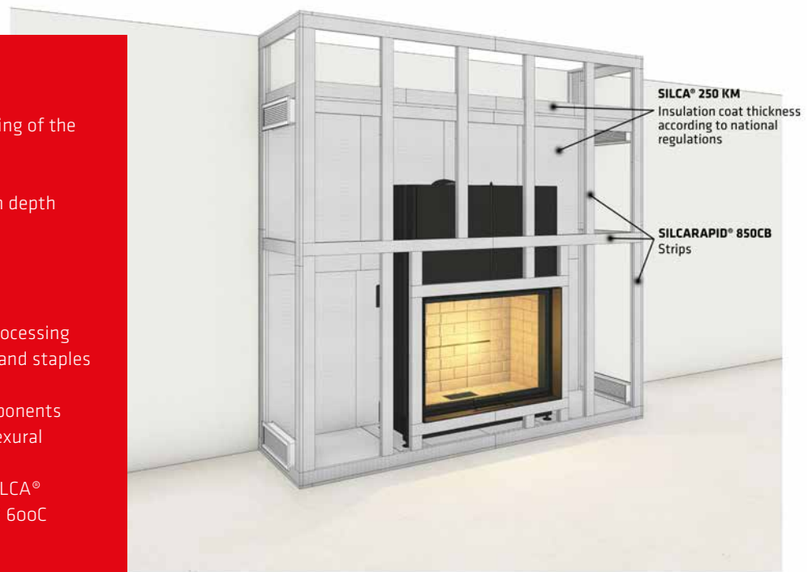
The SILCARAPID® 850CB construction boards and SILCARAPID® stripes are joined using stainless steel or phosphated screws, staples or nails. We recommend the use of power tools.

As an accessory, SILCARAPID® stripes are available as installation aid. The thin calcium silicate stripes, also 17 mm, can be used for the necessary sub-structure of the SILCARAPID® system and enable numerous construction variants. Attaching to SILCA® 250KM and SILCAHEAT® 600C boards is also possible. A pre-assembly of parts of the construction with SILCARAPID® 850CB can be done in advance in the workshop. From the 1250 x 68 x 17 mm size, in addition to straight struts, L and T angles can also be easily produced, which can be quickly extended to the desired length.

The innovative SILCARAPID® system is supplemented with the SILCACON primer HFS, SILCACON putty filler and SILCACON painting plaster. With these accessory components, the polished smooth surface of the SILCARAPID® 850CB can be constructed with ease and simplicity upon customer request.

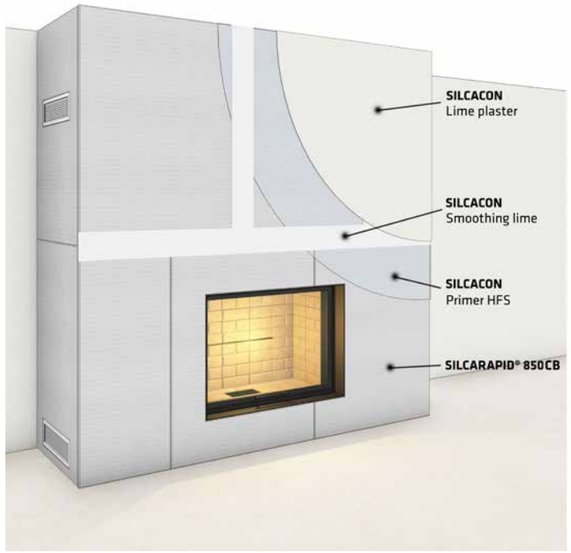
SPECIAL PROPERTIES

- Time-consuming plastering of the surface not necessary
- Minimal board thickness
- Very minimal installation depth
- Self-supporting
- Pre-assembly possible
- Non-combustible
- Large size boards
- Simple treatment and processing Installation with screws and staples possible
- Compatible system components
- High compressive and flexural strength
- Can be combined with SILCA® 250KM and SILCAHEAT® 600C

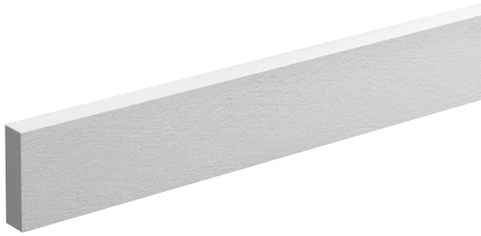


The back side of SILCARAPID® 850CB is produced with a moulded skin for a further design option with ceramic or natural stone claddings. The treatment and processing are possible with standard wood working tools. Through the minimal board thickness, large size and resilient quality, a precise installation is easily possible. The high density ensures an even distribution of heat over the surface of the fireplace.

In addition to the standard sizes, packaging and cuts are also possible upon request. Please pay attention to the installation manual as well.



Sample installation SILCARAPID



SILCARAPID® 850CB
Stripes

Technical data SILCARAPID ® 850CB	
CE Certificate	0432 CPR-00697-01
Product norm	DIN EN 14306
Fire performance	non-combustible A2 - s1.d0
Thermal expansion at 300°C	0.05 %
Thermal conductivity according to DIN EN 12667 10°C dry cut	0.15 W/mK
Size in mm	1000x625/1250x500/1250x1000/1500x1250/ 2440x1250/2500x1250/3000x1250
Board thickness in mm	17
Weight 1250x1000x17 mm	18.06 kg
Screw pull-out resistance	1000 N
Application limit temperature	1000°C
Bulk density (EN 1094-4)	850 kg/m³
Flexural strength (EN 12089)	12 MPa
Cold compressive strength (EN 1094-5)	12 MPa
Load mounting on vertical surfaces - screw 5.0x60/36 Chipboard screw countersunk head	Screw depth 15 mm 20 kg or 0.2 kN
Load mounting on vertical surfaces - screw 5.0x60/36 Chipboard screw countersunk head	Screw depth 2 x 15 mm (double layered) 50 kg or 0.5 kN
SILCARAPID® 850CB stripes	Screw depth 2 x 15 mm (double layered) 50 kg or 0.5 kN
SILCARAPID ® 850CB stripes	1250 x 10 x 17 mm

The properties mentioned are typical values from series tests, which were determined according to recognised test methods. Material and product-specific variations must be taken into account. The information does not indicate assured properties and cannot be used for a guarantee. Subject to technical modifications.

SILCACON Primer HFS

SILCACON Primer HFS is offered with a newly revised formulation for surface treatment of **SILCA® 250KM**, **SILCAHEAT® 600C** and **SILCARAPID® 850CB**. The new type of primer reduces the capillary activity of the mentioned calcium silicate boards and strengthens the surface. This enables improved further processing with SILCACON adhesive, SILCACON Filler, SILCACON Painting plaster and SILCACON plaster/smoothing lime. SILCACON primer HFS is mixed with clean water in a ratio of up to 1:2 and can be applied with a brush, roller or sprayer. SILCACON primer HFS is permeable and alkali-resistant. The new formulation guarantees thermal stability on the outside of the calcium silicate surfaces. It is available in 1 litre bottles and 5 litre canisters.

SILCACON Filler

SILCACON Filler is a white, permeable and low-chromate full and surface putty for SILCARAPID® 850CB calcium silicate boards. It is used for filling (levelling) the butt joints as well as the screw, staple and nail heads and for smoothing, repairing and coating the SILCARAPID® 850CB after installation. SILCACON Filler is hydraulically hardening, highly alkaline and has low tensile strength (hardens without cracks). The treatment is very simple. The surface of the SILCARAPID® 850CB is pre-processed with SILCADUR primer HFS. SILCACON Filler is mixed intensively with clean water until a homogeneous mass is formed. The coating is applied in a thickness of up to 4 mm. Depending on the processing temperature and general conditions, the SILCACON Filler can be handled on the SILCARAPID® 850CB boards for up to 15 minutes.

SILCACON Painting plaster

Due to its strong filling capacity, SILCACON Painting plaster enables a high surface quality while designing the SILCARAPID® 850 CB construction board. The fine structure is made possible due to the small grain size of max. 0.5 mm. The painting plaster is permeable, with low tensile strength and free of plasticizers. It is used for the top coat of SILCARAPID® 850CB, but also on SILCA® 250KM or SILCAHEAT® 600C boards plastered with SILCACON plaster/smoothing lime. SILCARAPID® 850CB must be pre-processed with SILCACON primer HFS or SILCACON Filler before SILCACON Painting plaster is applied. SILCACON Painting plaster is based on potassium silicate with very little organic additives and is alkali-resistant. Under standard conditions, the surface dries after approx. 12 hours.

SILCA: MORE THAN 30 YEARS OF KNOW-HOW AND INNOVATION

SILCA is the international service and sales company of the Calsitherm Group, specializing in high temperature materials and lightweight thermal insulation in various applications.

As the only German manufacturer of calcium silicate, we have demonstrated in the past years that through innovative products both safety and productivity during installation of fireplaces may continuously be improved. From A for aluminium casting to D for domestic fireplaces and chimneys to H for heat treatment systems, we cover all areas of refractory technologies in a wide variety of industries. In addition to the delivery of materials, we offer an integral service for technical questions and developments. This includes consulting, engineering, material delivery and complete services including installation of high-temperature systems.

With our companies SILCA Italia, SILCA Insulation (SEA) Malaysia, SILCA South Africa, SILCA Mexico as well as SILCA Amsterdam and International Syalons, we are active worldwide.

Consistent quality requires the systematic co-operation of all parties involved in the processes of production, sales and application. This is how we develop high-performance products that meet the high quality requirements of our customers. By doing so, we build on a know-how that has grown over more than 30 years and thus portray the basis for quality and innovation.

The key factors of our success are the high quality of our products, the high level of customer satisfaction and motivated and qualified employees.

SILCA is a member of

GesamtVerband OfenBau

Your local specialist dealer

silca
refractory solutions

SILCA Service and Sales Company for Insulation Materials mbH
Elberfelder Street 200 a, 40822 Mettmann
Telephone: +49 2104 9727-0 | Fax: +49 2104 76902 | info@silca-online.de | www.silca-online.de