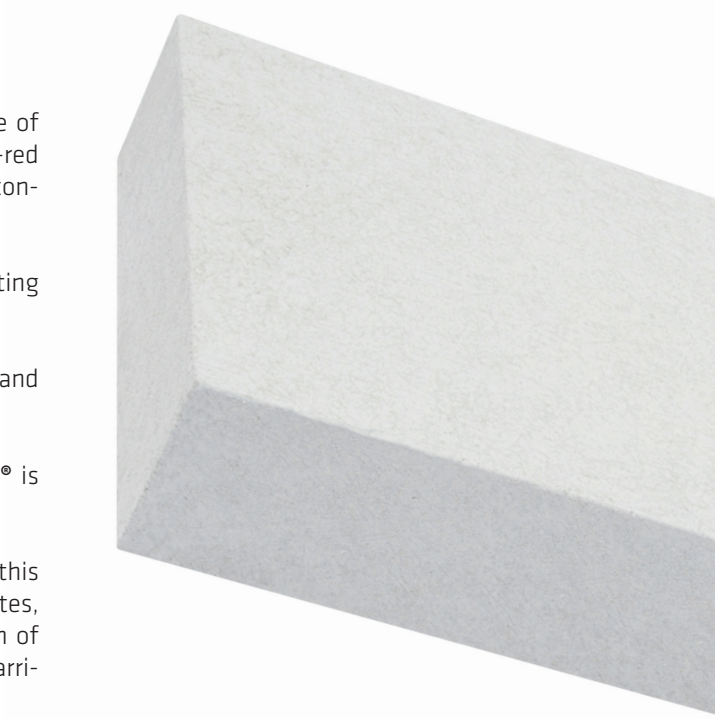
Lightweight calcium silicate boards

MICROCAL® 1100



MICROCAL® 1100 is a lightweight, pressure-resistant calcium silicate of the new generation. Through the addition of special opacifying infra-red agents, the amount of thermal radiation is reduced and the thermal conductivity in the high temperature range significantly reduced.

MICROCAL®is physiologically harmless and represents the trend-setting back-up insulation for modern furnace concepts.

MICROCAL® boards are large in size and have a good thermal stability and low thermal conductivity.

In addition to its outstanding thermophysical properties, **MICROCAL®** is resistant to reducing protective gases like H_2, CO, CH_4, NH_3, N_2.

MICROCAL® boards are surface-active and absorb water but release this again extremely rapidly. For work in combination with refractory concretes, a hydrophobic sealing primer, which can be applied during production of the boards, is recommended. In this way time-consuming work with barrier film can be dispensed with.

Machining
The elements can be machined using conventional woodworking machines. An appropriate dust extraction system should be provided. As breathing protection we recommend that a dust mask is worn. We will be pleased to produce the particular parts you require on our modern computer-controlled machining and grinding machines.

SPECIAL FEATURES

- environmentally friendly
- good insulating properties
- easy to machine
- resistant to protective gases
- low bulk density
- low accumulation of heat
- large-size

MICROCAL® 1100

MICROCAL® 1100		Method	Unit	
Upper application limit temperature		EN 1094-6	°C	1,100
Bulk density (± 10 %)		EN 1602	kg/m³	260
Open porosity (in acc. with standard)		EN 993-1	%	90
Compression strength		EN 826	MPa	1.2
Flexural strength		EN 12089	MPa	0.4
pH-value		EN 13468		approx. 9
Shrinkage after 12 h		EN 1094-6		
Length and width	750 °C		%	0.25
Thickness	750 °C			0.90
Length and width	1,000 °C			0.30
Thickness	1,000 °C			1.30
Thermal conductivity λ at t_m	200 °C	EN 12667	W/(m K)	0.08
	400 °C			0.09
	600 °C			0.12
	800 °C			0.15
Specific thermal capacity			kJ/(kg K)	0.8 – 1.2
Coefficient of thermal expansion	RT-750°C	DIN 51045-5	$K^{-1} \times 10^{-6}$	⊥ 6.4
⊥ perpendicular to board plane				
// parallel to board plane				// 6.4
Chemical composition				
Calcium silicate			%	82-87
Zircon				5-10
R_xO_x (R=Fe, Ti, K, Na)				1
Annealing loss				7
Dimensions				
Standard sizes	Length x width		mm	500 (±2) x 1,250 (0/+10) 1,000 (±2) x 1,250 (0/+10) 1,500 (±2) x 1,250 (0/+10) 1,000 (±2) x 625 (±2)
	Thickness		mm	25/30/40/50/60/65/70/75/80/90/100
Tolerances standard board				
unpolished	Thickness		mm	≤ 50 ± 2; > 50 -3/+2
ground on one side				± 0.6
ground on both sides				± 0.4

The properties mentioned are typical values obtained according to the listed methods. Product variations have to be taken into account. The data do not represent guaranteed properties and cannot be used for any warranty claim. Data are subject to technical modifications.

silca
refractory solutions

SILCA Service- und Vertriebsgesellschaft für Dämmstoffe mbH
Postfach 20 02 65, 40811 Mettmann | Auf dem Hüls 6, 40822 Mettmann
Telefon: +49 2104 9727-0 | Fax: +49 2104 76902 | info@silca-online.de | www.silca-online.de