CALCON 1000-SC

Calcon is a lightweight, pressure-resistant, and high-temperature-resistant insulation material based on calcium silicate, developed with a focus on environmental sustainability. It has proven its reliability as a backing insulation material in a wide range of industrial applications.

In sectors such as industrial furnace construction, drying systems, and equipment manufacturing, as well as in the cement and petrochemical industries, **Calcon** is frequently chosen as a cost-effective insulation solution.

In addition to its excellent thermal properties, **Calcon** is resistant to reducing protective gases such as hydrogen (H_2), carbon monoxide (CO), methane (CH_4), ammonia (NH_3), and nitrogen (N_2).

Calcon boards are surface-active and absorb moisture. When used in combination with refractory concrete, it is recommended to apply a hydrophobic sealing primer during the board production process. This eliminates the need for time-consuming work with barrier films.

Calcon is safe to use and recognized as an environmentally friendly construction material. It is certified with an internationally harmonized Type III environmental label in accordance with ISO 14025 and EN 15804. Disposal is handled as standard construction waste.

Machining

Calcon elements can be processed using standard woodworking equipment. It is recommended to use an appropriate dust extraction system during machining. For personal protection, wearing a dust mask is advised. Upon request, we can manufacture custom parts using our advanced CNC machining and grinding equipment.

Key Characteristics

- Environmentally responsible composition
- Excellent thermal insulation performance
- Easy to process with standard tools
- Resistant to reducing protective gases
- Low bulk density for lightweight applications
- Minimal heat storage capacity
- Available in large-format boards

Form: A2-027
Effective: 16102025/WJ/ch
Supersedes: 12032025/SR/ka
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Chemical Analysis

Upper application limit temperature EN 1094-6	°C	1000
Bulk density (± 10 %) EN 1602	kg/m³	255
Open porosity (in acc. with standard) EN 993-1	%	90
Compression strength EN 826	MPa	1.6
Flexural strength EN 12089	MPa	0.5
Shrinkage after 12 h by upper application limit temperature Length and width EN 1094-6	%	1.0
Thermal conductivity λ at t_m		
200 °C	W/(m K)	0.08
400 °C	W/(m K)	0.10
600 °C	W/(m K)	0.12
800 °C	W/(m K)	0.18
EN 12667		
Specific thermal capacity	kJ/(kg K)	0.8 – 1.2
Coefficient of thermal expansion 20°C - 750°C DIN 51045-5		
⊥ perpendicular to board plane	$K^{-1} \times 10^{-6}$	⊥ 6.4
// parallel to board plane	$K^{-1} \times 10^{-6}$	// 6.4
Chemical composition		
Calcium silicate	%	91
$R_x O_x$ (R=Fe, Ti, K, Na)	%	1
Annealing loss	%	8

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

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