

Dense calcium silicate boards

SILCAPAN 750, 845, 850

SILCAPAN are technical ceramics on the basis of calcium silicate.

SILCAPAN 750, 845 and **SILCAPAN 850** have bulk densities of 850 and 1,050 kg/m³, respectively and are usable up to temperatures of 1,000 °C.

SILCAPAN products are used in the mechanical engineering and apparatus construction sector as structural components when high temperature resistance as well as thermal and electrical insulation are required. These products are used, for example, as spacers, flanges, insulation housings for electronic components or for hot press insulation.

Machining

SILCAPAN can be precisely machined to close tolerances. With our 5-axis processing machines we can produce the most complicated geometries.

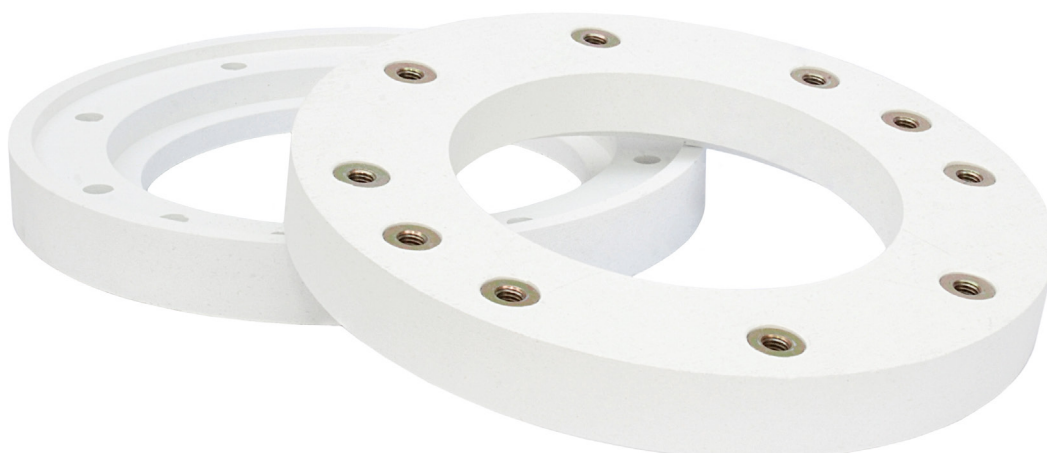
SPECIAL FEATURES

- good insulation
- high strength
- dimensionally stable
- self-supporting
- good machinability

SILCAPAN 845



SILCAPAN 850



SILCAPAN 750, 845, 850

SILCAPAN		Method	Unit	750	845	850			
Upper application limit temperature		EN 1094-6	°C	1,000	1,000	1,000			
Bulk density ($\pm 10\%$)		EN 1602	kg/m ³	850	1,050	900			
Open porosity (in acc. with standard)		EN 993-1	%	69	60	68			
Compression strength		EN 826	MPa	12	26	17			
Flexural strength		EN 12089	MPa	7	13	8			
Shrinkage after 12 h		EN 1094-6	%						
Length and width	750 °C						0.40	0.20	0.40
Thickness	750 °C						1.50	0.60	2.00
Thermal conductivity λ at t_m	200 °C	EN 12667	W/(m K)	0.24	0.27	0.24			
	400 °C			0.26	0.28	0.26			
	600 °C			0.29	0.31	0.29			
	800 °C			0.32	0.35	0.32			
Specific thermal capacity			kJ/kg K	0.8 - 1.2	0.8 - 1.2	0.8 - 1.2			
Thermal expansion coefficient \perp perpendicular to board plane \parallel parallel to board plane	20 °C - 750 °C	DIN 51045-5	K ⁻¹ x 10 ⁻⁶	\perp	\parallel	\perp	\parallel	\perp	\parallel
				5.2	5.9	4.3	5.3	7.2	6.2
Chemical composition			%						
Calcium silicate hydrate				-	91	-			
(CaO-; MgO-; Al ₂ O ₃ -) silicate hydrate				92	-	91			
R _x O _x (R=Fe, Ti, K, Na)				1	1	1			
Annealing loss				7	8	8			
Dimensions									
Standard sizes		Tolerances							
	Length	± 3	mm	1,250					
	Width	± 3	mm	1,000					
	Thickness	0/+0.8	mm	10/15/20/25/30/40/50/75/100					
Surfaces machined.									
Other dimensions are available on request.									

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.