

Dense calcium silicates

## SILCAPAN 845, 850

**SILCAPAN** boards are large-size, self-supporting insulating boards based on calcium silicate.

**SILCAPAN 845** and **SILCAPAN 850** belong to the group of dense calcium silicates and are employed in the general machine and apparatus construction sector as structural components. By reason of their good strength and thermal insulation properties, they are suitable in particular for highly loaded and load-bearing structural components, e.g. as spacers and flanges or for the insulation of hot presses.

**SILCAPAN 845** is characterized by its especially fine structure and surface.

Thanks to the ease with which they can be machined, **SILCAPAN 845** and **850** boards can also be used in applications where complex geometries are required. The large-size insulating boards are dimensionally stable and represent an innovative material for the designer of machines, furnaces and apparatuses.

### Machining

The elements can be machined using woodworking machines. As a result of the high strength values, tools with carbide cutting elements should be used. An appropriate dust extraction system should be provided. We possess a comprehensively equipped machining shop. We will be pleased to produce the particular parts you require on our modern computer-controlled machines.

### SPECIAL FEATURES

- high strength
- large-size
- self-supporting
- good machinability

**SILCAPAN 845**



**SILCAPAN 850**



**SILCAPAN 845, 850**

Material designation		Method	Unit	SILCAPAN 845	SILCAPAN 850
Upper application limit temperature		EN 1094-6	°C	1.000	1.000
Bulk density (± 10 %)		EN 1602	kg/m <sup>3</sup>	1.050	900
Open porosity		EN 993-1	%	60	68
Compression strength		EN 826	MPa	26	17
Flexural strength		EN 12089	MPa	13	8
Hardness		DIN 53505	Shore D	60	55
Shrinkage	12 h at	EN 1094-6			
Length and width	750 °C		%	0,2	0,05
Thickness	750 °C			0,60	0,20
Thermal conductivity $\lambda$ at $t_m$	200 °C	EN 12667	W/(m K)	0,27	0,24
	400 °C			0,28	0,26
	600 °C			0,31	0,29
	800 °C			0,35	0,32
Specific thermal capacity			kJ/kg K	0,8 - 1,2	0,8 - 1,2
Thermal conductivity	RT-750 °C	DIN 51045-5		$\perp$	$\parallel$
$\perp$ perpendicular to board plane					$\perp$
$\parallel$ parallel to board plane	$\times 10^{-5}$		m/m K	4,3	5,3
Chemical reference analysis (%)					
Calciumsilicat			%	91	-
(CaO-; MgO-; Al <sub>2</sub> O <sub>3</sub> -)Silicat			%	-	94
R <sub>x</sub> O <sub>x</sub> (R=Fe, Ti, K, Na)			%	1	1
Annealing loss			%	8	5
Standard dimensions		Tolerances			
(surfaces ground on both side, without trimming)	Length	*±2; **0/+50	mm	1.000/1.500*/3.000**	
	Width	0/+20	mm	1.250	
	Thickness	0/+0,8	mm	10/12/15/20/25/50/75	

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.

