

Density calcium silicate board (annealed)

CALCAST® CC 500

One further high temperature isolating material out of calcium silicate is our **CALCAST® CC 500**.

This material has a volume weight of 1.200 kg/m³ and a maximum application temperature of 1.200 °C. The quality is outstanding due to its excellent thermal shock resistance. It is not without reason that this is the most thermal shock resistant product in our **CALCAST®** product group. The material is not wetted by liquid non-ferrous metals.

CALCAST® CC 500 is used for channel cover, for the insulation of heating lids, as protective shield and as baffle plate.

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 dispose of a well equipped machining workshop. Therefore, even complicated geometrics can be manufactured on our 5-axes-processing machine.

Storage

For the special area of application where there is contact with liquid non-ferrous metals, the correct storage of the boards and shaped parts in dry rooms and at temperatures over 20 °C is important.

SPECIAL FEATURES

- thermal conductivity
- high productivity due to long service life
- dimensionally stable
- high compression and flexural strength
- excellent edge stability
- no reaction against basic or neutral media and lubricants
- is not wetted by liquid non-ferrous metals
- physiologically harmless
- accurate workability in tight tolerances



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Material designation		Method	Unit	CC 500	
Upper application limit temperature		EN 1094-6	°C	1.200	
Bulk density (± 10 %)		EN 1602	kg/m ³	1.200	
Open porosity (in acc. with standard)		EN 993-1	%	60	
Compression strength		EN 826	MPa	11	
Flexural strength		EN 12089	MPa	7	
Hardness, Shore D		DIN 53505		50	
Shrinkage after 12 h Length and Width Thickness Length and Width Thickness	750 °C	EN 1094-6	%	0,05	
	750 °C			0,40	
	1.000 °C			0,10	
	1.000 °C			0,70	
Thermal conductivity λ at t_m	200 °C	EN 12667	W/(m K)	0,22	
	400 °C			0,24	
	600 °C			0,26	
	800 °C			0,30	
Specific thermal capacity			kJ/(kg K)	0,8-1,2	
Coefficient of expansion ⊥ perpendicular to board plane // parallel to board plane	RT-750 °C	DIN 51045-5	K ⁻¹	⊥	//
	x 10 ⁻⁶			3,7	5,9
Chemical reference analysis (%) Calcium Silicate (CaO-; MgO-; Al ₂ O ₃ -)Silicate R _x O _x (R=Fe, Ti, K, Na)			%	96-97	
			%	-	
			%	0,5	
Annealing loss			%	3	
Standard sizes (Surfaces ground on both sides, without trimming)		Tolerances			
	Length	- 2/ +50	mm	1.000/1.500/3.000	
	Width	0 / +15	mm	1.250	
Thickness	0 / ±0,4	mm	12/19/25/31/38/50/76/100		
Cuttings are available on request.					

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.