

Boards based on aluminium silicate and alkaline earth silicate wool

SILCABOARD, SILCASAL

110-50, 126-26, 126-35, 140Z, 85-97B, 110-96B

SILCABOARD boards are vacuum-shaped high temperature insulating boards of special mixtures of aluminium silicate fibres. The different bulk densities and classification temperatures in which the product is available make it possible for the boards to be used in very different areas in the construction of furnaces, machines and apparatuses as well as also in the aluminium industry.

SILCABOARD boards have a good level of homogeneity and a high level of dimensional stability. Qualities **126-35** and **140Z** are characterized by good strength and have proved themselves for front-side use. The maximum application temperature depends on the particular construction and in cases of doubt should be discussed with our Technical Department.

Note:

Our EC safety data sheet will inform you about the protective measures to be taken when handling and using aluminium silicate wool as well as the health risks.

SILCASAL boards are bound with organic binders. They are manufactured by pressing and thereby possess high bulk density in combination with good mechanical strength. They are very well suited for thin intermediate layers for reducing thermal bridges.

SILCASAL 85-97B is manufactured of bio-degradable mineral wool and fillers. The synthetic mineral fibres used are not classified as hazardous material in accordance with GHS/CLP CE N°1272/2008.

SILCASAL 110-96B is a board based on wollastonite and contains no synthetic mineral fibres.

SILCABOARD 110-50 is an inorganic, double-hardened aluminium silicate fibre board. By reason of its special mechanical strength, this board is used, for example, for the lightweight lining of launder systems in the aluminium industry.

Machining

SILCABOARD and **SILCASAL** boards can be machined using woodworking machines. An appropriate dust extraction system should be provided.

SILCASAL boards can be matched to curved shapes by moistening them. After they have dried out again, the boards regain their initial strength.

Please see data sheet **SILCAVAC / SILCABOARD** for further qualities.



SPECIAL FEATURES

- low thermal conductivity
- resistant to high temperatures
- good resistance to temperature changes
- good machinability

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SILCABOARD SILCASAL		Unit	SILCASAL 85-97B	SILCASAL 110-96B	SILCABOARD 126-26	SILCABOARD 126-35	SILCABOARD 140Z
Classification temperature		°C	850	1,100	1,200	1,200	1,400
Bulk density		kg/m ³	910	950	300	390	340
Flexural strength		MPa	-	-	>0.7	>0.8	>0.8
Shrinkage after 24 h		°C	850	1,000	1,200	1,200	1,400
		%	< 2	< 1	< 4	< 4	< 4
Thermal conductivity λ at t_m	400 °C	W/(m K)	0.10	0.12	-	-	-
	600 °C		0.11	0.13	0.09	0.13	-
	800 °C		0.13	0.16	0.13	0.16	0.16
	1,000 °C		-	0.20	0.17	0.19	0.20
	1,200 °C		-	-	-	-	0.26
Chemical reference analysis	Al ₂ O ₃	%	20.6	17.9	42.0 - 50.0	42.0 - 50.0	28.0 - 32.0
	SiO ₂		53.3	44.5	50.0 - 58.0	50.0 - 58.0	52.0 - 56.0
	ZrO ₂		-	-	-	-	14.0 - 18.0
	Fe ₂ O ₃ + TiO ₂		3.9	1.2	< 0.2	< 0.2	< 0.2
	CaO + MgO		3.7	20.2	-	-	-
	Alkalis		1.9	0.9	< 0.25	< 0.25	< 0.25
Organic binder		%	10.0	12.8	-	-	-
Annealing loss		%	17.0	16.0	< 7.0	< 9.0	< 9.0
Dimensions							
Standard sizes	Thickness	mm	2 - 10	1 - 10	5 - 50*	5 - 50*	5 - 50*
	Length x width	mm	1,000 x 1,000	1,000 x 1,000	1,000 x 610 1,250 x 1,000	1,000 x 610 1,250 x 1,000	1,000 x 610 1,250 x 1,000

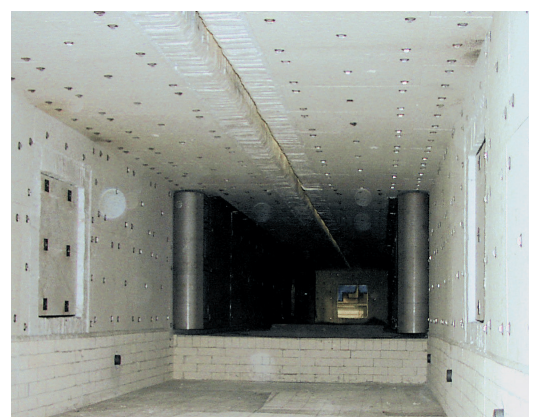
* Special thicknesses or hardened boards are available on request.

In addition to the specified boards, other SILCABOARD qualities for temperature ranges up to 1,800 °C can be supplied.

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.

SILCABOARD 110-50		Unit	
Classification temperature		°C	1,100
Bulk density		kg/m ³	approx. 500 - 600
Shrinkage after 24 h	1,000 °C	%	1.5
Thermal conductivity λ at t_m	400 °C	W/(m K)	0.10
	600 °C		0.12
	800 °C		0.15
Chemical reference analysis	Al ₂ O ₃	%	25
	SiO ₂		72
Organic binder		%	3
Dimensions			
Standard sizes	Thickness	mm	25 - 50
	Length x width	mm	1,000 x 610

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.

**SILCABOARD boards for the construction of furnaces as ceiling and side lining.**