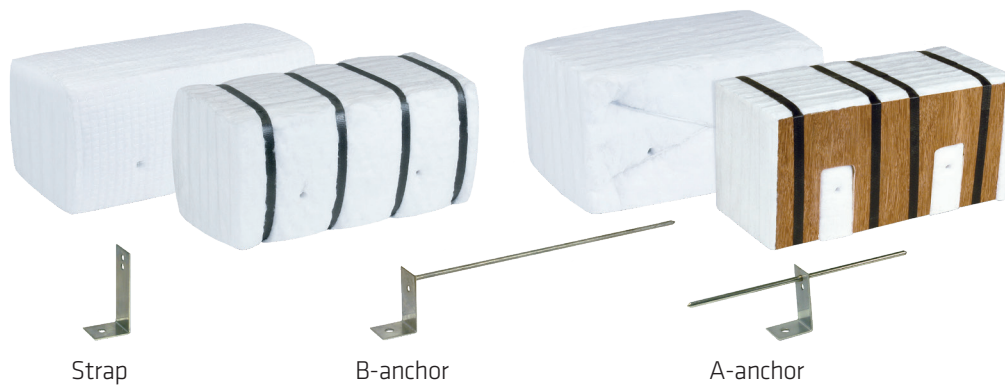


Lightweight construction system of aluminium silicate, polycrystalline and alkaline earth silicate wool

SILCASTACK, SILCAFIX SILCAWOOL-STACK / -FIX

SILCASTACK and **SILCAFIX** are lightweight construction systems of compacted fibre blanket strips based on aluminium silicate and polycrystalline wool including mechanical anchoring for front-side use in industrial furnaces and apparatuses for temperatures up to 1,450 °C. The system consist of prefabricated and perforated fibre modules which are manufactured of different fibre types. Different bulk densities and module dimensions can be specified. If required wedge modules, angled modules etc. can be manufactured.



SILCASTACK and **SILCAFIX** systems are manufactured of special homogeneous, flexible fibre blankets with high resilience and classification temperatures of 1,260 – 1,600 °C. Able to be supplied in addition to gauze and tape modules are forms of execution with cords as well as also **combination modules**. At levels of compaction upwards of 200 kg/m³ the modules are manufactured as tape modules with plywood boards.

The lightweight construction systems can be combined with different back-up insulation layers, e.g. to improve the corrosion protection, as a vapour barrier or to optimize the insulating properties.

The heat-resistant mechanical anchoring systems are selected in accordance with the wall structure as well as in accordance with the particular thermal and chemical loading expected.

The systems have proved themselves under extreme conditions of use, e.g. for forging furnaces, ceramic kilns, ladle heaters, refuse incineration plants, exhaust gas cleaning and bogie hearth furnaces. When there will be chemical loading, we recommend that you contact our Technical Department.

In plants/systems with high flow speeds, e.g. in exhaust gas lines or combustion chambers, the lining surface can be protected with **SILCADUR** Coating to reduce erosion of the fibres.

The fibre module systems **SILCAWOOL-STACK** and **SILCAWOOL-FIX** are manufactured from different **SILCAWOOL** fibre qualities which are not classified as hazardous materials by reason of their reduced bio-persistency.

SPECIAL FEATURES

- lightweight, low accumulation of heat
- resistant to thermal shock
- can be shaped very variably
- reliable anchoring system
- low thermal shrinkage
- high mechanical strength
- rapid and economic to install
- high resistance to abrasion
- high chemical loadability

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.

SILCASTACK, SILCAFIX SILCAWOOL-STACK / -FIX

SILCASTACK / FIX		Unit	126	143	160
Classification temperature		°C	1,260	1,430	1,600
Bulk density (±10%)		kg/m³	150 – 220	150 – 220	120 - 160
SILCAWOOL-STACK / -FIX			120	120P	130
Classification temperature		°C	1,200	1,200	1,300
Bulk density (±10%)		kg/m³	150 – 180	150 – 180	150 – 180
Chemical reference analysis		%	Please see product data sheets 40.7 and 51.7 for the chemical reference analysis data of the base material.		
Standard anchor			Material 1.4828		
Threaded bolts			Material 1.4301 (standard), optional 1.4841		
Hexagon nut			Material 1.4301 (standard), optional 1.4845		
Dimensions**					
SILCASTACK / FIX	Length	mm	600 and 300 (standard sizes), special dimensions on request		
SILCAWOOL-STACK / -FIX	Width*	mm	300* and 150* (standard sizes), special dimensions on request		
	Thickness	mm	Insulating thickness variable from 100 up to 350		
* The „width“ dimension is equal to the stacking and compression direction of the fibre blanket strips					
** Please note the order of dimensions when ordering: length x width* x insulation thickness					

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.

Mounting

SILCASTACK modules have mechanical anchoring systems. As a rule with **SILCASTACK** threaded bolts are secured to the furnace and the **SILCASTACK** anchors are screwed on. The modules are supplied with prepunched holes and are simply pushed over the **SILCASTACK** spears. The tip of the spear is pushed into the tab of the previous anchor at the start of the module row.

Thermal conductivity (empirical values)		Unit	SILCAPACK, SILCABLOCK, SILCASTACK, SILCAFIX SILCAWOOL-PACK / BLOCK, SILCAWOOL-STACK / FIX							
Material basis			SILCAFLEX (126, 143, 1400) SILCAWOOL (120, 120P, 130)					SILCAFLEX 160		
Classification temperature		°C	1,200 bis 1,430					1,600		
Bulk density		kg/m³	160	170	180	190	200	210	142	160
Thermal conductivity λ at t _m	200 °C	W/(m K)	0.08	0.08	0.07	0.07	0.07	0.07	0.08	0.08
	400 °C		0.10	0.10	0.10	0.10	0.09	0.08	0.09	0.09
	600 °C		0.16	0.15	0.14	0.13	0.12	0.11	0.13	0.13
	800 °C		0.23	0.21	0.19	0.18	0.17	0.16	0.19	0.18
	1,000 °C		0.32	0.29	0.26	0.24	0.22	0.20	0.28	0.26
	1,200 °C		0.42	0.38	0.33	0.31	0.29	0.27	0.41	0.37
	1,400 °C		-	-	-	-	-	-	0.61	0.52