

Blankets and papers based on aluminium silicate and polycrystalline wool

## SILCAFLEX

126-10, 126-13, 126-16, 140-13, 143-13, 143-16, 160-10, 160-13, 140D, 160D, EXP paper

**SILCAFLEX** products are based on long-fibre aluminium silicate and polycrystalline wool for the highest demands. The fibres can be processed into various products, such as blankets, cords, paper, etc.

**SILCAFLEX** blankets are offered with a range of classification temperatures. They are flexible, especially low in shot content or, as the case may be, have zero shot content (**SILCAFLEX 160**) and are needled on both sides. They are characterized by high tear strength, low thermal conductivity and very high resilience.

**SILCAFLEX products** have excellent resistance to temperature changes and are resistant to most chemicals. Exceptions are represented by hydrofluoric acid, phosphoric acid and alkaline compounds. With severe thermal loading we recommend our mullite fibre **SILCAFLEX 160** with increased  $Al_2O_3$  content.

**SILCAFLEX paper** is produced from aluminium silicate or polycrystalline wool and contains additional organic binders. This product is used in particular for thin thermal insulation applications (up to 3 mm).

Further forms of delivery such as **SILCAFLEX loose wool** are available on request.

### 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.**

**SILCAFLEX EXP** is an expanding paper based on aluminium silicate fibres, vermiculite and binders and serves for the sealing of gaps since it expands at temperatures in excess of 330 °C and closes the gaps.

SILCAFLEX EXP paper	Unit	
Upper application limit temperature	°C	750
Bulk density (± 10 %)	kg/m <sup>3</sup>	630
Annealing loss at 900 °C	%	max. 15
Aluminium silicate fibre	%	30 - 40
Vermiculite		50 - 60
Organic binder		5 - 9
Dimensions		
Standard size	mm	10,000 x 762 x 4

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.



### SPECIAL FEATURES

- resistant to high temperatures
- outstanding resistance to temperature changes
- low accumulation of heat
- high flexibility
- good tear strength
- good thermal insulation properties
- high chemical resistance



**SILCAFLEX**

126-10, 126-13, 126-16, 140-13, 143-13, 143-16, 160-10, 160-13, 140D, 160D, EXP paper

SILCAFLEX blankets		Unit	126-10	126-13	126-16	140-13	143-13	143-16	160-10	160-13	
Classification temperature		°C	1,260			1,400	1,430	1,600			
Bulk density		kg/m <sup>3</sup>	96	128	160	128	128	160	100	130	
Shrinkage after 24 h		°C	1,100			1,300	1,300	1,500			
		%	2.2			3.0	2.0	0.7			
Thermal conductivity $\lambda$ at $t_m$	200 °C	W/(m K)	0.06	0.06	-	-	0.06	-	-	-	
	400 °C		0.11	0.10	0.09	0.11	0.10	0.09	-	-	
	600 °C		0.16	0.15	0.13	0.15	0.15	0.13	-	-	
	800 °C		0.23	0.20	0.18	0.21	0.20	0.18	0.20	0.18	
	1,000 °C		0.32	0.27	0.25	0.31	0.27	0.25	-	-	
	1,200 °C		-	-	-	0.44	-	-	0.42	0.36	
	1,400 °C		-	-	-	0.64	-	-	0.59	0.51	
Chemical reference analysis	Al <sub>2</sub> O <sub>3</sub>	%	42 – 47			54	28 – 35		72		
	SiO <sub>2</sub>		53 – 58			46	50 – 56		28		
	ZrO <sub>2</sub>		-			-	14 – 18		-		
Dimensions		Content		X = available; loose wool in 20 kg bags							
6 x 610 x 21,960	mm	13.34	m <sup>2</sup>	-	X	-	X	-	-	-	-
13 x 610 x 14,640	mm	8.93	m <sup>2</sup>	X	X	X	-	X	X	-	-
13 x 610 x 7,200	mm	4.39	m <sup>2</sup>	-	-	-	-	-	-	X	X
19 x 610 x 9,760	mm	5.59	m <sup>2</sup>	-	X	-	-	X	-	-	-
25 x 610 x 7,200	mm	4.39	m <sup>2</sup>	-	-	-	-	-	-	X	X
25 x 610 x 7,320	mm	4.46	m <sup>2</sup>	X	X	X	-	X	X	-	-
38 x 610 x 4,880	mm	2.98	m <sup>2</sup>	X	X	-	-	X	X	-	-
50 x 610 x 3,660	mm	2.23	m <sup>2</sup>	X	X	X	-	X	X	-	-

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SILCAFLEX paper		Unit	140D	160D		
Classification temperature		°C	1,400	1,600		
Bulk density		kg/m <sup>3</sup>	210	150		
Shrinkage after 24 h		°C	1,400	-		
		%	3.0	-		
Thermal conductivity $\lambda$ at $t_m$	100 °C	W/(m K)	0.048	0.040		
	300 °C		0.070	0.060		
	500 °C		0.105	0.090		
Chemical reference analysis	Al <sub>2</sub> O <sub>3</sub>	%	48-54	88		
	SiO <sub>2</sub>		46-52	9		
Organic binder		%	6	6		
Dimensions						
Standard sizes	Length	mm	20,000	10,000	10,000	20,000
	Width	mm	500	500	500	500
	Thickness	mm	1	2/3	1/3	2

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