refractory solutions
rev. 23.09.2025

SILCAPOR 1000, 1000 RS, 1000 FT

SILCAPOR 1000, SILCAPOR 1000 FT und **SILCAPOR 1000 RS** are microporous thermal insulation materials manufactured based on fumed silica. **SILCAPOR 1000** is a thermal insulation board which is usually produced without lamination. **SILCAPOR 1000 RS** are pipe shells which are produced in the mentioned inner diameters as a standard and are laminated with a glass fabric. **SILCAPOR 1000 FT** is a shaped part which is machined according to drawings and manufactured based on **SILCAPOR 1000** sheets and their lamination options. **SILCAPOR 1000** and **SILCAPOR 1000 FT** can alternatively be laminated with glass fleece or aluminium foil. In case of contact with liquids, such as water, oil, gasoline, etc., the microporous structure is irreversibly de-stroyed and the thermal conductivity is negatively affected. **SILCAPOR 1000, SILCAPOR 1000 FT** and **SILCAPOR 1000 RS** are vapor diffusion stable and therefore do not show negative changes in properties towards vapours. The type of lamination should be selected according to the application temperature and intended use. The classification temperature refers to the core of **SILCAPOR 1000, SILCAPOR 1000 RS** and **SILCAPOR 1000 FT.**

SILCAPOR		Unit	1000	1000 RS	1000 FT
Classification temperature		°C	1,000		
Bulk density		kg/m³	300 (d ≤ 20 mm) 260 (d > 20 mm)	280	320 (d ≤ 5 mm) 300 (d > 5 mm)
Cold compression strength (ASTM C 165)		MPa	0.67		0.73
Linear shrinkage after 24h, temperature loading from all sides (ASTM C 356)	1.000 °C	%	≤ 2.5		
Thermal Conductivity λ at t_m (ASTM C 177)	200 °C	W/(m·K)	0.022		0.028
	400 °C		0.023		0.033
	600 °C		0.027		0.044
	800 °C		0.034		0.057
Specific heat capacity	200 °C	kJ/(kg·K)	0.86		0.93
	400 °C		0.94		0.96
	600 °C		0.96		1.02
	800 °C		0.99		1.07
Chemical composition					
SiO_2		%	55 - 80	60 - 80	55 - 80
SiC			15 - 30	15 - 30	15 - 30
Others			5 - 15	5 - 15	5 - 15
Ignition loss		%	< 2.0		
Dimensions					
Length		mm	1,000 ± 3	500 ± 3	1,000 ± 3
Width			650 ± 3	-	600 ± 3
Thickness			5 - 50 ± 1	-	5 - 20 ± 1
Nominal diameter (inside)			-	13 / 15 / 19 / 20 / 25 / 32 /40 / 50 / 65 / 80 / 90 / 100 / 113 / 125 / 150 / 175 / 200 / 250 / 300	-
Wall thickness			-	20–50 // 55–150 ±1 single layer// double-layered	
Other dimensions are available on request.					

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.

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