

SILTHERM Vaku

Microporous Solutions for High Temperature Insulation

SILTHERM VAKU Panel is specially designed for steel industry & other hot metal applications with a very good thermal and mechanical properties. The formulation is an opacified blend of filament reinforced pyrogenic silica.

The coverings is water repellent to assure the stability of the microporous core when moisture might occur due to castables, mortar etc.



SILTHERM VAKU 1000 offers excellent performance and can resist continuous temperatures up to 1000°C.

SILTHERM VAKU 1200 offers excellent compressive strength and withstand peak temperature of 1200 °C , while withstand a long time exposure of 1150 °C.



Properties & Advantages

- Extremely low thermal conductivity
- High thermal stability
- High compressive strength
- No harmful respirable fibres
- Environmentally friendly
- Free of organic binders
- Resistant to most chemicals
- Non combustible
- Easy to handle

Typical Applications

- Ladles
- Torpedo cars
- Tundish
- EAF (Electric Arc Furnace)
- Degassers

Working & Processing

SILTHERM VAKU panels can be shaped easily with a simple cutter and taped off with aluminium tape. The panels can be fixed in place with the same adhesives that are used for the refractory lining.

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Description		Siltherm Vaku			
Classification Temperature	C°	850	1000	1100	1200
Long time Exposure (Core)		850	950	1050	1150
Nominal Density	[kg/m ³]	300-400	300-400	400-500	400-500
Typical Density		350	350	450	500
Compressive Strength @ 10% deformation (ASTM C-165)	[MPa]	0.80	0.80	1.05	1.12
Thermal Conductivity (ISO 8302)					
200°C	W/m.K	0.024	0.024	0.027	0.027
400°C	W/m.K	0.027	0.027	0.032	0.032
600°C	W/m.K	0.030	0.030	0.037	0.037
800°C	W/m.K	0.035	0.035	0.043	0.044
Specific Heat Capacity					
200°C	[KJ/Kg K]	0.87	0.87	0.87	0.89
400°C	[KJ/Kg K]	0.96	0.96	0.96	0.99
600°C	[KJ/Kg K]	1.04	1.04	1.04	1.05
800°C	[KJ/Kg K]	1.08	1.08	1.08	1.08
Linear Shrinkage					
12h full soak @ 850 °C	%	≤2	≤0.5	≤0.1	≤0.1
24h full soak @ 950 °C		--	≤2.5	≤0.5	≤0.1
24h full soak @ 1050 °C		--	--	≤2.5	≤0.8
24h full soak @ 1150 °C		--	--	--	≤3.5
Standard Coverings	Aluminium Foil				

Products Dimensions and Size Availability		
Product Type	Length * Width (mm)	Thickness (mm)
SILTHERM VAKU PANEL	500 * 300	5 / 7 /10