

# SILTHERM STD ALU

## Microporous Solutions for High Temperature Insulation

Siltherm STD ALU Panel is rigid finishing from microporous technology, with optimized blend of filament reinforced fumed silica, which provides a superb thermal performance.

It is an ideal back-up insulation for various industry where the high temperature is needed, with a long time exposure of 1150 °C at highest.

Siltherm STD-Alu---Aluminium Foil wrapped panel in 2 or 6 sides upon request.

Siltherm STD ALU panel has 3 Grades available with a relative temperature grade of 850, 1100, 1200 .



### Properties & Advantages

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



### Typical Applications

- Back-up insulation in industrial furnaces
- Fuel cells (SOFC)
- Thermal Batteries
- Aluminium industry ( launders,Smelter.etc. )
- Glass & ceramics industry
- Petrochemical industry (cracking furnace, reformer)
- Black box & VDR (Voyage Data Recorder)
- Data loggers

### Working & Processing

SILTHERM STD ALU can be shaped both manually and with stationary wood processing machinery. They can be cut, sawn, drilled and punched. The boards can be fixed in place with glue or by mechanical means such as anchors, pins and clips.



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Description		SILTHERM STD ALU				
Classification Temperature		850	1000	1100	1200	
Long time Exposure	C°	850	950	1050	1150	
Nominal Density		240-320	240-320	260-350	350-450	
Typical Density	[kg/m <sup>3</sup> ]	280	280	320	400	
Compressive Strength @ 10% deformation (ASTM C-165)	[MPa]	0.32	0.32	0.36	0.40	
Thermal Conductivity (ISO 8302)						
200°C	W/m.K	0.022	0.022	0.024	0.027	
400°C	W/m.K	0.025	0.025	0.028	0.032	
600°C	W/m.K	0.028	0.028	0.032	0.037	
800°C	W/m.K	0.033	0.033	0.035	0.043	
Specific Heat Capacity						
200°C	[KJ/Kg K]	0.85	0.86	0.86	0.89	
400°C	[KJ/Kg K]	0.95	0.96	0.97	0.99	
600°C	[KJ/Kg K]	1.02	1.03	1.04	1.05	
800°C	[KJ/Kg K]	1.07	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	
<b>Standard Coverings</b>	Aluminium Foil ( 2or 6 sides )					

- Special requirements can be met upon request on the coverings.

### Products Dimensions and Size Availability

Product Type	Length * Width (mm)	Thickness (mm)
SILTHERM STD ALU	1000 * 600	10-50