



Siltherm AluFlex

Flexible Microporous Insulation Panel



1100°C

Siltherm AluFlex is a flexible microporous panel specifically developed for use in the steel industry and other molten metal applications where good mechanical and compressive strength along with high temperature stability and low thermal conductivity are required.



500 x 300
mm

Siltherm AluFlex is fully encapsulated in an aluminised envelope, making the panel clean and easy to handle, bend and manipulate. The microporous insulation core is an opacified blend of pyrogenic silica with a filament reinforcement. The aluminised covering is water repellent to ensure the stability of the microporous core if contact is made with moisture laden castables and mortars.



5, 7, 10
mm

The unparalleled thermal resistance provided by Siltherm microporous insulation products makes them a realistic alternative and best cost competitive choice on the market to other lightweight insulation solutions, such as millboards, low density calcium silicate, vermiculite, temperature resistant fibres or wool based blankets and boards, whilst also delivering benefits in terms of space optimisation and reduced weight.



Features and Benefits

Siltherm AluFlex has been designed to deliver benefits in terms of space optimisation, shorter pre-heat cycles, and extended holding and transfer cycles. Microporous insulation offers considerable and measurable advantages in terms of thermal management, energy efficiency and reduction of carbon footprint; the integration of microporous insulation in your heat containment systems and equipment provides a set of unique and measurable assets which impact at environmental, operational, social, economic and strategic levels like no other insulation can.

Features

- Extremely low thermal conductivity over a wide temperature range and up to its classification temperature.
- High thermal stability over time, no ageing effect.
- Low shrinkage.
- Resistant to compression.
- Thermal shock and vibration resistant.
- Inorganic and non combustible core.
- Wide range of sizes available to order.
- Alternative grades available to suit the application.
- Simple to handle, cut, and shape.
- No harmful respirable fibres.
- Environmentally friendly.
- Resistant to most chemicals.

Benefits

- Allows more freedom in engineering at the design stage.
- Increases inner capacity of existing equipment or reduces external space and weight.
- Reduces carbon footprint and energy consumption.
- Improves productivity and, in metallurgy and glass production specifically, also the quality of the finished product.
- Reduces downtime.
- Contributes to a safer working environment.
- Large product range sizes available.
- Alternative grades to suit the application.
- No thermal shift effect.
- Various encapsulation options available.

Typical Applications

As backup insulation in:

- **Metallurgy:** ladles; tundish; torpedo car ladles; degassers.
- **Cement & Lime Industry:** calciners; preheater cyclones; firing hood kilns; airducts.





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Technical Specification

CHARACTERISTICS	TEST METHOD	UNITS	GRADE 1000	GRADE 1100
Classification Temperature		°C	1000	1050
Nominal Density		kg/m ³	325	375
Cold Compressive Strength				
10% deformation	ASTM C165	MPa	0.73	0.73
Thermal Conductivity ¹				
mean temperature of				
200°C	ASTM C177	W/m•K	0.022	0.028
400°C			0.023	0.033
600°C			0.027	0.044
800°C			0.032	0.057
Specific Heat Capacity				
200°C		kJ/kg•K	0.92	0.93
400°C			1.01	1.01
600°C			1.04	1.04
800°C			1.08	1.08
Linear Shrinkage ¹				
24 hr full soak	ASTM C356	%	≤2.5	≤0.5
1050°C			-	≤3.5
Typical Chemical Composition				
SiO ₂			55-80	50-75
SiC		%	15-30	15-25
Al ₂ O ₃			-	5-10
Others			5-15	5-15
Loss on Ignition, dry conditions			<2.0	<2.0

¹ Pure core tested

Standard Dimensions, Tolerances and Coverings

CHARACTERISTICS	SIZES (mm)	ENCAPSULATION	TOLERANCES (mm)
Standard Sizes (Length x Width) ²	500 x 300	PE/ALU	±3
Maximum Sizes (Length x Width)	1000 x 600		
Standard Thicknesses ²	5, 7, 10		±1

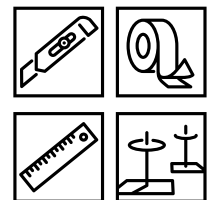
² Other sizes and thicknesses are available on demand

Cutting and Fixing

Siltherm AluFlex can be easily cut with a sharp knife or cutter and fixed in a variety of ways similar to most conventional insulations with glue, retaining pins or anchors, straps or wire.

Cut edges can be sealed with aluminium self adhesive tapes.

For environmental, health & safety information, please refer to our Material Safety Data Sheet.



ISO9001:2015
CERTIFIED

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