



# Siltherm AluFlex

## Flexible Microporous Insulation Panel

Siltherm AluFlex is a flexible microporous panel specifically developed for use in the steel industry and other molten metal applications.

This insulation product combines low thermal conductivity with good mechanical properties.

Siltherm AluFlex is encapsulated in an aluminised envelope, making the panel clean and easy to handle 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.

### Features and Benefits

- Extremely low thermal conductivity, high thermal stability
- Low shrinkage
- Low in weight
- High strength
- Wide range of sizes and customised shapes available to order
- Alternative grades available to suit the application
- Inorganic and non-combustible
- Shock and vibration resistant
- Simple to handle, cut, and shape
- No harmful respirable fibres
- Environmentally friendly
- Resistant to most chemicals.

### Cutting and Fixing

Siltherm AluFlex can be easily cut with a sharp knife 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.

### Typical Applications

- **Ladles**  
Used in steel plants and ferrous metals industry
- **Tundish**  
Containers used to feed molten metal into a mould
- **Torpedo cars (torpedo ladles)**  
Transfer containers, equipment used in steel plants
- **Degassers**  
Used to mechanically remove entrained air and/or gasses from pipe lines and/or liquid systems



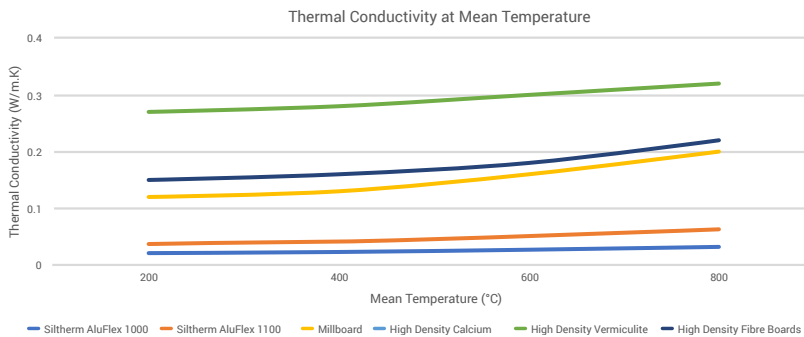
## Technical Specification

<b>Product AluFlex</b>					
Classification Temperature		°C	1000	1100	
Nominal Density		kg/m <sup>3</sup>	325	375	
Compressive Strength @ 10% deformation		MPa	0.8	0.11	
Thermal Conductivity*		200 °C	W/m.K	0.022	0.028
*Core tested according to ASTM C 177 : 2013		400 °C	W/m.K	0.023	0.033
		600 °C	W/m.K	0.027	0.044
		800 °C	W/m.K	0.032	0.057
Specific Heat Capacity		200 °C	kJ/kg.K	0.92	0.92
		400 °C	kJ/kg.K	1.01	1.01
		600 °C	kJ/kg.K	1.04	1.04
		800 °C	kJ/kg.K	1.08	1.08
Linear Shrinkage	24h full soak @ 950 °C		%	≤2.5	≤0.5
Linear Shrinkage	24h full soak @ 1050 °C		%		≤ 2.5

## Standard Dimension and Format Availability\*

<b>Product AluFlex</b>	<b>Length x Width (mm)</b>	<b>Thickness (mm)</b>
	500 x 300	3, 7, 10
<b>Length and Width Tolerance</b>	+/- 3	
<b>Thickness Tolerance</b>		±1

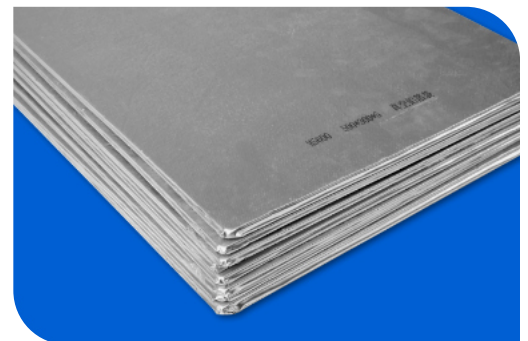
\* Other sizes available upon request



### Siltherm products offer a realistic alternative to other other back up insulation materials

Siltherm products offer a realistic alternative compared to other to other back up materials such as Millboard, Fibre Paper, high density Vermiculite, Calcium Silicates and Fibre Board.

The **thermal resistance** provided by AluFlex, coupled with **low shrinkage and compressive strength** makes this product a viable alternative solution. AluFlex also delivers benefits in terms of space optimisation, shorter pre heat cycles, and extended holding and transfer cycles.



The values given in this datasheet are typical and subject to normal manufacturing variation, they are for guidance only and maybe subject to change without notice. Recommendations for use are not intended to, and do not constitute a warranty, express or implied, of the suitability of the product for a particular use. The user is responsible for determining the suitability of Siltherm products for each application.



#### Siltherm Group Holdings Ltd

B-10 Huangpu Science Park  
2842 Xingangdong Road  
Haizhu District  
510000 Guangzhou  
People's Republic of China

Tel: +86 (20) 3888 9182  
Email: info@siltherm.com  
Web: siltherm.com

#### Siltherm Europe Ltd

Paramount Court  
Corrig Road  
Sandyford Business Park  
Dublin 18, D18 R9C7  
Republic of Ireland

Tel: +353 (0) 1 255 1800  
Email: info@siltherm.eu  
Web: siltherm.eu

Siltherm Group Holdings Ltd maintains a Quality Management System to: **ISO 9001: 2015 Certificate Registration Number CN-00219Q20582R1S**  
IQNet Certificate Issued by CQM for scope 'Research and development, production and after-sales service of nano thermal insulation materials'