



# Siltherm Quilt

## Flexible Microporous Insulation Panel

Siltherm Quilt products provide a truly flexible microporous insulation solution for insulating pipes, other curved surfaces, and producing customised insulation systems for complex or irregular shapes.

Siltherm Quilt is manufactured in a glass cloth outer 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.

These products are available with cross directional through stitching, one direction (2D) for manipulation on simple pipe or duct geometries, and two directional (3D) for more complex geometries. Stitch centres are available in both formats at 25 mm or 50 mm depending on the geometry and the degree of flexibility required.

### Features and Benefits

- Extremely low thermal conductivity over a wide temperature range
- High thermal stability
- Low shrinkage
- Low in weight
- Wide range of sizes available to order
- Inorganic and non-combustible
- Shock and vibration resistant
- Simple to handle, cut, and make into complex shapes
- Can be combined with other flexible insulation products to form customised composite insulation systems
- No harmful respirable fibres
- Environmentally friendly
- Resistant to most chemicals

### Cutting and Fixing

Siltherm Quilt is 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.

### Typical Applications

- **Oil and Gas and Power Generation**

Process piping, hot pipe supports, inside high temperature jacketing systems on pipes and valves, or in cassettes and heat shields

- **Concentrated Solar power**

Process piping and flexible Joints

- **Transport (automotive, marine, rail, aerospace)**

Inside heat shields and jacketing systems  
Exhaust systems  
Passive fire protection

- **For use as back up insulation in:**

Steel production process, in pipes and vessels, eg tuyere stocks on blast furnace  
Rotary kilns and crucible furnaces

- **Data Loggers**

Used to protect and control temperature inside the device, data logger, monitor, portable measurement instruments, temperature recorders



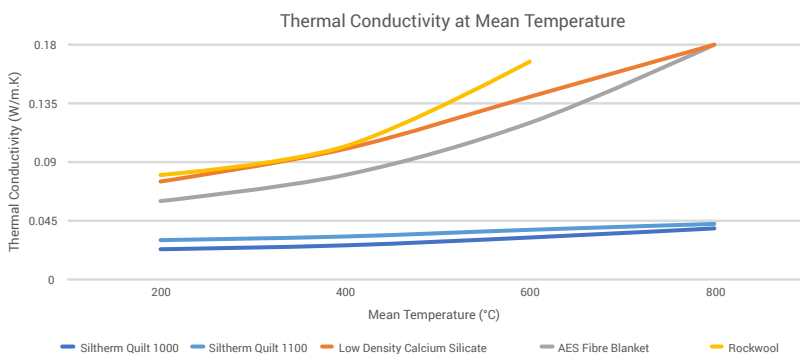
## Technical Specification

Product Quilt					
Classification Temperature		°C	1000	1100	
Nominal Density		kg/m <sup>3</sup>	200	220	
Thermal Conductivity*		200 °C	W/m.K	0.023	0.03
*Core tested according to ASTM C 177 : 2013		400 °C	W/m.K	0.026	0.033
		600 °C	W/m.K	0.032	0.038
		800 °C	W/m.K	0.039	0.042
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\*

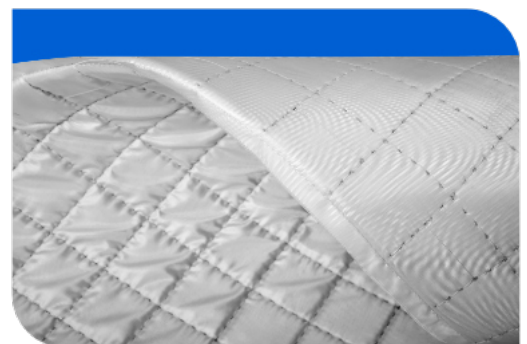
Product Quilt	Length x Width (mm)	Thickness (mm)	Stitching Centres (mm)
	1000 x 600	3, 5, 6, 10, 12.5	(25 x 25) / ( 50 x 50 )
Length and Width Tolerance	+/- 3		
Thickness Tolerance	±1		

\* Other sizes and stitch centres available upon request



## Siltherm products offer a realistic alternative to other lightweight insulations

Siltherm products offer a **realistic alternative** compared to other lightweight insulation solutions, such as low density calcium silicate, vermiculite, fibre or wool based blankets and boards. The thermal resistance provided by Siltherm products is a **cost competitive alternative** to the other lightweight insulation solutions on the market, whilst also delivering benefits in terms of space optimisation and reduced weight.



# SILTHERM

### 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](mailto:info@siltherm.com)  
Web: [siltherm.com](http://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](mailto:info@siltherm.eu)  
Web: [siltherm.eu](http://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'

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.