



Siltherm Quilt

Flexible Microporous Insulation Panel



1000°C



1000x600
mm



3 to 12.5
mm



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

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 - 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. Stitch centres are available in both formats at 25 mm or 50 mm, depending on the geometry and the degree of flexibility required. To prevent CUI phenomena and, more in general, where there is a risk of contact with water or condensation, Siltherm Quilt is also available in a hydrophobic grade.

Features and Benefits

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.
- Flexible in two dimensions, can also be twisted.
- High thermal stability.
- Low shrinkage and weight.
- Wide range of sizes available to order.
- Inorganic and non-combustible.
- Shock and vibration resistant.
- Simple to handle and customize.
- No harmful respirable fibres.
- Environmentally friendly.
- Resistant to most chemicals.

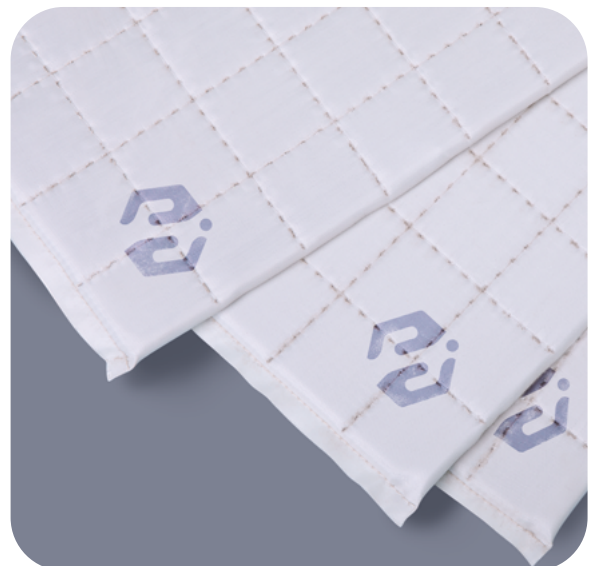
Benefits

- Increases capacity of existing equipment or reduces external space and weight allowing for more freedom in engineering at the design stage.
- Reduces carbon footprint and energy consumption.
- Conserves and stores energy, improving efficiency.
- Perfectly adaptable to irregular curved surfaces.
- Contributes to a safer working environment.
- Large product range sizes available.
- Alternative grades to suit the application.
- Clean and fast installation, easy fixing.
- No thermal shift effect.

Typical Applications

As backup insulation in:

- **Oil & Gas, Power Generation, Energy:** process and steam piping; hot pipe supports; inner core of high temperature removable jacketing systems on pipes and valves, or in cassettes and heat shields; turbines.
- **Concentrated Solar power:** piping and flexible ball joints.
- **Transportation:** inside heat shields and jacketing systems; exhaust systems; passive fire protection.
- **Iron & Steel:** tuyeres stocks on blast furnaces; recuperators and hot air piping systems; ducts, pipes and vessels; heat protection removable jacketing core for of electric cables.
- **Fire Protection:** jet fire protection systems for steel pipes; fire barriers and shutters; fire protection of electric cables and wires; air ducts; fire rated shutters and curtains.
- **Measurements devices:** data loggers used to protect and monitor temperature inside the device; portable measurement instruments temperature recorders.





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Technical Specification

CHARACTERISTICS	TEST METHOD	UNITS	GRADE 1000	GRADE 1000 PLUS	
Classification Temperature		°C	1000	1000 PLUS	
Nominal Density		kg/m ³	220	260	
Cold Compressive Strength					
10% deformation	ASTM C165	MPa	0.32	0.43	
Thermal Conductivity ¹					
mean temperature of	ASTM C177	W/m·K			
200°C			0.023	0.023	
400°C			0.026	0.026	
600°C			0.032	0.030	
800°C			0.039	0.032	
Specific Heat Capacity					
		kJ/kg·K			
200°C			0.92	0.92	
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	1000°C	ASTM C356	%	≤2.5	≤2.5
Typical Chemical Composition					
SiO ₂				55-80	55-80
SiC			%	15-30	15-30
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)	QUILTING PITCH (mm)	ENCAPSULATION	TOLERANCES (mm)
Standard Sizes (LxW) ²	1000 x 600	25x25, 50x50, 100x100	E-Glass Cloth ³	±3
Standard Thicknesses ²	3, 5, 6, 8, 10, 12.5			±1

² Other sizes and thicknesses are available on demand

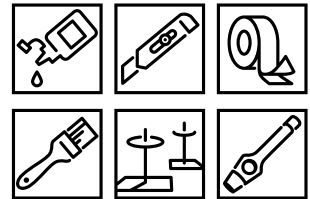
Semistitched is available on demand

³ Other type of encapsulation cloths are available on demand (S2-Glass, Alumina, Quartz)

Cutting and Fixing

Siltherm Quilt 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. When cut, Siltherm Quilt can be sealed with glass fiber tapes or aluminium self-adhesive tapes.

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



ISO9001:2015
CERTIFIED

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