



Siltherm VacuPanel

Rigid Microporous Vacuum Insulation

Siltherm VacuPanel is a high performance microporous insulation product.

The panels have a microporous insulation core, which is a blend of pyrogenic silica and a filament reinforcement.

The core is encapsulated in an ultra-low permeable barrier film that comprises multiple metallised polymer layers and is sealed under vacuum.

Special process techniques and innovative formulations enable Siltherm VacuPanel to deliver excellent thermal performance and R-value coupled with long term durability.

Features and Benefits

- Extremely low thermal conductivity
- High thermal resistance
- Light in weight
- Environmentally friendly
- Contains no respirable fibres
- Stable and long term thermal performance
- Excellent resistance to compression
- Wide range of sizes available to order

Typical Applications

- **Building and Construction Industry**

Used to insulate roofs, floors, facades

- **Temperature controlled packaging**

Used to provide inside insulation of cool transportation boxes and packets containing drugs, medicines and vaccines

- **Appliances, heating systems**

Water heaters, boilers etc

Refrigerators, chill cabinets, cold storage units

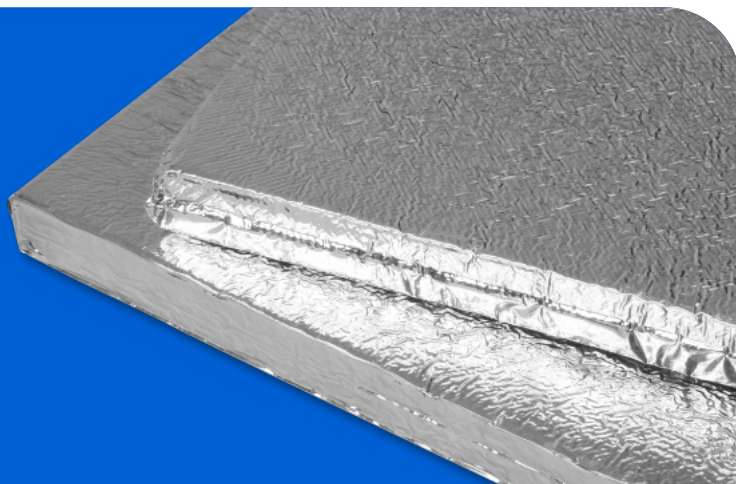
Vending machines, heated food display units

- **Oil and Gas**

Used to maintain the temperature required for Liquid Natural Gas (LNG) to remain in its liquefied forms

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

Used to maintain cabin comfort, cold storage areas



Technical Specification

Product VacuPanel			Thickness	STANDARD	PLUS
Nominal Density		kg/m ³		160-210	140-170
Compressive Strength	@ 10% deformation	kPa		145	145
Thermal Conductivity*	@ <1 mbar	W/m.K	5-19 mm	0.0042	0.0035
		W/m.K	20-50 mm	0.0042	0.003
*Core tested according to ASTM C 177 : 2013	@ ambient pressure	W/m.K		0.02	0.02
Temperature Stability		kJ/kg.K		-70 to +80	-70 to +80
Thermal Shock Resistance	Insensitive to heat and cold shock @ given temperatures				
Humidity Stability		%		0-60	0-60

Standard Dimension and Format Availability*

Product VacuPanel	Length x Width (mm)	Thickness (mm)
	1000 x 600 Standard (Maximum 1200 x 650)	5-50
Tolerance (L*W) mm	+/-3	
Thickness Tolerance (T) mm		±1
Colour (depending on the selected barrier film)	Silver/White	
Geometry	Rectangular (as standard)	

** Other sizes available upon request*

Product measured at a density of 170 kg/m³ according to ASTM C518 & ISO 8301 @ mean 10 °C

For special needs on barrier films, please contact our sales engineer for further help

Siltherm VacuPanel maintains the internal temperature within refrigerators and temperature controlled packaging

VacuPanel can maintain the temperature more efficiently for longer compared to other vacuum insulation panels.

This can deliver benefits in terms of space optimisation, panel thickness optimisation, and extended storage cycles.



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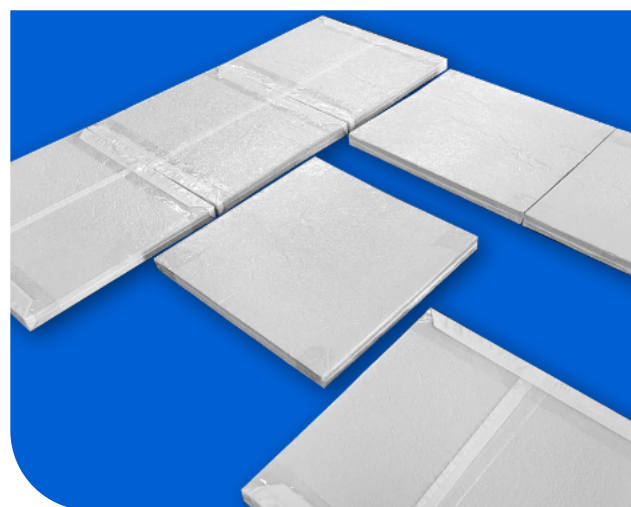
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Siltherm Group Holdings Ltd maintains a Quality Management System to:
ISO 9001: 2015 Certificate Registration Number CN-00219Q20582R1S
IQNet Certificate Issued by CQM for scope 'Research and development, production and after-sales service of nano thermal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