

# Spacetherm®

## THERMAL INSULATION

### OVERVIEW

For over 50 years, the A. Proctor Group Ltd has been developing thermal solutions to meet the increasing insulation standards required by the construction industry. However, with the recent drive by the government to dramatically reduce the CO<sub>2</sub> emissions associated with the 'built environment', the required thickness of traditional insulation is increasingly undesirable and impractical.

The Spacetherm® range of high performance laminates provides unrivalled performance for thickness, with a class leading thermal conductivity of 0.015 W/mK. This outstanding performance is delivered through the use of Aerogel insulation, which can be bonded to various facings, thus providing a traditional thermal laminate board with performance far in excess of anything previously available.

The unique performance of the Spacetherm® panels allows the easy upgrading of existing properties, with the minimum possible loss of internal space, without having to resort to expensive and awkward external insulation systems.

### KEY FEATURES

- Thin insulation system for hard to treat walls.
- The best thermal performance available.
- Minimum loss of room space.
- Direct fix to solid walls.
- Funding available.
- Includes an integrated vapour control layer.
- Non-hazardous material.
- Easy to install.

### SPACETHERM® – PP or FP

(Plasterboard or Fermacell / Plywood)

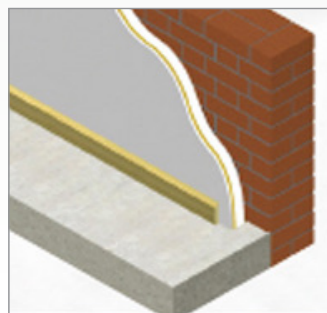
Combining the high performance of Spacetherm® aerogel with a reinforced plasterboard & plywood laminate, Spacetherm® PP is suited to walling applications where the extra reinforcement of the plywood allows for shot fired fixing, reducing the cost and time of installation. Although it does not have the same durability as Fermacell it is still a popular option due to its traditional finishing methods.

Spacetherm® aerogel can also be combined with a reinforced Fermacell & plywood laminate, known as Spacetherm® FP, it is also suitable for direct fixing to solid walls. A single screw in Fermacell can hold up to 30Kg, and a cavity plug up to 50Kg. Noggings are not required.

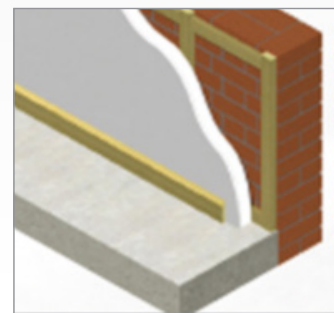
### SPACETHERM® – P or F (Plasterboard or Fermacell)

Combining the high performance of Spacetherm® aerogel with a plasterboard laminate, Spacetherm® P is suitable for a wide range of applications and can be finished using traditional methods. Ideally fixed to timber straps with stainless SCS wood screws.

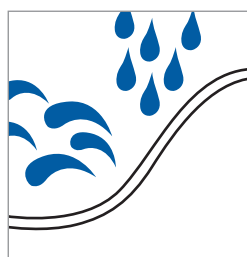
Spacetherm® insulation is also available with a Fermacell facing for use on the internal face of external walls, achieving superior thermal performance with minimal thickness. Spacetherm® F will also accept a screw fixing directly. Spacetherm® F should be ideally fixed to timber straps with stainless SCS wood screws. A single screw in Fermacell can hold up to 30Kg, and a cavity plug up to 50Kg. Noggings are not required.



Spacetherm® PP / FP installed directly on solid brick wall.



Spacetherm® P / F installed on timber battens system on brick wall



#### HYDROPHOBIC

Spacetherm® is highly hydrophobic (waterproof) which is advantageous as all insulation needs to remain dry in order to perform well.



#### DURABILITY

Spacetherm® is highly durable, it has a life span of 50+ years, with no loss of performance in its thermal conductivity.

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### SPACETHERM® – WRB (Window Reveal Board)

Spacetherm® WRB combines the high performance of Spacetherm® aerogel, bonded to plywood with either a Fermacell or plasterboard finish. Spacetherm® WRB is a true next generation solution to upgrading the thermal performance of your window reveals with minimal thickness. Spacetherm® WRB can be used in conjunction with traditional drylining materials.

### SPACETHERM® – CBS (Cold Bridge Strip)

Spacetherm® CBS puts the high performance of Spacetherm® aerogel to work in combating cold bridging in timber and steel frame structures. Supplied in easily installed self adhesive strips, Spacetherm® CBS can improve thermal performance by up to 30% for a minimal increase in cost and thickness.

### SPACETHERM® – C (Chipboard)

Spacetherm® C puts the high performance of Spacetherm® aerogel to work in flooring applications. Supplied in easily installed sheets, Spacetherm® C can dramatically improve performance of existing floors without losing excessive floor to ceiling heights.

### SPACETHERM® – Blanket

The Spacetherm® Blanket consists of unfaced sheets of high performance aerogel composite insulation. The possible applications of the Spacetherm® Blanket are virtually limitless as it has been used in doors, shutters, window reveals, boats, swimming pool covers and numerous other applications where thermal performance, space and thickness are critical.

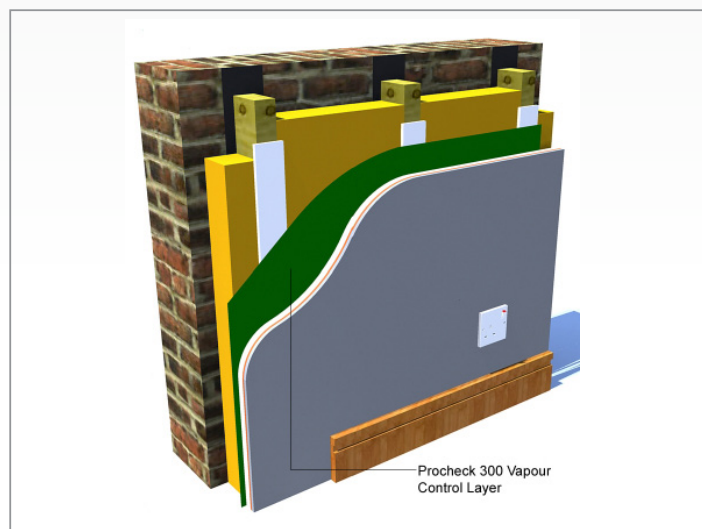
### HEALTH & SAFETY

Spacetherm® and in particular the dust produced when handling and cutting the material is a powerful desiccant and therefore gloves and dust masks should be worn when handling the material. Ensure the working space is well ventilated and when necessary a protective body suit should be worn.

*U-value performance ready reckoners are available for each specific application, these are available to download from our website.*



WRB laminate in position



CBS on timber frame

Physical Properties	Result
Thickness	5mm / 10mm
Density	0.15 g/cm <sup>3</sup>
Weight	0.745 - 1.56 kg/m <sup>2</sup>
Thermal Conductivity	0.015 W/mK
Vapour Resistivity	25 MNs/gm ( $\mu = 5$ )
Reaction to fire	C - sl - d <sub>0</sub>
Specific Heat Capacity	1 kJ / kgK
Compression Resistance (at 10% deflection)	80 kPa