



PERFORMANCE SPECIFICATION

Material:

Fibre reinforced silica
Aerogel.

Sheet size:

2400mm x 1200mm

Thickness:

5, 10 & 15mm

What is aerogel?

Silica aerogel is a synthetic material in which the liquid component of a silica-based gel has been replaced with a gas through a process of supercritical drying or freeze drying. This process creates a rigid material with excellent thermal properties, though it is incredibly brittle. Our Spacetherm embeds this material into a polypropylene fleece to allow it to be more usable and flexible without risking the integrity of the material and its thermal properties. When utilised as an insulation product it has many benefits including excellent thermal conductivity, vapour permeability, and hydrophobicity which makes it the ideal solution for space saving applications in existing buildings.

How thick is it?

We can supply our standard Spacetherm in a range of thicknesses, from as thin as a 5mm blanket, and increasing in increments of 5 or 10mm. We can then bond that to a range of boards to suit your construction. Our A-rated Spacetherm can be supplied in 5 or 10mm thicknesses, and they can be laid atop each other to accommodate any U-value.

Does it need battens?

Like many insulation systems on the market, our Spacetherm Wallboard is designed to be applied to frames or battens. However, most of our systems (Spacetherm Wall Liner, Spacetherm Multi and Spacetherm Directfix) are designed to be fixed or adhered directly to the wall, representing a further saving of space. Where Spacetherm Blanket is being utilised, it can be easily fixed to battens or studs using staples or nails for a temporary hold until an interior lining is fixed

over, or if a service void is required, Spacetherm can be fixed to the wall first then battens placed over so services can be installed without cutting through the insulation layer.



How does it compare to PIR?

PIR, or Polyisocyanurate insulation, is a rigid foam insulation. It is vapour impermeable, and has a thermal conductivity of around 0.022W/mK. Spacetherm on the other hand, is vapour permeable, and comprises a blanket type material which uses aerogel to gain its thermal conductivity of 0.015W/mK. This means that 15mm of Spacetherm insulation would equate to 22mm of PIR insulation in terms

TECHNICAL ADVICE

The A. Proctor Group has a dedicated Technical Department which can help with installation details, view drawings for approval and give specialist advice on the correct use of the A. Proctor Group products.

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of insulation depth, and on top of that, it is important to consider that Spacetherm also uses thinner boards, and in many cases negates the need for battens in an insulation system, resulting in a much thinner overall system depth.

Can it be used on retrofits?

Yes, due to its low depth and vapour permeability, it is well suited to insulating solid masonry properties, particularly in areas where space is at a premium. It can often be installed over existing wall renders and plasters then boarded over, or it can be provided as a laminate product with an interior lining board, such as MgO or plasterboard, which can be skimmed over to match the existing. Its permeable nature means it has little impact on the moisture performance of the existing element while significantly improving its thermal performance.

Is it easy to work with?

The blanket itself can be cut using a knife, while the bonded systems can be cut using a jigsaw. It is recommended to cut it outside or in a well-ventilated area, as it can generate some dust. Our Spacetherm Wall Liner is designed for the DIY market, and for this reason is smaller and lighter than other boards, making it easy to manoeuvre (especially around tight staircases and other minimal spaces), even by a single person. We provide an Essentials datasheet with every order containing information on safe handling and storage of the material as well as instructions for working with it.

Is it fire rated?

We have two versions of Spacetherm insulation available. Our standard Spacetherm, as is used in our thermal laminates, has a fire classification of C, and so is suitable for use on most constructions. It also has a better thermal performance. We also have our A-rated version, which we can supply as a blanket.

How important is cold bridging?

Cold bridges are areas of a building element in which the thermal envelope is broken. This can occur at a number of interfaces, including through framing, window reveals, and slab edges. These can prove to be significant thermal bypasses, and can lead to localised condensation or mould growth. Preventing these cold bridges is crucial in creating an energy efficient building. Using our Spacetherm thermal laminates, window reveals can be easily insulated without taking up too much space. We can also provide our Spacetherm as a Cold Bridge Strip, designed to be applied over features such as studs. This comes with an easy to apply tape, making it ideal for adhering to cover cold bridges and it will adhere to most common materials such as timber, steel, and stone or brick masonry.

What U-value does it achieve?

The U-value achieved with Spacetherm depends on a number of factors including the thickness of the Spacetherm being installed, the performance of any existing insulation, and the general assembly of the element it's being installed in. We indicate potential U-values in our Spacetherm Building & Construction brochure based on some common assemblies using various thicknesses of Spacetherm as a general guide for specification. We also provide U-value calculations as part of our technical services and we can calculate how much you should use to achieve your target performance. In a typical uninsulated masonry cavity wall, even 10mm of Spacetherm can improve the existing U-value by 50% and in a solid masonry wall the improvement is as much as 100%.

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