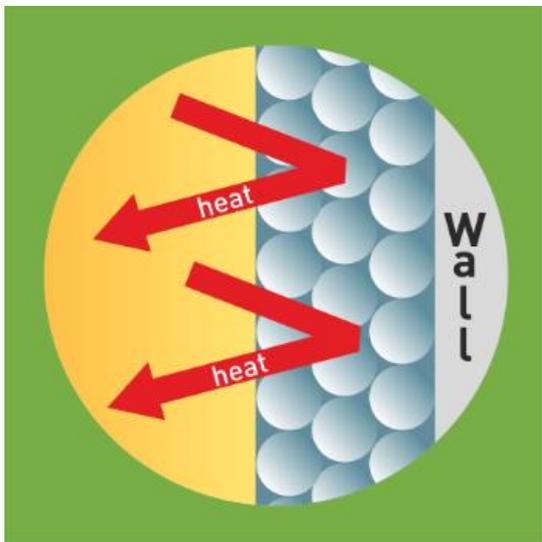


AERO-THERM

THE REVOLUTIONARY ALTERNATIVE TO CONVENTIONAL INSULATION

- 1mm coating for internal walls and ceilings
- Reduces heating costs by up to 35%
- Helps address condensation and mould problems
- Half the installed cost of traditional IWI/EWI
- Ideal for hard to treat solid wall properties

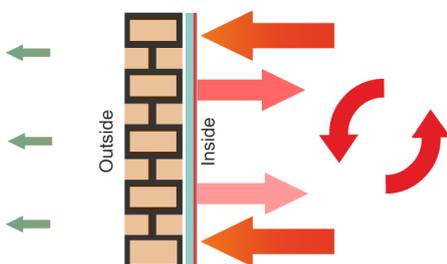


AeroTherm is a new type of plaster which has been designed to take advantage of recent developments in reflective technology and offer a cost effective and practical solution to applying retrofit insulation to domestic properties.

The impressive performance of AeroTherm is due to combining advanced materials such as aerogel and hollow glass microspheres into a **1mm thin internal wall insulation**. The ultra-thin coating is able to effectively absorb and reflect certain key bands of radiant energy to rapidly balance the heat distribution within the room. The thermo-reactive nature of the product allows the surfaces to, in effect, become part of the heating system, constantly working to efficiently maintain and distribute the available heat. By reacting to the internal environment, AeroTherm allows the occupants to maintain their thermal comfort, whilst minimising the necessary heat input - creating considerable energy savings.

By creating a 'warm wall' effect and reducing cold spots, the conditions for condensation and mould to occur are also much reduced.

For owners of solid wall properties and hard-to-treat homes, including listed buildings, improving insulation using conventional internal or external wall insulation has long been a complicated and expensive proposition. AeroTherm is the solution to these and many more properties.



RISE Awards 2016



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Test Results

The thermal conductivity or resistivity properties commonly tested in conventional insulation products is not relevant to the way in which AeroTherm performs. Therefore to determine its thermal performance, more in-depth and relevant co-heating tests have been carried out by two independent leading European "Building Construction" test centres

In a controlled test, two identical buildings were constructed, which were then monitored to ensure they had near identical heat loss characteristics. The walls were built to a 0.29 U-Value, with the ceiling built to 0.18 U-Value. One was then treated with AeroTherm to the internal walls and ceiling. AeroTherm demonstrated a number of significant energy savings:-

TZUS Test Certificate – 010-033223

- The AeroTherm treated building warmed up from 15°C to 23°C 27% faster than the untreated building. (30 minutes compared to 41 minutes)
- After turning the heating off, a 3°C drop took almost twice as long in the AeroTherm treated building (57 minutes, compared to 30 minutes)
- The AeroTherm treated building showed a more balanced temperature throughout, reducing the difference in the room temperature range by 3°C. (10°C to 7°C differential)
- Over the duration of the test, the building treated with AeroTherm achieved average daily energy savings of 18%, with a minimum 12.5% daily saving.

As a consequence in a typical home environment the heat source can be switched on later and switched off sooner. The thermostat can also be lowered by up to 3°C, whilst maintaining the same thermal comfort level. This equates to more than 30% energy savings in the AeroTherm treated building.

VUPS Test Certificate – OV-15-0297 & OV-15-0298

The tests confirmed that with AeroTherm you can reduce the power of your heating system by 35% (with radiant floor heating) and 26% (with conventional heating).

- With radiant floor heating, the building treated with AeroTherm over the evaluated 5 day period used 9.8kWh compared with 17.9kWh for the untreated building (an energy saving of 45%). The pre-calculated heat loss expected for the building structure was 16.8kWh.
- with a convectional radiator, the building treated with AeroTherm over the evaluated 5 day period used 12.3kWh compared with 20.0kWh for the untreated building (an energy saving of 39%). The pre-calculated heat loss expected for the building structure was 18.6kWh.

Application

AeroTherm is applied as a paste straight on to existing walls and ceilings. It is quickly smoothed over to create a 1mm coating, then left to dry. After 24 hours the surface is lightly sanded to a smooth white finish, which can then be re-decorated. No loss of space or interference with existing fixings.

AeroTherm continues to receive positive feedback from contractor trials and domestic customers across the UK.



AeroTherm is unique in offering a 1mm plaster coating which can provide energy savings comparable to conventional insulation methods. Current conventional IWI & EWI methods have many drawbacks in terms of cost, disruption and suitability. These issues have meant less than 4% of solid wall properties in the UK have had retrofit wall insulation installed. This is a continuing problem for over 8 million homeowners, landlords and housing associations. AeroTherm can provide a **practical, cost effective solution** for nearly all these properties.

In conjunction with the Universities of Prague, Brno and business entrepreneurs from The Czech Republic, AeroTherm was developed using the latest advances in energy secondary reflectance to provide an ultra-thin breathable coating, suitable for many domestic and commercial applications. The lightweight paste can be installed by anyone with competent plastering skills and a basic understanding of how the product works.

No other insulation is as effective at such a low thickness.

