

SHEEP'S WOOL INSULATION

warmer  
safer  
smarter



 **Black  
Mountain**  
INSULATION LTD



Black Mountain Sheep Wool Insulation is the safest insulation on the market today. By its very nature it doesn't harbour any dangerous chemicals, dust or mould that can lead to allergic or other reactions.



### True sustainability

Sheep wool insulation is truly sustainable; each year over 50 million kilograms of wool are sheared in the UK alone. Black Mountain uses the waste dark coloured wool that is not required by other industries.

Black Mountain has the most modern, energy efficient, zero waste, natural insulation factory in Europe. The embodied energy is extremely low, almost 90% lower than man-made mineral fibre insulation.

Man made insulation can only be disposed of into landfill; no recycling system is currently in place. Whereas sheep's wool insulation can be composted at the end of its life; this not only generates soil enriching humus but also nitrogen fertilisers.

Care should be taken to select the correct sheep wool insulation as some other brands have very high levels of plastics incorporated - 40% or greater - and hence cannot be deemed sustainable, recyclable or biodegradable.

### Easier to Install

There are no health or safety risks when fitting sheep wool insulation, which means it is not just safer but faster too. Unlike rigid boards, Black Mountain fits easily between timber joists and provides a tight seal with minimal effort because it is naturally flexible.

Sheep wool insulation is resilient and strong - the wool fibre has a natural spring which ensures the insulation doesn't compact over time unlike other insulations. It is also very strong, yet can be torn by hand across direction to facilitate installation.

To avoid the unpleasant task of removing existing mineral wool insulation it is possible to install sheep's wool insulation on top of the compacted insulation;

however, care should be exercised to prevent loose mineral fibres being inhaled.

### Natural Condensation Control

Condensation is probably the biggest challenge facing architects and renovators today. Sheep wool can assist in solving this problem.

Sheep wool is very hygroscopic; it is unique in that it generates significant heat as moisture is absorbed - in fact 1 kg of wool generates the same heat as an electric blanket used for 8 hours. The heat generated increases the dew point and thus reduces the risk of interstitial condensation; man-made insulation cannot achieve this.

Wool draws out moisture from the fabric of the building and allows it to evaporate out of the building. Even having absorbed up to 30% moisture it maintains its thermal performance, whereas mineral wool insulation performance deteriorates dramatically. Only a few percentage points of moisture can reduce thermal performance by up to 50%, leading to increased condensation.

### Ideal for older properties

Older properties don't fit the current standard rafter dimensions, requiring a lot of cutting and wastage. Black Mountain is unique in its ability to manufacture special widths to fit your project, thus reducing wastage and speeding installation. The installed cost is similar to the more expensive man-made boards.

The majority of older properties have no vapour barriers installed, hence condensation is a major concern with the consequent risk to the fabric of the building.

### Indoor Air Quality

Sheep wool insulation is unique in its ability to absorb and lock up toxic gases (sulphur dioxide, nitrogen dioxide and formaldehyde) - these gases are given off by other building products and exhausts.

### The definitive long life material

Black Mountain uses hill farmed wool which has a very strong fibre, and will last over 50 years. This is clearly demonstrated by the long life of carpets - despite decades of heavy trafficking carpets retain their resilience.



Our natural sheep's wool insulation is made from only virgin UK and Irish wool. The wool is treated with a natural mineral, Borax, to give it an insect resistance plus a small amount of binder is added to join the fibres together



## Fire Standards

Wool is naturally fire retardant; it only chars since there is insufficient oxygen in the atmosphere to support combustion of wool. In the event of a fire, wool will not add to the fire risk and produces no toxic gases. All of our products are tested to:

*Euro Class C, Building Regulations Part L BS:5803-4*



Wool insulation matches the following standards for loft, rafter and internal wall thermal requirements as follows:

<i>England/Wales</i>	<i>Approved Document L1, L2 - Table 1</i>
<i>Scotland</i>	<i>Technical Standard Table J23</i>
<i>N. Ireland</i>	<i>Technical Booklet F - Table 1.2 / 1.4</i>

## Performance and Technical Standards

<i>Fire</i>	<i>Euro Class C / BS 5803-4:1985</i>
<i>Condensation</i>	<i>BS 5250: 1989</i>
<i>Thermal Conductivity</i>	<i>0.04 W/mK</i>
<i>U Value (100mm)</i>	<i>0.4 W/m<sup>2</sup>K</i>
<i>ODP (ozone depletion potential)</i>	<i>zero</i>
<i>GWP (global warming potential)</i>	<i>zero</i>

## Sizes Available

<i>Widths</i>	<i>400mm or 600mm (other widths to special order)</i>
<i>Thicknesses</i>	<i>50mm, 75mm, 100mm (125mm and 150mm available soon)</i>
<i>Roll length</i>	<i>10m - 50mm, 5m - 75mm, 5m - 100mm</i>
<i>Batts</i>	<i>1.2m length, 10 pieces per pack</i>

## Recommended thickness for Part L

<i>Area</i>	<i>U Value</i>	<i>Thickness</i>
<i>Cold Loft</i>	<i>0.16 W/m<sup>2</sup>K</i>	<i>250mm</i>
<i>Warm Loft</i>	<i>0.20 W/m<sup>2</sup>K</i>	<i>200mm</i>
<i>Walls</i>	<i>0.27 W/m<sup>2</sup>K</i>	<i>150mm</i>
<i>Floor</i>	<i>0.25 W/m<sup>2</sup>K</i>	<i>160mm</i>