

SEVEN WAYS INSULATION IMPROVES HEALTH AND COMFORT IN HOMES

Insulation is a great way to save energy and help tackle climate change, but it also makes a major contribution to indoor health. Here's how:

1



Noise pollution

In Europe noise pollution has been linked to 43,000 annual hospital admissions, 900,000 hypertension cases and 10,000 causes of premature death. Mineral and Wood Wool insulation fibres absorb noise and provide a powerful sound barrier.

3



Living better

Insulation keeps buildings pleasantly cool in summer and comfortably warm in winter. It creates comfort zones that allow everyone to flourish in a healthy environment. One in six Europeans report living in an unhealthy building.

2



Cold comfort

When a building is well-insulated the indoor environment is immediately improved. This means no more unpleasant cold wall surfaces. Twice as many Europeans report poor health when they cannot keep their homes warm in winter.

4



Community care

For vulnerable sections of society – such as the elderly or very young – having a well-insulated comfortable home means better health and lower stress levels. Excess winter deaths among the elderly have been linked to cold housing.

5



Poverty trap

Nineteen percent of Europeans live in homes that are not comfortably cool in summer. Eleven percent live in homes not comfortably hot in winter – that's 50 million Europeans who face a choice between heating or eating on a cold day. Insulation is the solution.

6



Healthier air

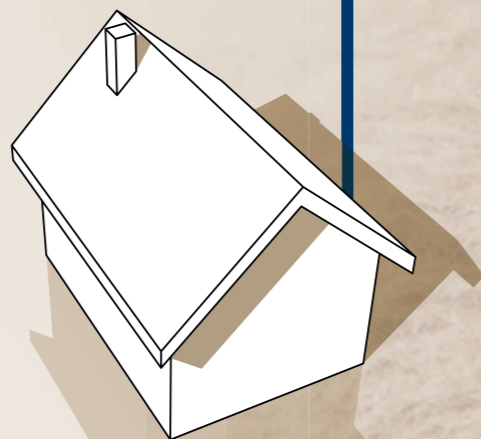
Insulation can reduce concentrations of external air pollutants by up to 9%. In Europe that means saving 78,678 life years every year and avoiding 7,173 annual cases of bronchitis. People are 40% more likely to have asthma when living in a damp or mouldy home.

7



Healthy savings

One study found that the annual healthcare cost of Europeans living in 'unimproved' housing was €194 billion. And, in the case of asthma and chronic pulmonary disease, the total cost for Europe was €40 billion.



WHAT DO EXPERTS SAY?

“Well insulated, comfortable homes have a major impact on the health and wellbeing of the population. At the most basic level, the prevention of nearly 25,000 excess winter deaths through the improved performance of homes in the UK has been highlighted as a priority area by the National Institute for Health and Care Excellence in the UK.”

Professor Will Swan,
Professor of Building Energy Performance,
University of Salford
in the UK

“Emissions from products are called Volatile Organic Compounds or VOC. Synthetic VOC can pose a serious health risk, especially to children. Eurofins Indoor Air Comfort Gold certification guarantees that a product has low emissions. Knauf Insulation was the first company to have its Mineral Wool with ECOSE Technology certified Indoor Air Comfort Gold.”

Thomas Neuhaus,
Head of Certification
Body Eurofins

HOME COMFORTS

There are two forces of nature that will sabotage the real performance of any building. Our Homeseal LDS System is the ideal solution to address these challenges.

Even small gaps and cracks in the building envelope can allow air to circulate and pass through or over insulation. This can significantly reduce the insulation's energy-saving potential.

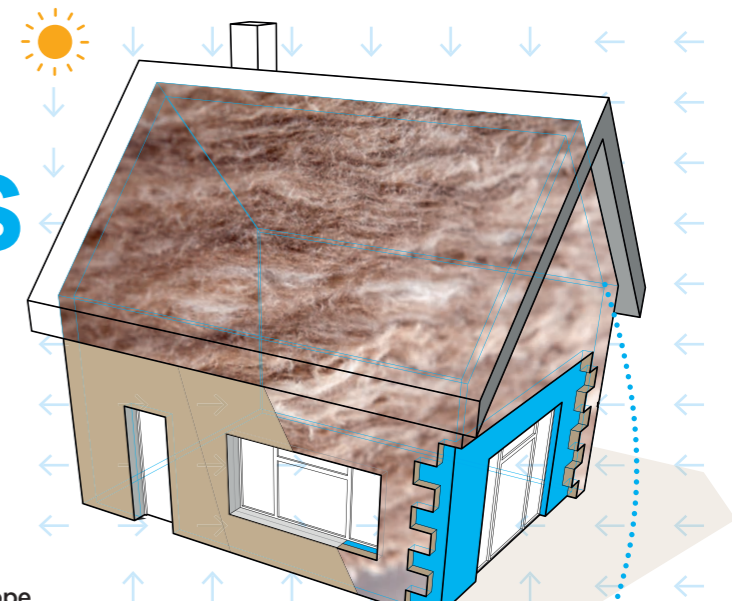
Further complications can occur if humidity is allowed to migrate through or around the insulation. This can in some cases even lead to condensation and mould.

That is why the building envelope should be air-tight and should be protected from any risk of water damage.

In other words, it is critical to consider those two aspects in the insulation of your roof if you want to guarantee its efficiency.

An airtight building envelope not only safeguards the performance of insulation, but also contributes to internal comfort by locking out cold air caused by leaks.

Furthermore, by preventing uncontrolled condensation and possible mould spores, mildew or microbial organic compounds, an airtight envelope can contribute to the health of a building – particularly if combined with efficient installation of the solutions and a controlled ventilation system.



HOMESeal SYSTEM



Plugging gaps in air-tightness regulation

In the past when it came to building energy efficiency it was seen as sufficient to just install insulation. It is not.

In recent years, our knowledge of building physics has grown enormously and we understand that controlling air-tightness and humidity is critical to protecting building envelope performance in a long-term perspective.

And we are not alone. Many national regulations are also becoming increasingly demanding when it comes to issues of air-tightness and humidity. This regulation may vary from country to country, but we can help.

For example, in France, RT2012 enforces performance-related air-tightness as part of French regulation designed to reduce energy use in new buildings.

Our RT Plus System is highly popular in France and offers a built-in air-tightness and vapour control functionality and complements our Homeseal LDS Solutions. It has consistently proved to be ideal for installers keen to save time while ensuring the real performance of the building envelope. The RT Plus System meets construction and regulatory demands while ensuring comfort. In 2017 the system won the Engineering Prize in Toulouse and received a Trade trophy in July.

Our Homeseal Solutions

At Knauf Insulation we have created the Homeseal LDS range of insulation accessories that are designed to tackle the challenges of airtightness and humidity.

Our weather-proof Homeseal LDS breather membranes are installed above rafters to protect insulation from wind and rain while our Vapour control Homeseal LDS membranes are installed inside the building envelope to plug air gaps and protect the insulation against humidity coming from the inside of the building.

We have also selected products for the Homeseal range that are ideal for every application from purpose-designed gaskets and elastic sealants to a range of powerful and reliable tapes that have been designed to last.

