



lenoo

Introducing...

Eco-friendly insulation for optimal comfort in all seasons.



www.lenoo.be



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LENOO

Bio-sourced Insulation



Lenoo Bio-sourced Insulation

FOR ECONOMICAL AND SUSTAINABLE COMFORT

Lenoo insulation is made from recycled high-density wood fibre. This gives it superior thermal and acoustic performance for guaranteed optimal comfort in all seasons.



1 Thermal Comfort

Lenoo is state-of-the-art insulation that retains heat in the winter and coolness in the summer to regulate the temperature without additional energy consumption.

2 Energy Savings

Lenoo not only reduces heating and air conditioning costs for significant savings on energy bills, but also helps protect the environment through its energy efficiency and eco-friendly properties.

3 Indoor Air Quality

Lenoo's water vapour permeability is beneficial for a healthy indoor environment – it regulates humidity and prevents mould growth, thereby improving the quality of the air you breathe.

4 Durability

Lenoo can be easily adapted to different insulation projects. Delivered in bulk, the insulation is blown into the roof structure, walls, floors and attic flooring. It has exceptional durability, ensuring long-term insulation performance and adding value to your property.

THERMAL PROTECTION

Global warming is making our winters milder and our summers hotter, with heatwaves becoming more prevalent. It is therefore important to think about using insulation that protects against both the cold and the heat.

Thermal conductivity is a key consideration when assessing an insulating material's effectiveness. It measures the material's ability to conduct heat. An insulation material is considered efficient when its thermal conductivity is low, as this means it restricts the passage of heat. **Thermal resistance** is an additional factor, based on the material's thermal conductivity and thickness. The higher the thermal resistance, the more efficient the insulation material. This means that a thick insulation material with low thermal conductivity provides better insulation. This data is calculated on the basis of perfectly stabilised temperatures; in fact, though, a building's exterior and interior temperatures vary constantly, and this is where Lenoo insulation makes all the difference. With its high density and high thermal capacity, it will absorb and retain all the excess heat, then release it slowly, generating a more stable interior temperature over a longer period.

To understand in greater depth and more detail why Lenoo insulation is so superior to other loose-fill insulation materials, it is vital to get to grips with the concept of **thermal attenuation**. This refers to the insulation's ability to reduce temperature fluctuations. Better attenuation means that variations in the outside temperature have less effect on the building's interior temperature. Even if two types of insulation have the same thickness and thermal phase shift, one may outperform the other because of its superior ability to limit heat transfer. And this is the case with Lenoo insulation, which boasts a greater density and high specific heat capacity that results in exceptional performance. For example, a 23 cm layer of Lenoo insulation under the roof can provide up to four times greater thermal attenuation than other loose-fill insulations.



This reduces **thermal diffusivity** – the speed with which heat spreads through a material – which is great for interior comfort, and saves you money too. This remains the case until the insulation's heat storage capacity becomes saturated. To make this phenomenon clearer, it is helpful to talk about **phase shift**. This is the length of time, in hours, that heat takes to pass through insulation. If the phase shift is long enough, the heat captured at hot times of day can be released to the outside in the evening, when it is cooler. By combining Lenoo insulation with efficient ventilation in the evening, you can maximise the thermal comfort of your living space while saving on heating or air conditioning.

DID YOU KNOW?



1 Carbon neutral

Lenoo maintains a carbon-neutral footprint through its circular economy model while recycling MDF scraps into a virtuous insulator, thus ensuring the sustainability of its life cycle.



2 Bio-sourced label

Bio-sourced insulation is made from natural resources, which is good for energy efficiency and sustainability. Using bio-sourced insulation in your renovation project also entitles you to additional premiums in Wallonia.



3 Phase shift

Lenoo insulation has excellent phase shift properties, but that's not all. As well as delaying thermal transmission within your home, it also attenuates it.



4 Made In Belgium

Lenoo insulation has been developed and patented by two Walloon engineers. Combining innovation and local know-how, it is the result of a commitment to Belgian excellence and the support of regional investors.