



INSULATE THE ATTIC FLOOR WITH LENOO.





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Insulate one's attic floor with Lenoo - initial assessment

Insulating your attic floor is a key step in enhancing the thermal comfort of your home and reducing your energy bills. It's especially beneficial for unfinished attics, providing an economical solution to keep heat in the rooms below. If you notice heat loss in winter or overheating in summer, it might be time to replace your existing insulation with a more efficient option.

Initial assessment

- 1) **Structure**: Ensure that the attic floor can bear the weight of the insulation, in accordance with the NBN EN 13964 standard. The load capacity of the ceiling panels is specified by the manufacturer.
- **2) Moisture :** Check that the attic is properly ventilated and free from moisture issues. A vapor barrier prevents moisture from penetrating the insulation, but good ventilation is essential to prevent condensation and mold. Select a vapor barrier that is suitable for your region and the location of your home.
- **3) Safety:** Lenoo insulation must not come into contact with heat sources such as flues or recessed spotlights. Electrical cables in contact with the insulation should be protected by a conduit. Any ventilation system must be installed outside of the insulation area. We will address these points in more detail.



2 Site Preparation

- 1) Protection: Wear personal protective equipment, including gloves, a P2 dust mask, safety goggles, and long-sleeved clothing.
- **2) Cleaning :** Remove all unnecessary objects and clean the space for optimal safety. Seal any holes and cracks to ensure proper air and dust tightness. An under-roof screen is essential.
- **3) Measurements :** Calculate the area to be insulated to determine the amount of insulation and vapor barrier needed. Allow for extra material for overlaps, covering joists, and cuts around obstacles. Make sure you have enough staples to secure the vapor barrier and adhesive tape to seal the joints. To be eligible for subsidies in Wallonia, it is imperative that the insulation reaches a minimum thickness of 21.5 cm, corresponding to a thermal resistance of at least $R \ge 5$. To anticipate any potential settling of the insulation over time, it is advisable to plan for a safety margin of 20%, thus aiming for a final thickness of at least 26 cm for an $R \ge 5$. To illustrate an example of the magnitude for insulation, the installation of 25 cm thickness of Lenoo insulation, with a density of 60 kg/m³, requires the use of a 15 kg bale per square meter.

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Insulation Installation

- 1) Protection of Recessed Lights: Recessed lights and transformers require protection to prevent any risk of overheating. A 10 cm air gap must be maintained around the lights, either by creating a technical void or by using fireproof light covers. Transformers should be placed outside the insulation layer for cooling purposes.
- 2) Flue Pipe: Insulating materials must be installed in such a way that they do not touch the flue pipes, with a rigid collar at least 15 cm away from the pipe and extending 10 cm above the top of the insulation (NBN B 61-002). In France, the space around the flue pipe cannot be filled with fireproof insulation and must remain empty to avoid creating a heat trap.
- **3) Low Ventilation in Attics :** Install baffles 10 cm above the insulation to prevent any risk of it being drawn in.

- 4) Access Hatch: Construct a frame around the access hatch that extends at least 10 cm above the insulation. Insulate the hatch with a rigid insulator whose thermal resistance is at least equal to that of the Lenoo insulation.
- 5) Insulation Thickness: Place graduated markers at the required thickness to ensure an even distribution of the insulation and maintain the necessary thickness. A minimum of 4 markers per 100m2 are recommended, visible from the access hatch to facilitate inspections.
- 6) Other Markings: Mark the locations of recessed lights, electrical conduits, and other important elements to easily identify them later.
- 7) Vapor Barrier: Install it on the warm side (inscriptions not visible in our case because it is always on the heated interior side). Attach it to the attic floor by stapling it to the floor and sealing its joints with suitable tape. Make sure to overlap the strips properly.
- 8) Insulation Distribution of Lenoo: Pour the insulation into a large container, mix it to increase its volume and reduce its density, then spread it evenly over the area to be insulated. Lenoo is delivered in dense bales of 180 kg/m³; it is recommended to fill a quarter of the container's capacity and use a mixer to aerate the insulation until it triples in volume to reach its density of 60 kg/m³. Use a rake for even distribution.
- 9) Informative Label: Place a label near the electrical panel to inform future workers of the precautions to take in the insulated attic.



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