

TRANSCRIPT VIDEO

## **WHY INSULATE BUILDINGS?**

A well-insulated building = fewer heat exchanges

between the warm air inside and the cold air outside. (+ Inside / Outside / Heat / Cold )

A well-insulated building = less energy loss

This reduces the energy required to heat the building. And therefore, reduces its carbon footprint.

### **Which parts of a building should be insulated first?**

For an old home without insulation, heat loss breaks down as follows\*:

\* As estimated by French environmental agency ADEME

25%-30% via the roof – 20%-25% via the walls – 20%-25% via ventilation points and channels (chimneys) – 10%-15% via the windows – 7%-10% via the floor

The roof and walls should therefore be insulated first.

### **How exactly are buildings insulated?**

Internal insulation: Increasing the building's thermal resistance by adding insulation on the **inside**.

External insulation: Wrapping a layer of **insulation on the outside** of sections of the building.

What materials are used to insulate buildings?

**Glass wool and stone wool:** Cost-effective but high environmental impact in the production phase.

**Plastics like polystyrene and polyurethane:** Cost-effective but high environmental impact in the production phase.

**More natural insulation materials like cork and vegetable wools:** Lower environmental impact but more costly and more flammable.

Summary:

A well-insulated building = fewer heat exchanges and less energy loss. = reduction in energy use and carbon footprint.

The roof and walls should be insulated first. Two types of insulation: internal and external.

Materials used: glass wool, stone wool, plastics, vegetable wools and cork.