

What is Cavity Wall Insulation (CWI)?

Cavity Wall Insulation (CWI) is a method of improving the thermal efficiency of buildings by filling the gap (cavity) between the inner and outer layers of a cavity wall with insulating material. This reduces heat loss, lowers energy consumption, and enhances indoor comfort.

CWI is widely used in the UK, particularly in residential retrofit and renovation projects, to meet energy efficiency standards and comply with Building Regulations. It is suitable for homes built after the 1920s, as these typically feature cavity walls.

Synonyms:

- Wall cavity insulation
- Cavity fill insulation

Related Terms:

1. **Thermal Bridging:** Heat transfer through building elements that bypass insulation, reducing overall efficiency.
2. **U-Value:** A measure of heat loss through a structure, with lower values indicating better insulation.
3. **Building Regulations Part L:** UK regulations governing the conservation of fuel and power in buildings.
4. **Retrofit Insulation:** Upgrading existing buildings with insulation to improve energy performance.
5. **Condensation Risk Assessment:** An evaluation to ensure insulation does not lead to moisture issues within the wall cavity.

Explanation:

CWI involves injecting materials such as mineral wool, polystyrene beads, or foam into the cavity. This process is typically carried out by certified installers to ensure compliance with Building Regulations and Approved Documents. For example, Approved Document L1B (Conservation of Fuel and Power in Existing Dwellings) provides guidance on insulation standards for retrofits.

Practical Examples:

- A homeowner in London retrofits their 1930s semi-detached house with CWI to reduce heating bills and comply with energy efficiency targets.
- A housing association in Manchester uses CWI as part of a larger renovation project to improve the thermal performance of their properties.