

# KORENZEB

## Get nZEB-Ready with KORE Insulation

### What is nZEB, or Nearly Zero Energy Building?

Ireland's building regulations are changing. In 2018, a public consultation on the Building Regulations Part L (Conservation of Fuel and Energy) was announced. These changes affect a number of current regulations, including U-values for a number of building components. The changes are documented in the tables below.

Changes under Part L 2019 will become compulsory from 1st November 2019 and will replace Part L 2011. However, Part L 2011 may still be used where the work, material alteration or change of use commences or takes place before 31st October 2019. In addition, planning permission granted before this date with substantial work completed by 31st October 2020 may also continue to meet the 2011 requirements. Substantial work is defined as the external walls of the structure having been erected.

Part L defines the requirements as buildings being designed and constructed to limit the amount of energy required for operation and its associated carbon emissions as is reasonably practicable.



### New Build U-Value Requirements

Building Element	Minimum U-Value
Ground floor (no underfloor heating)	0.18W/m <sup>2</sup> K
Ground floor (with underfloor heating)	0.15W/m <sup>2</sup> K
External walls	0.18W/m <sup>2</sup> K
Flat roof	0.20W/m <sup>2</sup> K
Pitched roof (sloping ceilings; rafter level)	0.16W/m <sup>2</sup> K
Cold roof (ceiling level)	0.16W/m <sup>2</sup> K

### Existing Build U-Value Requirements

Building Element	Minimum U-Value
Ground floor (no underfloor heating)	0.45W/m <sup>2</sup> K
Ground floor (with underfloor heating)	0.15W/m <sup>2</sup> K
External walls (Cavity)	0.55W/m <sup>2</sup> K
External walls (other - not cavity)	0.35W/m <sup>2</sup> K
Flat roof	0.25W/m <sup>2</sup> K
Pitched roof (sloping ceilings; rafter level)	0.25W/m <sup>2</sup> K
Cold roof (ceiling level)	0.16W/m <sup>2</sup> K
External doors, windows, rooflights & curtain walling	1.40W/m <sup>2</sup> K

## Major Renovations

TGD Part L 2019 sets out requirements for dwellings that undergo major renovation. It is considered a major renovation when more than 25% of the building's surface area undergoes refurbishment or renovation. The TGD states that the performance of the entire building should be improved to a cost optimal level where technically, functionally and economically feasible. The cost optimal performance level is considered 125 kWh/m<sup>2</sup>/yr, or B2 equivalent energy rating, when calculated in DEAP.

To calculate the surface area, the entire external envelope needs to be considered. This includes the external walls, floors, roof, windows and doors. The surface area of the building includes any area that can lose heat to the external environment or the ground.



## Calculating Major Renovations

The following calculations could be considered for a detached house:

Building Element	M <sup>2</sup>
External wall	150
Floor	84
Roof	110
Windows & Doors	42
Total Surface Area	386m <sup>2</sup>

To calculate the percentage that would trigger a major renovation, take the building element and divide it by the total surface area. For example, for external walls we would divide 150m<sup>2</sup>/386m<sup>2</sup>, giving us a percentage of 39% of the total surface area. This mean external

insulation or internal wall dry lining upgrades would be considered a major renovation as more than 25% of the surface area will undergo refurbishment. At a cost optimal level of 125 kWh/m<sup>2</sup>/yr, this dwelling would need to achieve a B2 equivalent energy rating to meet the new requirements.

It's important to note that there are several exclusions that will not trigger a major renovation. This includes cavity wall insulation or attic insulation upgrades, painting, re-plastering, re-slating or re-tiling. Roof, floor and window upgrades are also not considered cost optimal. Other exclusions include some historic buildings, and dwellings damaged due to natural disasters or material defect.

For complete regulations please refer to TGD Part L 2019.

## Meeting nZEB with KORE

Nearly Zero Energy Buildings must combine energy efficiency solutions and renewable energy technologies to offset a building's energy demand. Heat loss must be limited, while heat gain must be optimised.

KORE's EPS insulation solutions are nZEB-ready, meaning our solutions will help you achieve the new regulations from day one. This includes our bonded bead cavity wall insulation, external wall insulation, roof insulation, insulated foundation system and floor insulation.

Speak with our technical sales team today to learn more about how KORE is preparing for the future with TGD Part L 2019, and see how our EPS solutions can move with you into the future of low energy building.

