



For a quotation please contact us on

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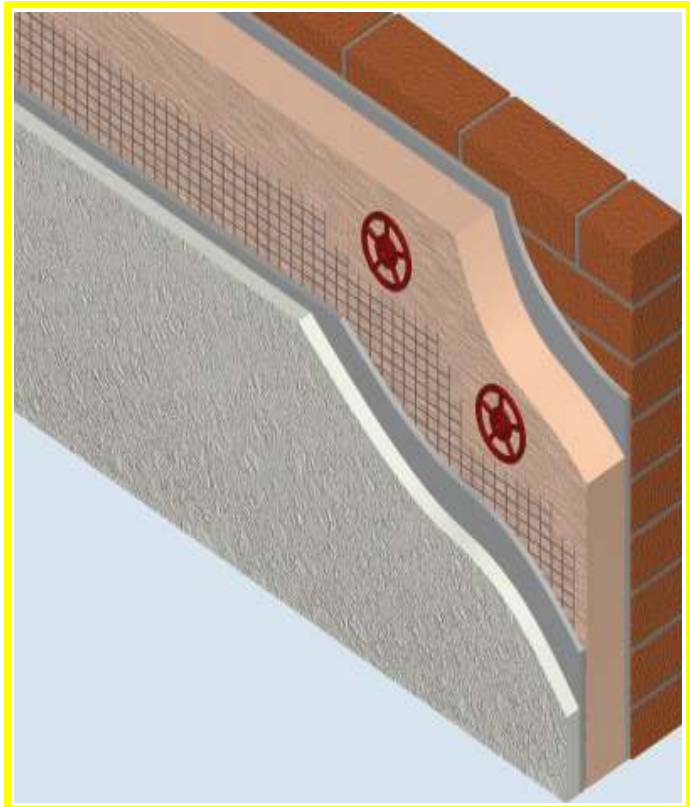
or via email at

[xsulation@gmail.com](mailto:xsulation@gmail.com)

[www.xsulation.ie](http://www.xsulation.ie)

We are SEI registered Applicators of external board insulation systems. Below is information on one of the external systems that we use.

- Premium performance rigid phenolic insulation – thermal conductivity as low as 0.021 W/m-K
- Class 0/Low Risk fire rating
- Negligible smoke obscuration
- Suitable for use behind traditional and lightweight polymer modified renders
- Transforms and upgrades the appearance of existing buildings
- Resistant to the passage of water vapour
- Easy to handle and install
- Ideal for new build and refurbishment
- Non-deleterious material
- CFC/HCFC-free with zero Ozone Depletion Potential (ODP)





### Typical Applications

*Kingspan Kooltherm® K5 EWB* can be mechanically fixed to masonry or timber frame walls behind either traditional or lightweight polymer modified render systems. Once installed, *Kingspan Kooltherm® K5 EWB* can exceed Building Regulations / Standards requirements for these applications.

### Water Vapour Control

#### Surface Condensation

Surface condensation can be controlled by the selection of the correct thickness of insulation, the heating and ventilation system being designed with condensation in mind, and subsequently the combination of heating and ventilation being used correctly.

#### Interstitial Condensation

The Kingspan Insulation Technical Service Department can provide a condensation risk analysis of your proposed design. Alternatively the designer can undertake an independent assessment by following the procedures set out in BS 5250: 2002 (Code of practice for the control of condensation in buildings).

### Fire Stops

Current Building Regulations / Standards should be considered with regard to the requirements for and / or provision of fire stops.

### Sitework

#### Insulated Render Systems

Because insulated render systems are proprietary and utilise different mechanisms for attaching insulation to the wall structure, sitework guidance should be sought from the system manufacturer.

However, in the absence of any other guidance *Kingspan Kooltherm® K5 EWB* insulation boards are mechanically fixed to the exterior of masonry external walls using anchor bolts, expansion fixings, proprietary fixings or bedded in render. In the case of timber frame walls the *Kingspan Kooltherm® K5 EWB* insulation boards are temporarily pinned in place with all joints lightly butted. A breathable membrane e.g. *Kingspan nilvent®* is applied over the insulation boards and temporarily stapled or pinned in place. Preservative treated softwood battens are fixed vertically at centres to coincide with the timber frame wall studs. The expanded metal / cementitious board to carry the render is then fixed to the vertical battens. Sill extenders and flashings are used around openings, although the use of rigid phenolic insulation minimises the overall thickness of the external render system.

### Cutting

Cutting should be carried out either by using a fine toothed saw, or by scoring with a sharp knife, snapping the board over a straight edge and then cutting the facing on the other side. Ensure accurate trimming to achieve close-butting joints and continuity of insulation.





### Durability

If correctly applied, *Kingspan Kooltherm® K5* EWB has an indefinite life. Its durability depends on the supporting structure and the conditions of its use.

### Resistance to Solvents, Fungi & Rodents

The insulation core is resistant to short-term contact with petrol and with most dilute acids, alkalis and mineral oils. However, it is recommended that any spills be cleaned off fully before the boards are installed. Ensure that safe methods of cleaning are used, as recommended by the suppliers of the spilt liquid. The insulation core is not resistant to some solvent-based adhesive systems, particularly those containing methyl ethyl ketone. Adhesives containing such solvents should not be used in association with this product. Damaged boards or boards that have been in contact with harsh solvents or acids should not be used.

The insulation core and facings used in the manufacture of *Kingspan Kooltherm® K5* EWB resist attack by mould and microbial growth, and do not provide any food value to vermin.

### Fire Performance

The rigid phenolic insulation core of *Kingspan Kooltherm® K5* EWB will achieve the results given below, which enable it to be classified by the Building Regulations as being Class 0 and as Low Risk by the Technical Standards in Scotland.

### Thermal Conductivity

The boards achieve a thermal conductivity ( $\lambda$ -value) of 0.024 W/m.K (insulant thickness 15–24 mm), 0.023 W/m.K (insulant thickness 25–44 mm), 0.021 W/m.K (insulant thickness  $\geq$  45 mm).

### Thermal Resistance

Thermal resistance (R-value) varies with the thickness and is calculated by dividing the thickness of the board (expressed in metres) by its thermal conductivity.

Insulant Thickness (mm)	Thermal Resistance (m <sup>2</sup> .K/W)
20	0.80
25	1.05
30	1.30
35	1.50
40	1.70
45	2.10
50	2.35
55	2.60
60	2.85
65	3.05
70	3.30
75	3.55
80	3.80

