

Insulation
Ireland

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Kooltherm[®] K18 Insulated Plasterboard

Insulated plasterboard for
mechanically fixed insulated
drylining



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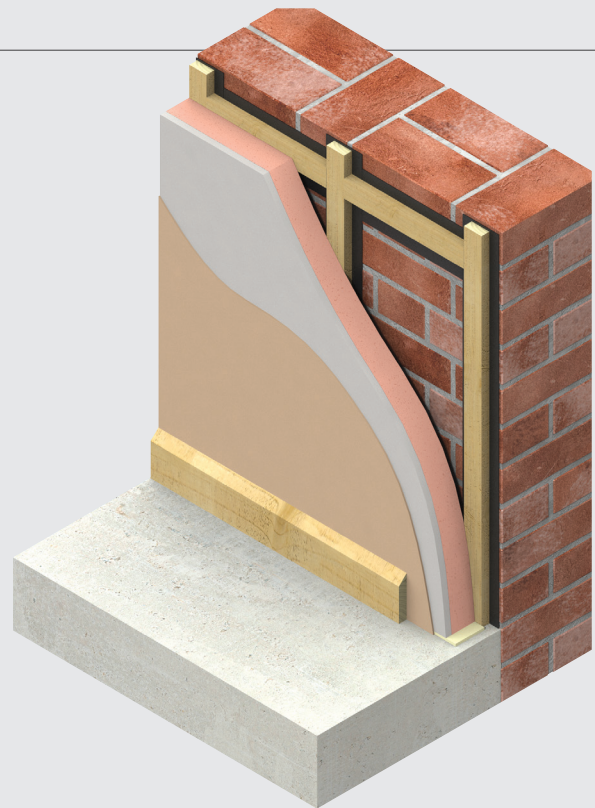
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Introduction

- Premium performance rigid thermoset phenolic insulation - thermal conductivity as low as 0.021 W/mK
- Insulation, drylining and vapour control in one board
- Allows quick response heating
- Unaffected by air infiltration
- Resistant to the passage of water vapour
- Easy to handle and install compared to some other commonly used insulants
- Ideal for new build, retrofit and refurbishment



Visit our free online U-value calculator.
Offering free, quick and easy calculations
for wall, floor and roof constructions.



Useful links

Website

[Kingspan Kooltherm® K18 webpage](#)

Certification

[Kingspan Kooltherm® K18 NSAI Certificate](#)

Declaration of Performance (DoP)

[Kingspan Kooltherm® K18 Declaration of Performance](#)

Safety information

[Kingspan Kooltherm® product safety information](#)

Product details

The front facing

The front facing of Kingspan Kooltherm® K18 is a tapered edge gypsum based plasterboard which readily accepts dry-jointing materials and plaster skim.

The core

The core of Kingspan Kooltherm® K18 is a premium performance rigid thermoset fibre-free phenolic insulant.

The reverse facing

The reverse facing of Kingspan Kooltherm® K18 is a low emissivity composite foil, autohesively bonded to the insulation core during manufacture. This reflective, low emissivity surface improves the thermal resistance of any unventilated cavity adjacent to the product.

Standards & approvals

Kingspan Kooltherm® K18 is manufactured under a management system certified to ISO 9001: 2015 (Quality management systems), ISO 14001: 2015 (Environmental management systems), ISO 37301: 2021 (Compliance management systems), ISO 45001: 2018 (Occupational health and safety management systems) and ISO 50001: 2018 (Energy management systems).

The use of Kingspan Kooltherm® K18 produced at Kingspan Insulation's Castleblayney manufacturing facility is covered by NSAI Certificate 09/0329.



Standard dimensions

Kingspan Kooltherm® K18 is available in the following standard size(s):

Nominal dimension		Availability
Length	(mm)	2400
Width	(mm)	1200
Plasterboard thickness	(mm)	12.5
Insulant thickness	(mm)	Refer to local distributor or Kingspan Insulation for current stock and non-stock sizes.

Durability

If correctly installed, Kingspan Kooltherm® K18 can have 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® K18 resist attack by mould and microbial growth and do not provide any food value to vermin.

Fire performance

Kingspan Kooltherm® K18 achieves European Classification (Euroclass) B-s1,d0 when classified to EN 13501-1: 2018 (Fire classification of construction products and building elements - Classification using data from reaction to fire tests).

Further details of the fire performance of Kingspan Insulation products may be obtained from the Kingspan Insulation Technical Service Department (see rear cover for details).

Product details

Thermal properties

The λ -values and R-values detailed below are quoted in accordance with EN 13166: 2012 + A2: 2016 (Thermal insulation products for buildings. Factory made phenolic foam (PF) products. Specification) for the insulation board component and EN 13950: 2014 (Gypsum board thermal/acoustic insulation composite panels - definitions, requirements and test methods) for the plasterboard component).

Thermal conductivity

The thermal conductivity (λ -value) of the plasterboard component of Kingspan Kooltherm® K18 is 0.25 W/mK.

The thermal conductivity (λ -value) of the insulation core of Kingspan Kooltherm® K18:

0.022 W/mK (insulant thickness 25 - 44 mm)

0.021 W/mK (insulant thickness 45 - 100 mm).

Thermal resistance

Thermal resistance (R-value) varies with the thickness of each component. It is calculated by dividing the thickness of each component (expressed in metres) by its thermal conductivity, followed by adding the resulting figures together. The sum is rounded down to the nearest 0.05 (m²K/W).

Insulant thickness (mm)	Thermal resistance (m ² K/W)
25	1.10
30	1.35
40	1.80
50	2.35
60	2.85
70	3.30
80	3.80
90	4.25
100	4.75

Plasterboard component (mm)	Thermal resistance (m ² K/W)
12.5	0.05

NB Refer to local distributor or Kingspan Insulation price list for current stock and non-stock sizes.

Typical constructions & U-values

Assumptions

The U-values in the tables that follow have been calculated using the method detailed in EN 6946: 2017 (Building components & building elements. Thermal resistance & thermal transmittance. Calculation methods). They are valid for the constructions shown in the details immediately above each table.

These examples are based on the use of 3 mm skim coated Kingspan Kooltherm® K18 mechanically fixed to both 25 x 47 mm treated softwood timber battens and metal studding / channels.

NB When calculating U-values to EN ISO 6946: 2017, the type of mechanical fixing used may change the thickness of insulation required. For the mechanically fixed options to timber battens or metal studding / channels, the use of carbon steel fasteners of cross sectional area 4 mm² has been assumed at a density of 16.7 per m².

NB For the purposes of these calculations the standard of workmanship has been assumed good, and therefore the correction factor for air gaps has been ignored.

NB The figures quoted are for guidance only. A detailed U-value calculation and a condensation risk analysis should be completed for each project.

NB If your construction is different from those specified, and / or to gain a comprehensive U-value calculation along with a condensation risk analysis of your project, please consult the Kingspan Insulation Technical Service Department for assistance.

U-value table key

Further information on the applicable notional and area weighted average limiting U-values is available in the relevant geographical documentation:

- Technical Guidance Document L (Dwellings) and Technical Guidance Document L (Buildings other than Dwellings) to the Building Regulations for the Republic of Ireland
- Technical Booklets F1 & F2 to the Building Regulations for Northern Ireland.

Solid masonry walls

Solid brickwork

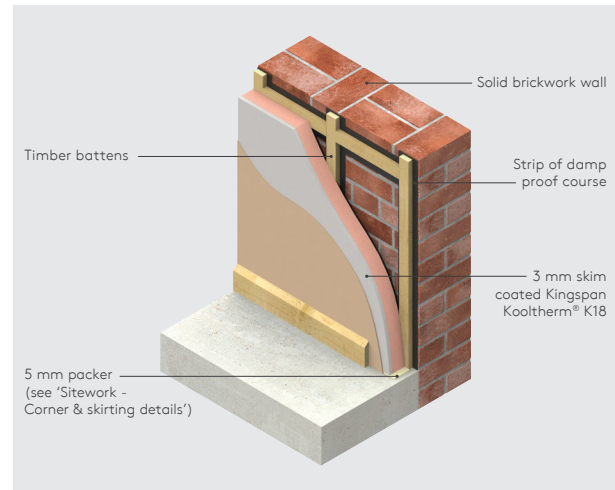


Figure 1

U-values (W/m²K) for various product thicknesses of Kingspan Kooltherm® K18 and different fixing methods

Product thickness* (mm)	Brickwork thickness	
	102.5 mm	215 mm
Timber battens at 600 mm centres		
37.5	0.51	0.47
42.5	0.46	0.43
52.5	0.39	0.37
62.5	0.33	0.31
72.5	0.29	0.27
82.5	0.25	0.25
92.5	0.23	0.22
102.5	0.21	0.20
112.5	0.19	0.19
Metal studding / channels at 600 mm centres		
37.5	0.55	0.51
42.5	0.49	0.46
52.5	0.41	0.39
62.5	0.34	0.32
72.5	0.30	0.29
82.5	0.26	0.25
92.5	0.24	0.23
102.5	0.22	0.21
112.5	0.20	0.19

* Product thickness = insulant thickness + 12.5 mm plasterboard.

NB Refer to local distributor or Kingspan Insulation for current stock and non-stock sizes.

NB Suitability of Kingspan Kooltherm® K18 in this application should be assessed against the relevant regulatory and best practice frameworks.

Typical constructions & U-values

Solid stone wall

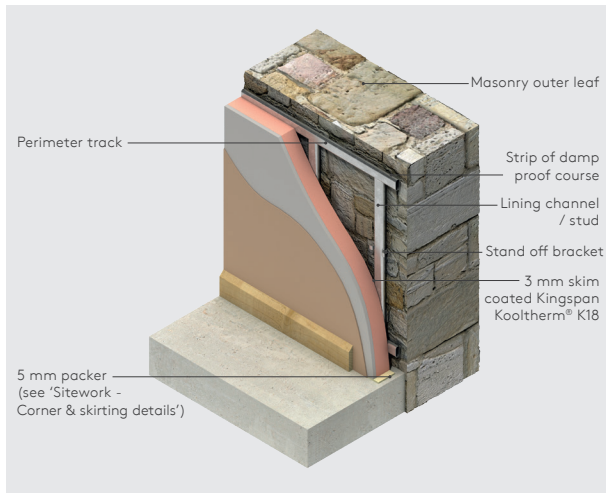


Figure 2

300 mm block wall with 60 mm Kingspan Kooltherm® K18 within cavity & 20 mm cement render

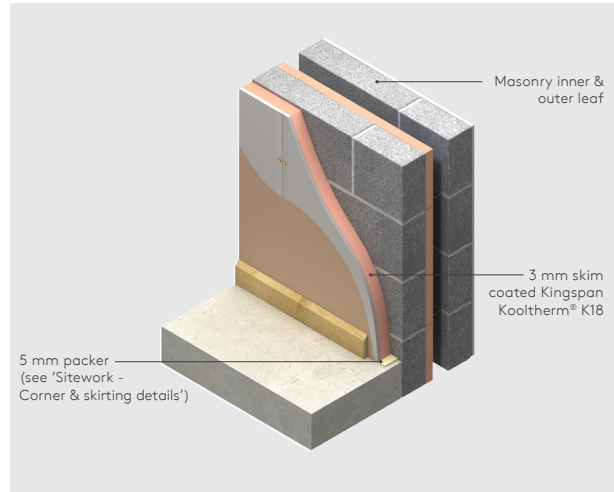


Figure 3

U-values (W/m²K) for various product thicknesses of Kingspan Kooltherm® K18 and different fixing methods Kingspan

Product thickness* (Mm)	Thickness of stonework	
	300 mm sandstone**	450 mm sandstone**
Timber battens at 600 mm centres		
37.5	0.51	0.49
42.5	0.46	0.45
52.5	0.39	0.38
62.5	0.32	0.32
72.5	0.29	0.28
82.5	0.25	0.25
92.5	0.23	0.23
102.5	0.21	0.21
112.5	0.19	0.19
Metal studding / channels at 600 mm centres		
37.5	0.55	0.53
42.5	0.49	0.48
52.5	0.41	0.40
62.5	0.34	0.33
72.5	0.30	0.29
82.5	0.26	0.26
92.5	0.24	0.23
102.5	0.22	0.21
112.5	0.20	0.18

* Product thickness = insulant thickness + 12.5 mm plasterboard.

** Calculations assume sandstone stonework of λ -value (2.30 W/mK).

NB Refer to local distributor or Kingspan Insulation for current stock and non-stock sizes.

NB Suitability of Kingspan Kooltherm® K18 in this application should be assessed against the relevant regulatory and best practice frameworks.

U-values (W/m²K) for various product thicknesses of Kingspan Kooltherm® K18

Product thickness* (mm)	Inner leaf blockwork density and λ -value (W/mK)	
	Dense (1.13)	Medium (0.51)
37.5	0.20	0.19
42.5	0.19	0.19
52.5	0.18	0.17
62.5	0.16	0.16
72.5	0.15	0.15
82.5	0.14	0.14
92.5	0.14	0.13
102.5	0.13	0.13
112.5	0.11	0.12

* Product thickness = insulant thickness + 12.5 mm plasterboard.

** Calculations assume sandstone stonework of λ -value (2.30 W/mK).

*** A 6.6% thermal bridging factor has been assumed for the effect of mortar joints.

† Please see the 'Residual cavity width' section in the Kingspan Kooltherm® K8 brochure for details of cavity width requirements.

NB Refer to local distributor or Kingspan Insulation for current stock and non-stock sizes.

Design considerations

Linear thermal bridging at junctions

Basic principles

Linear thermal bridging describes the heat loss at junctions between elements, which is additional to the losses occurring through roofs, walls and floors. This heat loss is represented by the junction's ψ value. The lower the ψ -value, the better the performance of a junction detail. The ψ -values and lengths of linear thermal bridges are accounted for in a new building's energy and carbon dioxide emissions calculations. Existing building junction losses are not typically accounted for in whole building heat loss calculations and only the risk of surface condensation and mould growth are considered.

Heat typically flows through the easiest path, for example in a masonry cavity wall the linear thermal bridge is primarily the inner leaf of masonry and in a timber frame wall the linear thermal bridge is primarily the sole plate and the construction below it. These linear thermal bridges can be reduced by increasing the distance that the heat has to travel.

Whilst there are some 'approved' details available, they are specifically targeted at new build constructions. However, where applicable, they are also considered good practice for refurbishment.

Reducing linear thermal bridging

Detailing at junctions to minimise the effects of thermal bridging and the associated risk of condensation or mould growth is important and there are some simple design considerations that can be adopted when insulating internally to help mitigate the risks and to reduce heat loss.

At a window or door opening, the primary linear thermal bridge is the reveal. This heat loss can be reduced by insulating the reveal. The key factor is the thermal resistance (R-value) of the insulation layer. Reveals should be designed to accommodate 37.5 mm (min.) of Kingspan Kooltherm® K18.

The application of internal insulation above and below an intermediate floor reduces the overall heat loss, but can increase the losses through the intermediate or separating floor. To reduce these losses, where possible, the edge of the intermediate floor within the floor void should also be insulated.

Where the properties to both sides of a party wall are to be insulated, best practice to minimise heat losses through the junction with external walls would be to return the insulation back along the party wall for at least 400 mm back from the external wall.

For further advice on details to reduce linear thermal bridging, please contact the Kingspan Insulation Technical Service Department (see rear cover for details).

NB Where insulating the external walls to only one side of a party wall, and the other property remains uninsulated, it is better not to insulate back along the return, as this can increase the losses to the uninsulated side, increasing the risk of surface condensation and mould growth for the uninsulated property.

Responsible sourcing

Kingspan Kooltherm® K18 produced at Kingspan Insulation's Castleblayney, Co. Monaghan manufacturing facility is certified to BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) 'Good'.



NB The above information is correct at the time of writing. Please confirm at the point of need by visiting the Kingspan Insulation [website](#), from which copies of Kingspan Insulation's certificates can be obtained.

Specification clause

Kingspan Kooltherm® K18 should be described in specifications as:-

The wall drylining insulation shall be Kingspan Kooltherm® K18 Insulated Plasterboard_____ mm thick: comprising a premium performance fibre-free rigid thermoset phenolic insulation core with 12.5 mm plasterboard bonded to its front surface and a low emissivity composite foil facing on its reverse surface. The product shall be manufactured under a management system certified to ISO 9001: 2015, ISO 14001: 2015, ISO 37301: 2021; ISO 45001: 2018 and ISO 50001: 2018; by Kingspan Insulation Limited; and installed in accordance with the instructions issued by them.

Design standards

BS 8212: 1995 (Code of practice for dry lining and partitioning using gypsum plasterboard) should be considered.

Limitations

Kingspan Kooltherm® K18 has a gypsum plasterboard face. It should, therefore, not be used to isolate dampness, nor be used in continuously damp or humid conditions.

When fixing Kingspan Kooltherm® K18 to walls, the boards are normally fixed with their long edges vertical. Boards may be fixed horizontally with an increased number of timber noggins, metal fixing straps or fixing T's. For ceilings, the boards must be installed with the long edge running perpendicular to the joists or rafters (see 'Sitework - Mechanical fixing - To timber framing studs / battens').

Fire stops

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

Sitework

Water vapour control / condensation

Consideration should be given to the risk of condensation, when designing thermal elements.

When internally lining a construction with insulation, condensation can be controlled by ensuring there is a layer of high vapour resistance on the internal surface of the construction. Kingspan Kooltherm® K18 contains an integral vapour control layer and, when installed correctly, with appropriate detailing at joints between sheets, penetrations and wall perimeters, can provide the necessary vapour resistance. If required, the vapour resistance of the wall lining can be increased by the application of two coats of Gyproc Drywall Sealer.

A condensation risk analysis should be carried out following the procedures set out in BS 5250: 2021 (Code of practice for control of condensation in buildings). The Kingspan Insulation Technical Service Department can provide this service.

Preparation

- The existing structure should be surveyed to ensure the construction is capable of supporting the weight of the internal wall system, ancillary items and any post-installation fittings.
- Existing wallpaper, skirting, picture rails, gloss paint and projecting window boards may need to be removed. Some internal finishes, such as vinyl wallpaper or gloss paint, can be scored or sanded as an alternative method to removal.
- The wall surface should be clean, stable and free from dust, contamination and loose or friable materials.
- The amount of preparation and removal required will be dependent on the chosen internal wall system.
- Check the structure is dry. Remedial work should be undertaken to remove dampness before installation of the internal wall insulation. Internal wall insulation must not be used to isolate dampness.
- Ensure there are no gaps at the perimeter (including floors, ceilings, internal corners or junctions), or around openings or service penetrations. For optimum airtightness, existing gaps should be sealed using a continuous fillet of drywall adhesive or flexible sealant, before wall lining commences.
- Positions for all new services should be determined. Existing services should be assessed to determine any alterations that may need to be made, for example relocating sockets and switches. Wall mounted fixings, such as electrical sockets, should be fitted to take into account the additional wall lining thickness.
- New wall linings must be designed to accommodate the thickness of the new insulated dry lining solution, particularly at reveals, heads, sills and in relation to ceiling height.

Mechanical fixing

To timber framing studs / battens

- This method may be used on timber frame constructions or on dry, stable constructions capable of supporting battens and associated fixings. Timber battens can be packed out using proprietary shims to correct alignment and provide a space to accommodate services.
- Guidelines should be marked out at maximum 600 mm centres to indicate the positioning of the vertical battens.
- Vertical timber framing studs / battens should be set at maximum 600 mm horizontal centres, around the perimeter of the walls, at floor and ceiling, and around any openings and services which penetrate the system.
- If fixing to battens, they should be mechanically fixed to the wall, and comprise 25 x 47 mm (min.) treated softwood, backed with a strip of damp proof course (DPC).
- Each sheet of Kingspan Kooltherm® K18 should lap timber framing studs / battens / noggins by 19 mm (min.) at sheet joints.
- Battens should be fixed approximately 75 mm from the ends of each timber batten and positioned at a maximum 600 mm apart.
- Where joints between sheets of insulated plasterboard are unsupported by the timber framing studs / battens, timber noggins should be installed.
- Each sheet of insulated plasterboard should be lightly butted, with fixings located no less than 10 mm from the bound edges of the sheet.
- Kingspan Kooltherm® K18 should be cut approximately 5 mm short of the floor to ceiling height.
- Sheets of Kingspan Kooltherm® K18 should be located centrally over the timber studs / battens and fixed using either drywall screws at 300 mm centres (or 200 mm at external corners), or large headed galvanised clout nails at 150 mm centres. Each sheet of insulated plasterboard should be lightly butted.
- When installing sheets onto timber, fixings should be long enough to allow minimum 25 mm penetration of the timber frame or minimum 22.5 mm penetration of the the timber battens. Fixings should not penetrate through the battens.
- Fixings should be driven straight, with the heads embedded just below the surface of the plasterboard.
- Care should be taken not to overdrive nails / screws.
- The perimeter of the Kingspan Kooltherm® K18 and the 5 mm clearance gap at the base of the wall should be sealed with a flexible sealant or equivalent.

Sitework

To metal wall liner systems

- This method may be used on any dry, stable constructions capable of supporting the stand-off brackets, tracks and associated fixings. It can be used to correct substantial substrate irregularities, or where a larger cavity is required to accommodate services. Because metal framing systems are proprietary, sitework guidance should be sought from the framing system manufacturer. However, in the absence of any other guidance, the instructions laid out below may be followed.
- The maximum undulation on the wall or service protrusion should be measured to determine the required cavity depth.
- Guidelines should be marked out on the floor and ceiling to indicate where the metal tracks will be positioned.
- The metal tracks should be fixed to the floor, ceiling and perimeters at a maximum of 600 mm centres using appropriate fixings for the proprietary system.
- Vertical guidelines should be marked out on the wall at a maximum 600 mm centres to indicate the position of the lining channels. Horizontal marks should also be made at 800 - 900 mm vertical centres (see manufacturers details for specific dimensions) to indicate the fixing points for the individual stand-off brackets. Brackets should be fixed using appropriate fixings.
- The lining channels should be fitted and fixed into the metal tracks at ceiling and floor level at a maximum of 600 mm centres, in line with the stand-off bracket positions, using appropriate fixings for the proprietary system, extending if required.
- Bracket legs on the stand-off brackets should be bent forward. Screws should then be inserted through holes in the brackets and fixed to the lining channels using appropriate fixings, such as 13 mm wafer headed drywall screws or jack point screws. Bracket legs can then be bent back to sit clear of the channel face.
- At internal angles or corner, a lining channel or track should be positioned tight into the corner to provide support for the lining.
- Fixing straps or fixing T's should be used to secure unsupported board joints. Metal channels or tracks should also be positioned around the perimeter of openings to support the board.
- Kingspan Kooltherm® K18 should be cut approximately 5 mm short of the floor to ceiling height.
- Kingspan Kooltherm® K18 should be located centrally over the metal lining channels and fixed using self-tapping drywall screws at 300 mm centres (or 200 mm at external corners). Each sheet of insulated plasterboard should be lightly butted.
- Fixings should be located no less than 10 mm from bound edges of the sheet, and be long enough to allow minimum 10 mm penetration of the metal.
- Fixings should be driven straight, with the heads embedded just below the surface of the plasterboard.
- Care should be taken not to overdrive screws.
- The perimeter of the Kingspan Kooltherm® K18 and the 5 mm clearance gap at the base of the wall should be sealed with a flexible sealant or equivalent.

Sitework

To timber joists or rafters

- Sheets of Kingspan Kooltherm® K18 may be used to line ceilings (see Figure 4).

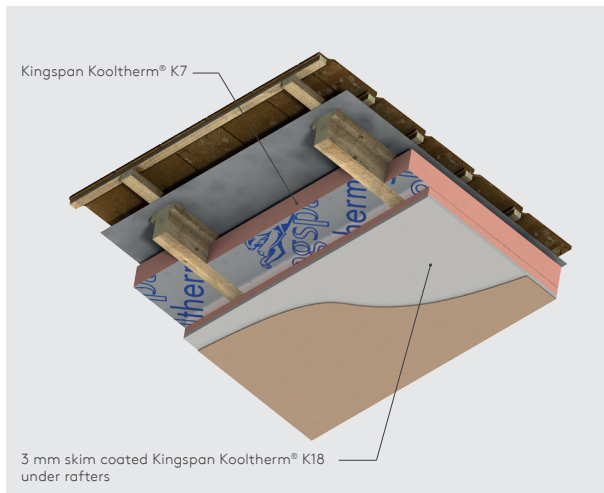


Figure 4 - Mechanically fixed to timber rafters with Kingspan Kooltherm® K7 Pitched Roof Board between rafters

- Sheets must always be placed with the long edge running across the joists or rafters, and all edges must be supported.
- Where joints between sheets of insulated plasterboard are unsupported by the timber joists / rafters, timber noggins should be installed.
- Each sheet of insulated plasterboard should lap joists / rafters / noggins by 19 mm (min.) at sheet joints.
- Sheets should be fixed using either drywall screws at 230 mm centres, or large-headed galvanized clout nails placed at 150 mm centres.
- Each sheet of insulated plasterboard should be lightly butted, with fixings located no less than 10 mm from the bound edges of the sheet. Fixings should be long enough to allow a minimum 25 mm penetration of the timber.
- Fixings should be driven straight, with the heads embedded just below the surface of the plasterboard.
- Care should be taken not to overdrive nails / screws.
- The perimeter of the Kingspan Kooltherm® K18 should be sealed with a flexible sealant or equivalent.

Fixing heavy internal fittings

- Suitable mechanical fixings should be used for heavy internal fittings (kitchen units, shelving etc), to ensure the load is applied direct to the supporting wall and not to the Kingspan Kooltherm® K18.

For details on fixings refer to:

MAK Fasteners +353 (0) 1 451 99 00
www.makfasteners.com

Fischer Fixings +44 1491 827 900
www.fischer.co.uk

- Alternatively, where there are to be extensive heavy internal fittings, the construction outlined in Figure 4 can be adopted.

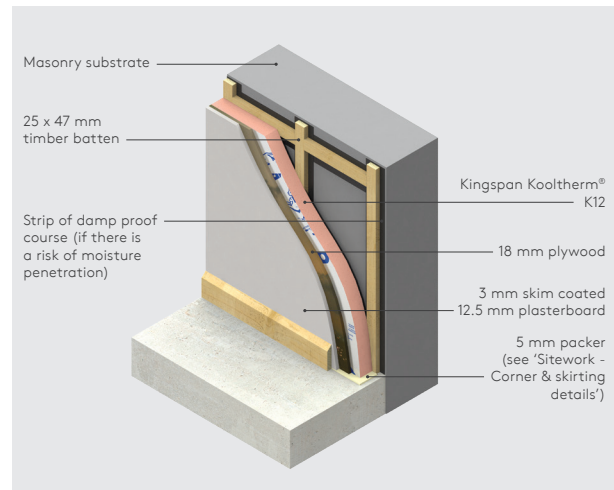


Figure 5 - Mechanically fixed construction suitable for heavy internal fittings

- Vertical timber framing studs / battens should be set at maximum 600 mm horizontal centres.
- If fixing to battens, they should be mechanically fixed to the wall, and comprise 25 x 47 mm (min.) treated softwood, backed with a strip of damp proof course (DPC).
- Kingspan Kooltherm® K12 Framing Board should be cut approximately 5 mm short of the floor to ceiling height.
- Where insulation board joints are unsupported by the timber framing studs / battens, timber noggins should be installed.

Sitework

- Each insulation board should lap timber framing studs / battens / noggins by 19 mm (min.) at board joints.
- Boards of Kingspan Kooltherm® K12 should be temporarily fixed / nailed to timber framing studs / battens.
- 18 mm plywood should then be fixed through insulation boards to the timber framing studs / battens, using either drywall screws at 300 mm centres, or large headed galvanised clout nails at 150 mm centres.
- When fixing plywood through the insulation boards onto timber battens, fixings should be located no less than 10 mm from the bound edges of the sheets, and be long enough to allow minimum 22.5 mm penetration of the timber. Fixings should not penetrate through the battens.
- When fixing plywood through the insulation boards onto a timber frame, fixings should be located no less than 10 mm from the bound edges of the sheets, and be long enough to allow a minimum 25 mm penetration of the timber.
- Fixings should be driven straight, with the heads embedded just below the surface of the plywood.
- 12.5 mm plasterboard is then fixed to the plywood, using either drywall screws at 300 mm centres, or large headed galvanised clout nails at 150 mm centres.
- Fixings should be driven straight, with the heads embedded just below the surface of the plasterboard.
- Care should be taken not to overdrive nails / screws.
- The 5 mm clearance gap at the base of the wall should be sealed with a flexible sealant or equivalent.
- Heavy fittings can be fixed through the plasterboard directly to the plywood.

Corner & skirting details

- For external corners (including reveals), the lining should run past the corner and the insulating backing of Kingspan Kooltherm® K18 should be cut back to create a junction (see Figures 6 & 8). Sheets should be cut and rebated to allow a plasterboard / plasterboard joint at the angle.
- Ensure sheets are lightly butted and air gaps minimised to reduce the risk of cold bridging (see Figures 6 & 8). Any air gaps should be sealed with flexible sealant or equivalent, or a combination of flexible polyurethane foam and flexible sealant or equivalent.

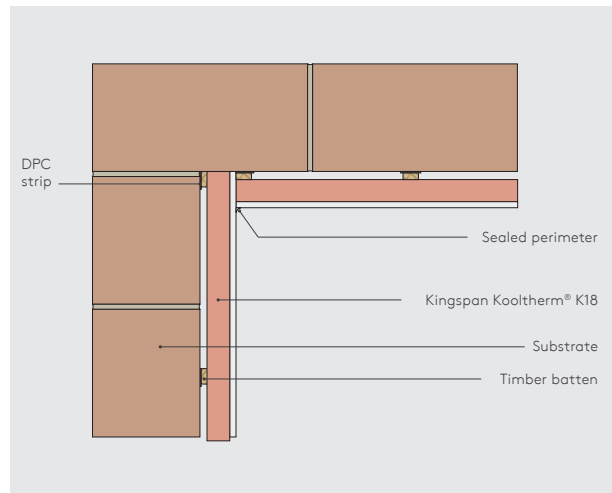


Figure 6 - Internal corner detail

- For mechanically fixed applications, a 5 mm packer should be used at the base of the wall to provide a level surface from which to build up the boards.
- The packer should be replaced with a flexible / sealant or equivalent (for 5 mm gaps), or with a combination of flexible polyurethane foam and flexible sealant or equivalent (for 15 mm gaps) (see Figure 8).

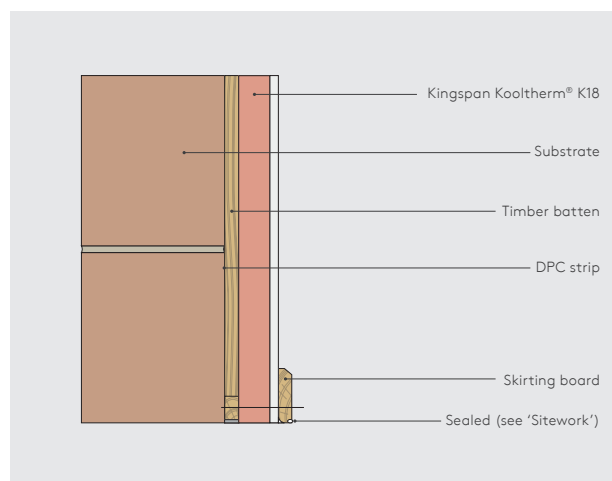


Figure 7 - Packer and skirting detail

Sitework

Window / door reveals, separating / internal walls & soffit / head details

- Reveal lining should be mechanically fixed.
- A 37.5 mm sheet of Kingspan Kooltherm® K18 should be used to line the window or door reveals. Where the depth of the window or door frames does not allow for this, the reveal can be cut back or the existing lining can be removed.
- The junction of the external wall and separating / internal wall should also be insulated with 37.5 mm (min.) of Kingspan Kooltherm® K18, for a minimum distance of 400 mm back from the external all lining.

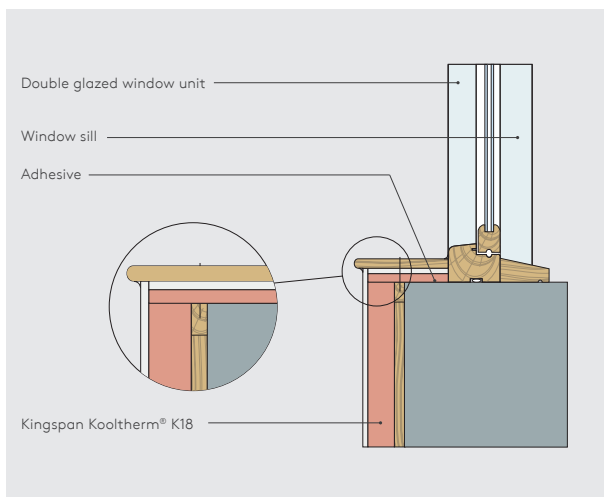


Figure 8 - Insulated reveal and external corner

Finishing

- To avoid air leakage, any penetrations through the insulation (electrical sockets, plumbing and wiring etc) should be sealed with flexible sealant or equivalent, or a combination of flexible polyurethane foam and flexible sealant or equivalent.
- Any remaining gaps between boards / sheets of insulation should be filled with flexible sealant or equivalent, or a combination of flexible polyurethane foam and flexible sealant or equivalent.
- Tapered edged boards allow the employment of standard drylining techniques.
- Plasterboard tape should be employed at all board joints, and a plaster skim finish applied.
- The skimming should be carried out in accordance with the specified plaster manufacturer's instructions, particularly in relation to the need to allow thorough drying of the plaster prior to decoration.

General

Cutting

- Cutting should be carried out either by using a fine toothed saw, or by using a sharp knife to cut through the insulation and paper backing of the plasterboard, then snapping the sheet face down over a straight edge and cutting the paper facing of the plasterboard on the other side.
- Ensure accurate trimming to achieve close butting joints and continuity of insulation.

Availability

- Kingspan Kooltherm® K18 is available through specialist insulation distributors and selected builders' merchants throughout Ireland and Northern Ireland.

Packaging & storage

- The polyethylene packaging of Kingspan Insulation products, which is recyclable, should not be considered adequate for outdoor protection.
- Ideally sheets should be stored inside a building. If, however, temporary outdoor storage cannot be avoided then the sheets should be stacked flat on a level base, clear of the ground, and completely protected from inclement weather by use of an opaque polythene sheet or weatherproof tarpaulin. Sheets that have been allowed to get wet should not be used.

Health & safety

- Kingspan Insulation products are chemically inert.
- Warning - do not stand on or otherwise support your weight on this product unless it is fully supported by a load bearing surface.
- A Safety Information Data Sheet for this product is available from the Kingspan Insulation website www.kingspaninsulation.ie/safety.

Please note that the reflective surfaces on this product are designed to enhance its thermal performance. As such, they will reflect light as well as heat, including ultraviolet light. Therefore, if this product is being installed during very bright or sunny weather, it is advisable to wear UV protective sunglasses or goggles, and if the skin is exposed for a significant period of time, to protect the bare skin with a UV block sun cream.

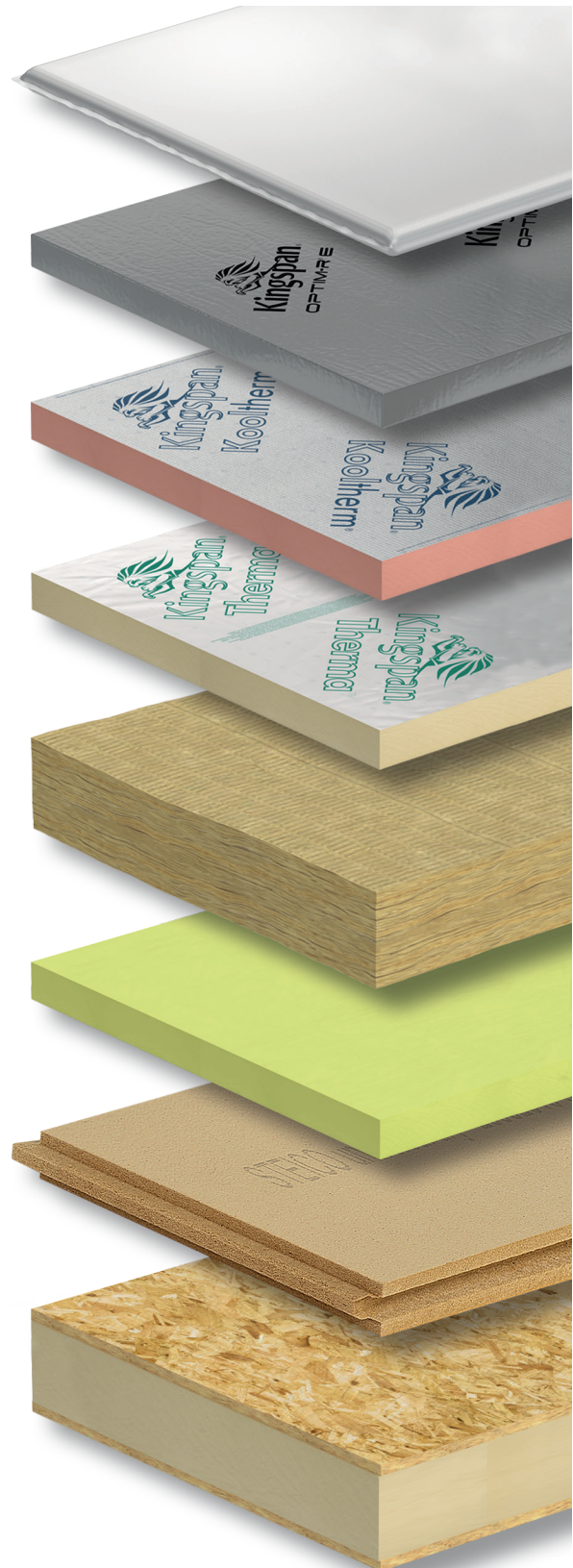
The reflective facings used on this product can be slippery when wet. Therefore, it is recommended that any excess material should be contained to avoid a slip hazard.

About Kingspan Insulation

Products & solutions

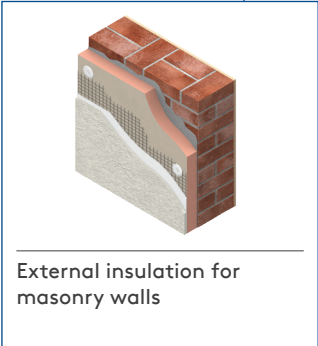
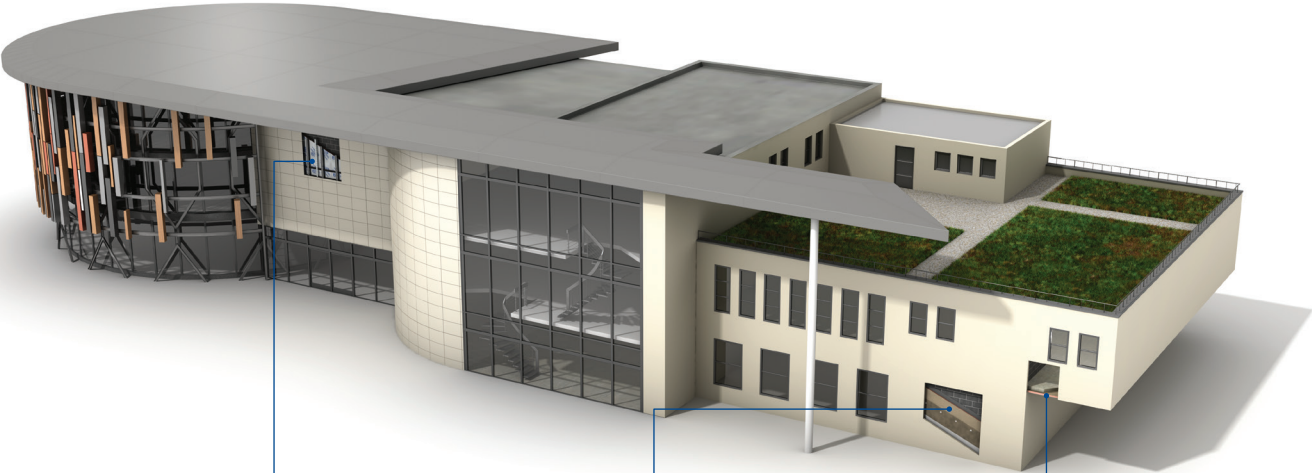
Rigid insulation products for building fabric applications, including roofs, walls and floors.

- Kingspan AlphaCore® – microporous silica-based insulation.
- Kingspan OPTIM-R® – vacuum insulation panel (VIP) systems.
- Kingspan Kooltherm® – phenolic insulation.
- Kingspan Therma™ – PIR insulation.
- Kingspan K-Roc® – rock mineral fibre insulation.
- Kingspan GreenGuard® – extruded polystyrene insulation (XPS).
- STEICO – wood fibre insulation.
- Kingspan TEK® – structural insulated panels (SIPs).
- Cavity closers – PVC-U extrusions with an insulation core.
- Membranes – for pitched roofs and walls.



About Kingspan Insulation

Solutions available for roofs, walls and floors of commercial buildings, from schools to retail.

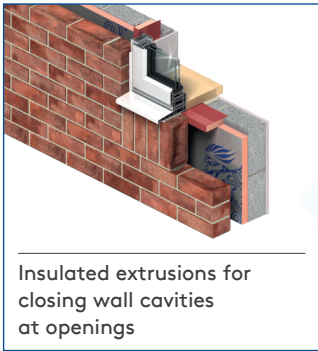


About Kingspan Insulation

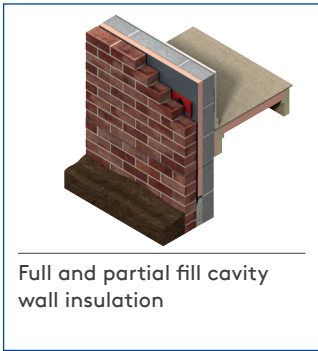
From new housing developments to refurbishing your home, we offer a number of different solutions for roof, wall and floor applications.



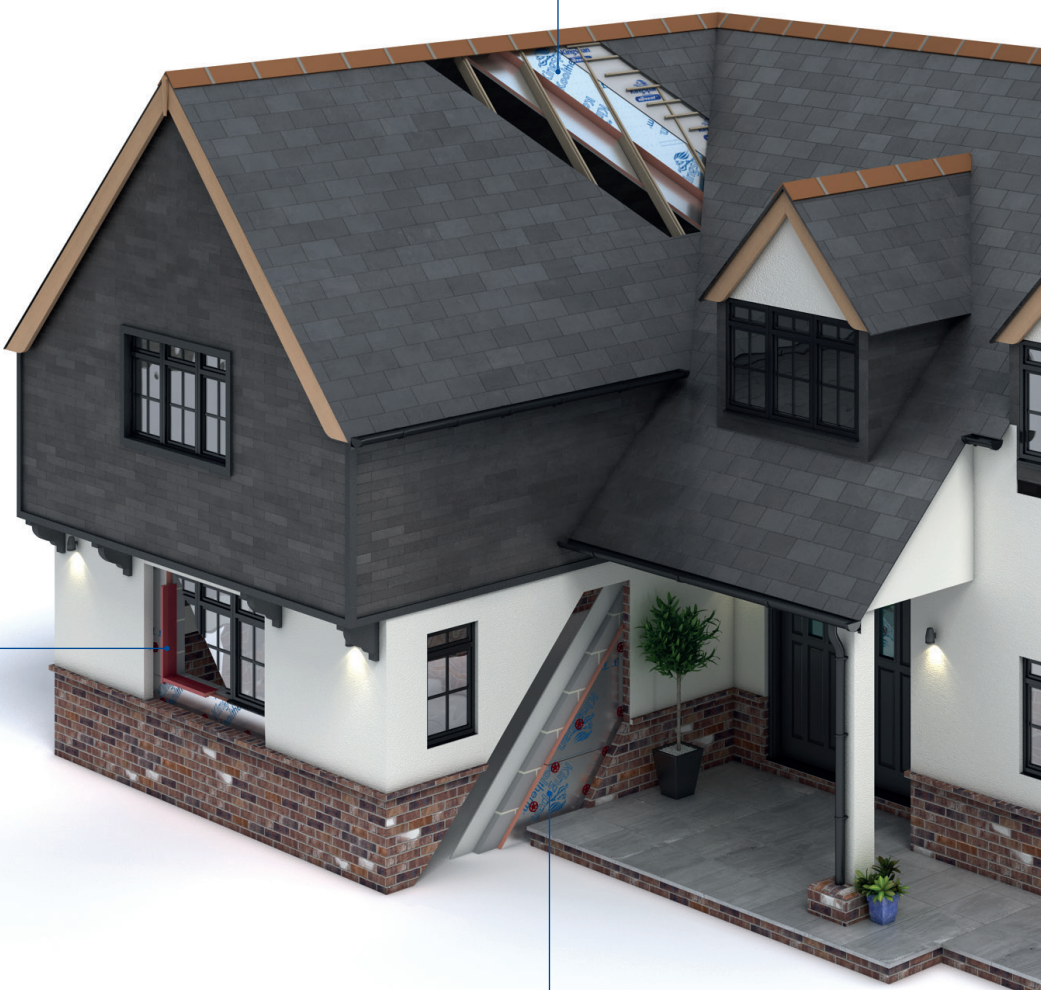
Insulation for tiled or slated pitched warm roof spaces

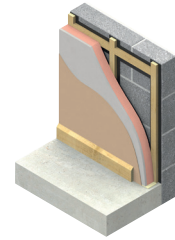


Insulated extrusions for closing wall cavities at openings

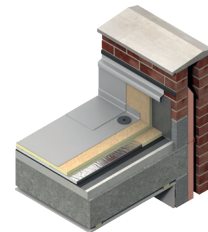


Full and partial fill cavity wall insulation

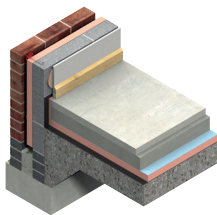




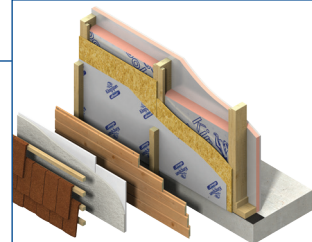
Insulation for tiled or slated pitched warm roof spaces



Insulation for flat roofs and terraces



Insulation for floors



Insulation for timber and steel framing systems

About Kingspan Insulation

Company details

Kingspan Insulation Ltd is part of the Kingspan Group plc., one of Europe's leading construction product manufacturers. The Kingspan Group was formed in the late 1960s and is a publicly quoted group of companies headquartered in Kingscourt, County Cavan, Ireland.



Kingspan Insulation Ltd is a leading manufacturer of rigid insulation products and insulated systems for building fabric and building services applications.

Our site in Castleblayney, Ireland, is accredited to the independent compliance standard ISO 37301: 2021.



Services

Our support services provide fast and accurate advice no matter what your role is. Visit our website to access the following services.

- U-value calculations – free, quick and easy U-value calculations with our U-value Calculator.
- Help and advice on your projects, including stockists, how to guides, regulatory guidance and e-learning.
- Dedicated Specification and Sales teams to support projects.
- Building Information Modelling (BIM) – download BIM objects for our products.
- Tapered roofing service – Kingspan Insulation's tapered roofing systems come with a supporting design service to ensure the most cost-effective solution for a roof is identified.



- CPDs – Kingspan Insulation offers a number of free CPD seminars for architects and specifiers covering a wide range of industry topics. CPDs can be booked or a range of courses can be found online.



PLANET PASSIONATE

Planet Passionate is our group wide global sustainability programme.

Our Planet Passionate programme aims to have a positive impact on three big global challenges: climate change, circularity and protection of our natural world.



Scan for our latest progress report to learn more about our targets, partnerships and global commitments.

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www.kingspaninsulation.ie/contact



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