Insulation
Great Britain

Second Issue | 11/2026

Kingspan Insulation Façade Solutions

Insulation solutions for use behind façades



Kingspan®

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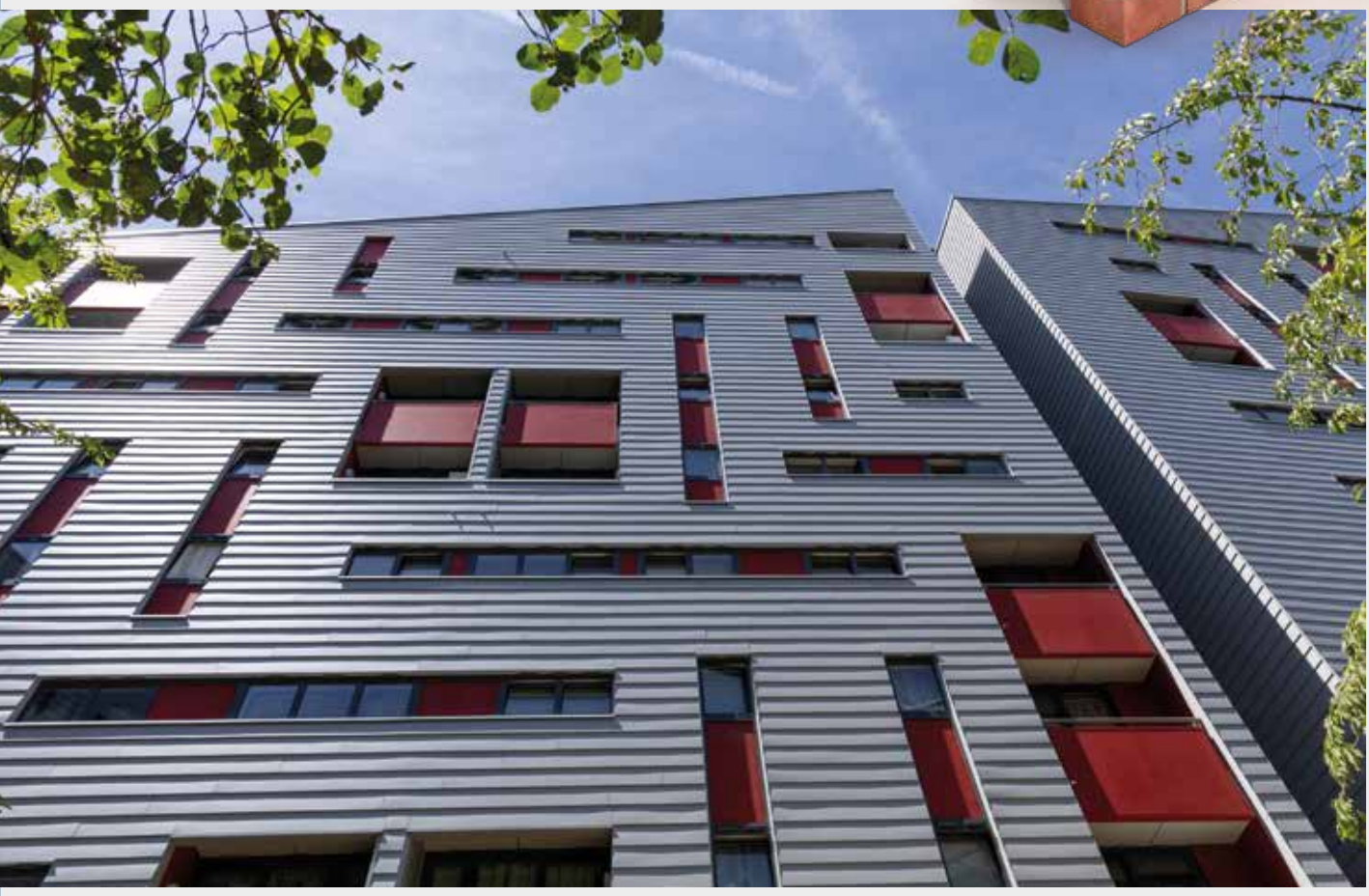
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Introduction



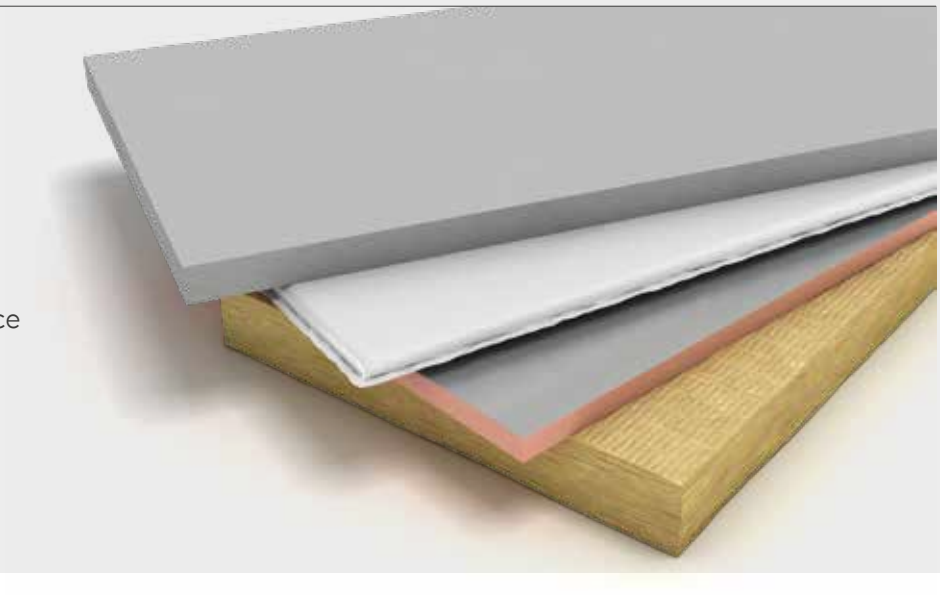
Façades offer a practical and versatile solution for new and existing buildings, allowing designers to achieve a diverse range of aesthetics on buildings of all sizes.

When selecting insulation for use within these systems, both regulatory compliance and project-specific requirements need to be carefully assessed. Elements such as the building's location, height, and intended use can all influence which product is most suitable for the application.

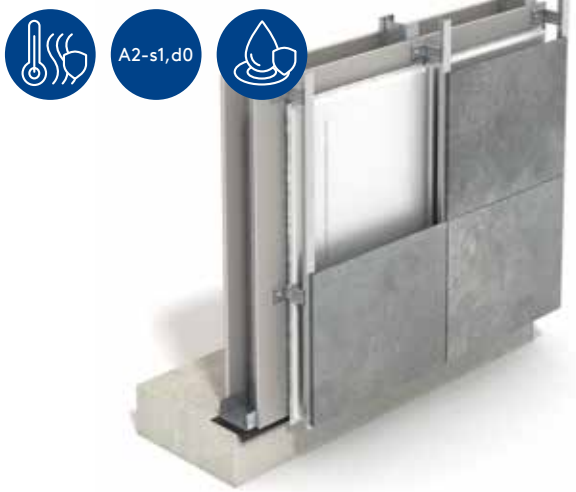


Kingspan Insulation façade solutions

Discover our range of insulation solutions designed to meet the needs of any façade application. Explore the options below as a guide to selecting the ideal product for your design and performance requirements.



Kingspan AlphaCore® Pad



- Microporous silica-based insulation
- Thermal conductivity of 0.020 W/mK
- Euroclass of A2-s1,d0
- Water-repellent core
- Ideal for projects needing a balance of both thermal and fire performance

Kingspan AlphaCore® Pure



- Microporous silica-based insulation
- Thermal conductivity of 0.020 W/mK
- Euroclass of A2-s1,d0
- Water-repellent core
- Ideal for off-site installation as part of OEM application systems – contact Kingspan Insulation for more information on developing systems

NB indicative build-up only for illustration purposes.



Kingspan Kooltherm® K121 Façade Board

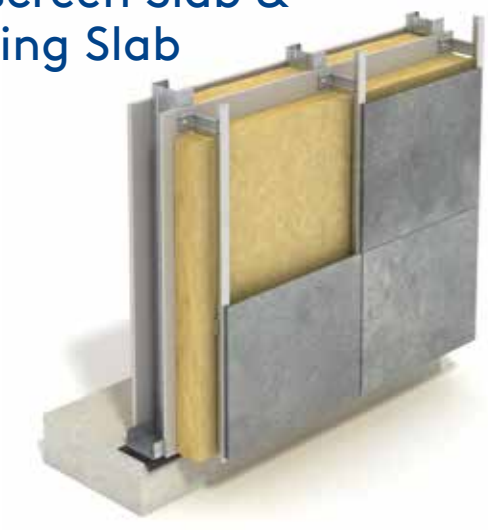


- Phenolic insulation
- Low thermal conductivity of 0.019 W/mK
- Euroclass B-s2,d0
- Ideal for low-rise projects needing a solution with minimal thickness

Scan here to find out more about our façade insulation solutions

Kingspan K-Roc® Rainscreen Slab & Framing Slab

A1



- Mineral fibre insulation
- Thermal conductivity of 0.034 W/mK (Rainscreen Slab) or 0.036 W/mK (Framing Slab)
- Euroclass A1
- Ideal for projects needing Euroclass A1 fire performance
- Can be used in a hybrid construction with Kingspan AlphaCore® Pad for lower U-values

Regulatory & legislative requirements



The key requirements when insulating building façades are contained within the Building Regulations and the supporting technical guidance documents which provide advice on how to reach compliance. These are known as the Approved Documents in England and Wales, and the Technical Handbooks in Scotland.



The Building Regulations cover a range of aspects relating to façade design, including daylighting and overheating risk, however, for façade insulation specification the main considerations relate to the requirements for energy efficiency and fire performance. The following pages will cover these in detail.

Alongside the regulations, a range of other legislation has either been introduced or is currently being developed within the different countries.

In England, the Building Safety Act 2022 sets out a comprehensive new process for assessing building safety on what it describes as "Higher-Risk Buildings" (HRBs). The Act, and supporting secondary legislation, includes the creation of the Building Safety Regulator (BSR) who now oversees a gatewayed building control approval process on these projects – requiring project teams to evidence compliance at key defined stages in a project.

These applications ask for detailed justifications of why certain specifications or building approaches have been used, especially those related to building or fire safety. Therefore, it is important that performance claims are supported with clear and robust technical and test data.

Wales and Scotland are implementing some aspects of this Act within their own Regulations, but are also developing their own separate legislation which is expected to impact façade insulation specification.

Scan here to book a CPD on the Building Safety Act 2022



Thermal performance



For specifiers, complying with thermal and fire performance requirements can present challenges.

Where a Euroclass A1 or A2 rated insulation is required, this has typically required the use of a suitable rock mineral fibre insulant, such as Kingspan K-Roc® Rainscreen Slab. However, these products have a much higher thermal conductivity than alternatives, such as Kingspan Kooltherm® K121 Façade Board. This means that a greater thickness of insulation is needed to achieve a given U-value.

This can lead to trade-offs in the design or performance of the building, as specifiers either choose to install deeper, heavier façade systems or aim for a higher (worse) U-value which can have implications for long-term building energy performance and occupant comfort. It may also be challenging to achieve a compliant U-value in areas where there is a tight boundary with nearby buildings or structures.

New options such as Kingspan AlphaCore® Pad offer a thinner alternative which blends a Euroclass of A2-s1,d0 with a thermal conductivity of just 0.020 W/mK.

The energy efficiency requirements are contained in Part L of the Building Regulations in England and Wales, with supporting guidance in Approved Document L 2021 (England) and 2022 (Wales), and in Section 6 (Energy) to the Building Standards in Scotland with supporting guidance in the associated Technical Handbooks.

The guidance documents set key performance metrics around carbon emissions and energy which buildings must meet. These necessitate a good level of fabric performance and are supported with backstop U-values which set worst-case fabric values the construction must meet.

The performance requirements have tightened over recent decades, with further changes anticipated over the next couple of years requiring all new buildings to be 'net zero ready' which may include further tightening of fabric requirements.

The tables below outlines the requirements of the current guidance documents for façade constructions.

Façade systems are proprietary, resulting in a wide variation of possible system build-ups, material combinations and mechanisms that are used to fix and support the external cladding to the wall structure. Please contact the Kingspan Insulation Technical Service Department for specific U-value calculations (see rear cover for details).

Scan here to book a CPD on the energy regulations in Great Britain

England – walls



Domestic

	Target metric	U-value (W/m²K)
New dwellings	Notional dwelling	0.18
	Area-weighted worst case	0.26
Existing dwellings – adding or replacing a thermal element[1]	Maximum U-value	0.18
Existing dwellings – renovated elements	Improved U-value	0.30
	Threshold U-value	0.70

Non-domestic

	Target metric	U-value (W/m²K)
New buildings	Notional dwelling	0.18
	Area-weighted worst case	0.26
Existing buildings – adding or replacing a thermal element[1]	Maximum U-value	0.26
Existing buildings – renovated elements	Improved U-value	0.30
	Threshold U-value	0.70

[1] As these are area weighted average U-values, it is possible to insulate certain areas of an element to worse (higher) U-values, provided this is compensated for elsewhere in the construction. In all cases, the U-values should be no worse than the limiting U-values (0.70 W/m²K). Consequential Improvements may also apply to the existing buildings with a useable floor area over 1000 m² depending on the type of work being carried out (typically for extensions).

Thermal performance

Wales – walls



Domestic

	Target metric	U-value (W/m²K)
New dwellings	Notional dwelling	0.13
	Area-weighted worst case	0.18 (0.21 – flats or apartments)
Existing dwellings – new elements[2]	Area-weighted worst case	0.18
Existing dwellings – renovated elements[3]	Limiting U-value for retained fabric	0.70
	Area-weighted worst case	0.30

Non-domestic

	Target metric	U-value (W/m²K)
New buildings – side-lit and unlit activities	Notional building	0.22
	Area-weighted worst-case	0.26
New buildings – side-lit and unlit activities (spaces with mechanical cooling)	Notional building	0.26
	Area-weighted worst-case	0.26
New buildings – top-lit activities	Notional building	0.26
	Area-weighted worst-case	0.26
Existing buildings – new elements – buildings that are essentially domestic in character[2]	Area-weighted worst-case	0.21
Existing buildings – new elements – all other non-domestic buildings[2]	Area-weighted worst-case	0.26
Existing buildings – renovated elements[3]	Area-weighted worst-case	0.30
	Limiting U-value for retained fabric	0.70

[2] Some flexibility is given for certain applications, such as where fitting floor insulation may create an access problem. Consequential Improvements may also apply to the existing building depending on the type of work being carried out (typically for extensions).

Project teams can also choose to adopt two alternative approaches:
- U-value trade off approach; or
- Equivalent Primary Energy and carbon emissions target approach.

These approaches are available for all works carried out on existing dwellings and for material change of use, change in energy status and extensions on non-domestic properties. They can allow the U-values of certain elements (i.e. individual walls) to be relaxed providing this is compensated elsewhere. In all cases, the U-values should be no worse than the limiting U-values (0.70 W/m²K – walls and floors, 0.35 W/m²K – roofs).

See the relevant Approved Document for further details on Consequential Improvements, design flexibility or the alternative approaches.

[3] Renovated elements include cases where:
- there is a material change of use;
- an unheated space is converted; or
- where more than 50% of the surface of an individual element is renovated (for example, by applying cladding, render or a waterproof membrane) or more than 25% of the surface area of the external envelope is renovated (for example, by fitting drylining).

Ideally, this work should look to achieve the improved values shown in the table above as a minimum. Where this isn't technically feasible, or will not provide payback within 15 years, you should look to achieve the best possible U-values which are achievable. In all cases, you should reach, or improve upon, the limiting values.

Scotland – walls



Domestic

	Target metric	U-value (W/m²K)
New dwellings	Notional dwelling	0.15
	Area-weighted worst case	0.17
Existing dwellings	Area-weighted average	0.17
	Individual element backstop	0.70

Non-domestic

	Target metric	U-value (W/m²K)
New buildings	Notional building	0.15
	Area-weighted worst case	0.21
Existing buildings	Area-weighted average	0.21
	Individual element backstop	0.70

Project teams can also choose to adopt two alternative approaches for extensions:
- compensatory approach; or
- whole dwelling approach.

These can allow the U-values of certain elements (i.e. individual walls) to be relaxed providing this is compensated elsewhere. In all cases, the U-values should be no worse than 0.70 W/m²K for walls and floors or 0.35 W/m²K for roofs.

Fire performance

The regulatory requirements around fire performance are primarily contained in Part B to the Building Regulations in England and Wales, and Section 2 (Fire) to the Building Standard in Scotland.

The Building Regulations are supported by guidance in Approved Document B 2019 (England) and 2025 (Wales), and the Technical Handbooks (Scotland).

These set out specific requirements for components within a façade, including the insulation, which vary depending on a range of factors including building height, use and the boundary from surrounding buildings. In some cases, this may require the façade insulation to achieve a set level within the Euroclass System or to be part of a complete assembly which has met the requirements of BR 135 when tested to BS 8414.

Complying with the guidance in the Approved Document or the Technical Handbooks does not guarantee that building work complies with the requirements of the regulations. There may also be other ways to comply with the requirements than those described in the Approved Document. The project Principal Designer (during design stages), Principal Contractor (during construction) and relevant consultants (such as Fire Engineers) should be consulted to ensure compliance with the Building Regulations.

Scan here to book a CPD on fire safety for insulation solutions



Did you know?

You can find our fire resistance test data on our website. Each report is accompanied by field of direct application information which defines the permissible variations that can be introduced to a tested specimen without requiring further testing or assessment. Scan here for info.

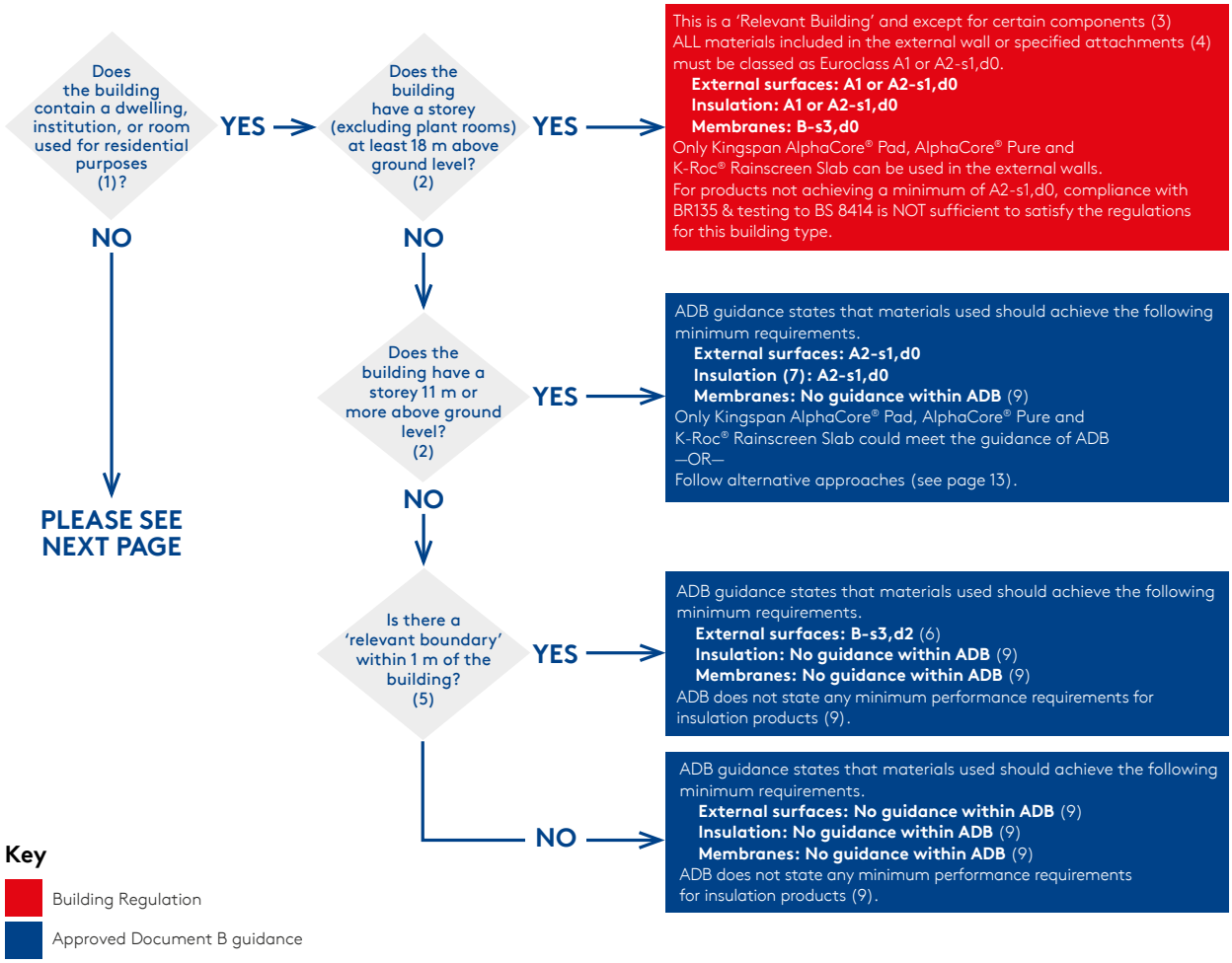
Compliance with fire regulations

England & Wales



The flowchart is based on the English & Welsh versions of Approved Document B. The information presented here is intended only to provide a simplified overview of the fire performance regulations and guidance for external wall systems (including rainscreen and ETICS type cladding, but not curtain walling). The flowchart looks at the reaction to fire requirements; there are other requirements, for example cavity barriers or fire resistance, which should also be considered – please see Approved Document B.

Note that complying with the guidance in the Approved Document does not guarantee that building work complies with the requirements of the regulations. There may also be other ways to comply with the requirements than those described in the Approved Document. The project Principal Designer (during design stages), Principal Contractor (during construction) and relevant consultants (such as Fire Engineers) should be consulted to ensure compliance with the Building Regulations.



Compliance with fire regulations

England & Wales



Does the building contain a dwelling, institution, or room used for residential purposes (1)?

NO

Does the building have a storey (excluding plant rooms) at least 18 m above ground level? (2)

YES → Is there a 'relevant boundary' within 1 m of the building? (5)

YES → ADB guidance states that materials used should achieve the following minimum requirements.
- **External surfaces: B-s3,d2** (6)
- **Insulation (7): A2-s3,d2**
- **Membranes: No guidance within ADB** (9)

Only Kingspan AlphaCore® Pad, AlphaCore® Pure and K-Roc® Rainscreen Slab could meet the guidance
—OR—
Follow alternative approaches (see page 13).

NO → ADB guidance states that materials used should achieve the following minimum requirements.
- **External surfaces:**
  - **0-18 m above ground level: C-s3,d2** (8)
  - **>18 m above ground level: B-s3,d2** (6)
- **Insulation: A2-s3,d2**
- **Membranes: No guidance within ADB** (9)

Only Kingspan AlphaCore® Pad, AlphaCore® Pure and K-Roc® Rainscreen Slab could meet the guidance
—OR—
Follow alternative approaches (see page 13).

NO

Is there a 'relevant boundary' within 1 m of the building? (5)

YES → ADB guidance states that materials used should achieve the following minimum requirements.
- **External surfaces: B-s3,d2** (9)
- **Insulation: No guidance within ADB** (9)
- **Membranes: No guidance within ADB** (9)

ADB does not state any minimum performance requirements for insulation products (9).

NO

Will the building be used for assembly or recreation purposes?

YES → ADB guidance states that materials used should achieve the following minimum requirements.
- **External surfaces:**
  - **0-10 m above ground level (9): C-s3,d2** (8)
  - **0-10 m above a roof or any part of the building to which the public have access: C-s3,d2**
  - **10-18 m above ground level: No guidance within ADB** (9)
- **Insulation: No guidance within ADB** (9)
- **Membranes: No guidance within ADB** (9)

ADB does not state any minimum performance requirements for insulation products (9).

NO → ADB guidance states that materials used for a cladding system on this building should achieve the following minimum requirements.
- **External surfaces: No guidance within ADB** (9)
- **Insulation: No guidance within ADB** (9)
- **Membranes: No guidance within ADB** (9)

ADB does not state any minimum performance requirements for insulation products (9).

Compliance with fire regulations

England & Wales



Alternative approaches

Meet the performance criteria given in BRE report BR 135 for external walls using full-scale test data from BS 8414-1 or BS 8414-2 (click here for details of Kingspan Insulation test data).

—OR—

Assessment in lieu of test to BS 9414 using BS 8414 test data (note the tested system must match what is built).

—OR—

Fire safety engineering might provide an alternative approach to fire safety. Fire safety engineering may be the only practical way to achieve a satisfactory standard of fire safety in some complex buildings and in buildings that contain different uses. Fire safety engineering may also be suitable for solving a specific problem with a design that otherwise follows the provisions of Approved Document B. A fire engineering professional should be consulted. Please note that when using this route you will need to consider the certification for the products, for example BBA approvals of some products restrict the use above 11 m. Please contact **highrisetechnical@kingspan.com** for further advice.

NOTES:

(1) The term relevant building includes student accommodation, care homes, sheltered housing, hospitals, dormitories in boarding schools, hotels, hostels and boarding houses. For more information on relevant buildings, please click here.

(2) The height of the top storey in a building is determined by Diagram D6 of ADB for England and Diagram C1 (for dwellinghouses) or C6 (for buildings other than dwellinghouses) of ADB (for Wales). The height of the top storey is measured from the upper floor surface of the top floor to ground level on the lowest side of the building. The height of the top storey excludes roof-top plant areas and any top storeys consisting exclusively of plant rooms.

(3) This includes:
- (a) cavity trays when used between two leaves of masonry
- (b) any part of a roof (see paragraph (iv) of regulation 2(7)) if that part is connected to an external wall
- (c) door frames and doors
- (d) electrical installations
- (da) fibre-optic cables
- (e) insulation and waterproofing materials used below ground level or up to 300 mm above that level
- (f) intumescent and fire stopping materials where the inclusion of the materials is necessary to meet the requirements of Part B of Schedule 1
- (g) membranes (however, note that **membranes used as part of the external wall construction above ground level should have a minimum rating of B-s3,d0)**
- (h) seals, gaskets, fixings, sealants and backer rods
- (ha) components associated with a solar shading device (excluding components whose primary function is to provide share or deflect sunlight, such as the awning, curtain or slats)
- (i) thermal break materials where the inclusion of the materials is necessary to meet the thermal bridging requirements of Part L of Schedule 1
- (j) window frames and glass (however, window spandrel panels and infill panels must comply with Regulation 7(3))
- (k) materials which form the top horizontal floor layer of a balcony which are of European Classification A1fl or A2fl-sl (classified in accordance with the reaction to fire classification) provided the entire layer has an imperforate substrate under it

(4) Specified attachments include: (a) balconies attached to an external wall; (b) solar panels attached to an external wall; (c) devices attached to an external wall to deflect sunlight (sun-shades).

(5) This is typically the distance between a side of a building and the site boundary (see section 13, diagram 13.2 of Approved Document B for England, or diagrams 41 & 42 (for buildings other than dwellinghouses) of Approved Document B for Wales).

(6) Profiled or flat steel sheet at least 0.5 mm thick with an organic coating of no more than 0.2 mm thickness is also acceptable.

(7) This includes any insulation product, filler material (such as the core materials of metal composite panels, sandwich panels and window spandrel panels but not including gaskets, sealants and similar) etc. used in the construction of an external wall.

(8) Timber cladding at least 9 mm thick is also acceptable.

(9) Whilst ADB does not provide any specific requirements for this cladding element, the document does state: "In relation to buildings of any height or use, consideration should be given to the choice of materials (including their extent and arrangement) used for the external wall, or attachments to the wall, to reduce the risk of fire spread over the wall."

(10) Based upon scientific principles and in line with the BS 7974 suite of documents from an integrated or a 'whole building' perspective, fire safety engineering not only considers the performance of structures, systems, products and materials when exposed to fire, it also includes human behavioural aspects, fire prevention and active and passive fire protection measures e.g. effective means of egress and adequate measures for alarm, detection, control and extinguishment.

NB The fire safety requirements of the Building Regulations will probably be satisfied by following the relevant guidance in Approved Document B. However, approved documents provide guidance for some common building situations and there may be alternative methods of complying with the Building Regulations' requirements. If alternative methods are adopted, the overall level of safety should not be lower than the approved document provides. It is the responsibility of those undertaking the work to demonstrate compliance. If other standards or guidance documents are adopted, the relevant fire safety recommendations in those publications should be followed in their entirety. However, in some circumstances it may be necessary to use one publication to supplement another. Care must be taken when using supplementary guidance to ensure that an integrated approach is used in any one building. Guidance documents intended specifically for assessing fire safety in existing buildings often include less onerous provisions than those for new buildings and are therefore unlikely to be appropriate for building work that is controlled by the Building Regulations. Buildings for industrial and commercial activities that present a special fire hazard, e.g. those that sell fuels, may require additional fire precautions to those in Approved Document B.

Compliance with fire regulations



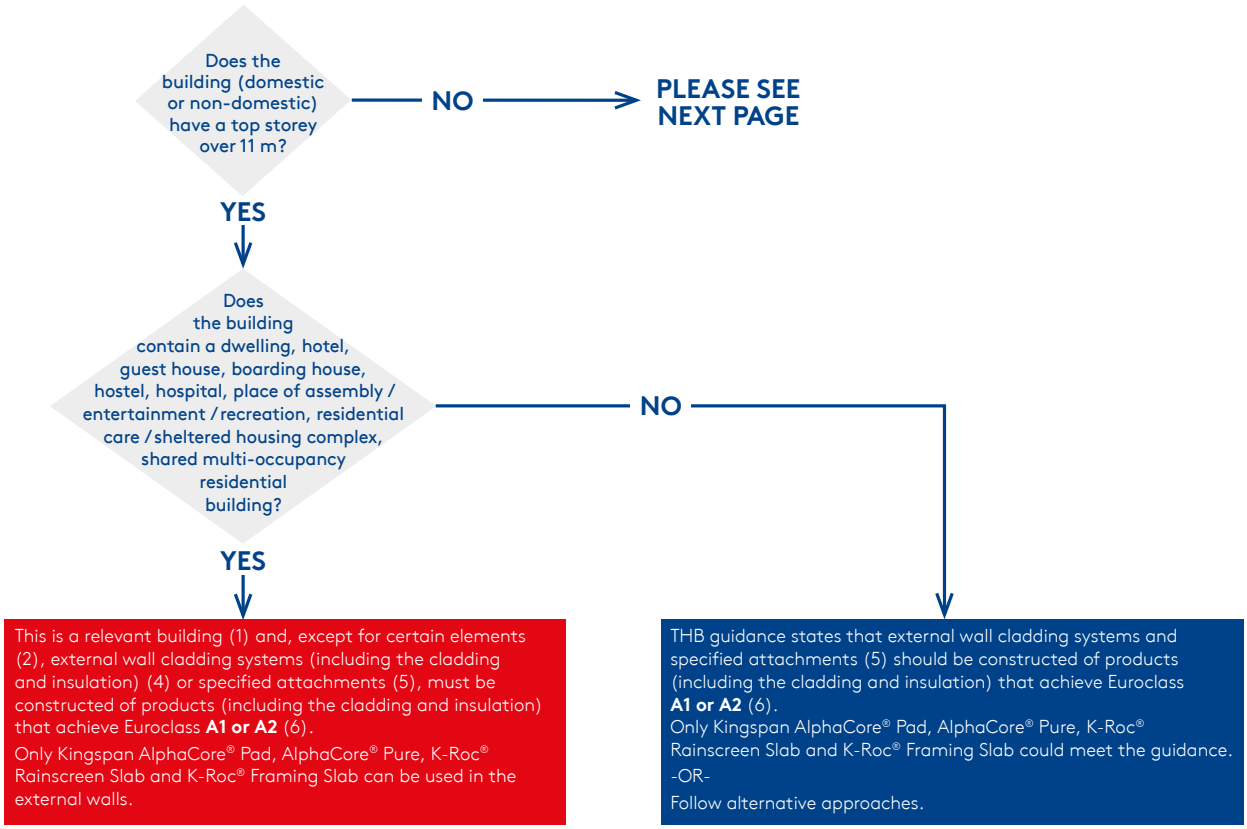
Scotland

The flowchart is based on the Scottish Domestic & Non-domestic Technical Handbooks (THB) January 2025.
The information presented here is intended only to provide a simplified overview of the fire performance regulations and guidance for external wall systems (including rainscreen and ETICS type cladding, but not curtain walling).
The flowchart looks at the reaction to fire requirements; there are other requirements, including (but not limited to) cavity barriers, fire resistance, distance to boundary and fire spread within cavities, which must also be considered – please see the Technical Handbooks.

Note that the Technical Handbooks define external wall cladding systems as non load-bearing components attached to the building's structure. This includes thermal insulation.

Following the Technical Handbook guidance in full should be accepted as compliance with the Building (Scotland) Regulations. However, the Scottish building standards system is outcomes-based, and there may be other ways of demonstrating compliance with the mandatory standards than those described in the guidance.

Where alternative approaches are proposed (for example, full-scale system testing or fire safety engineering), early engagement with the local authority verifier, and where appropriate the fire and rescue service, is recommended. The project Principal Designer (during design stages), Principal Contractor (during construction), and relevant consultants (such as fire engineers) should be consulted to ensure compliance with the Building Regulations.



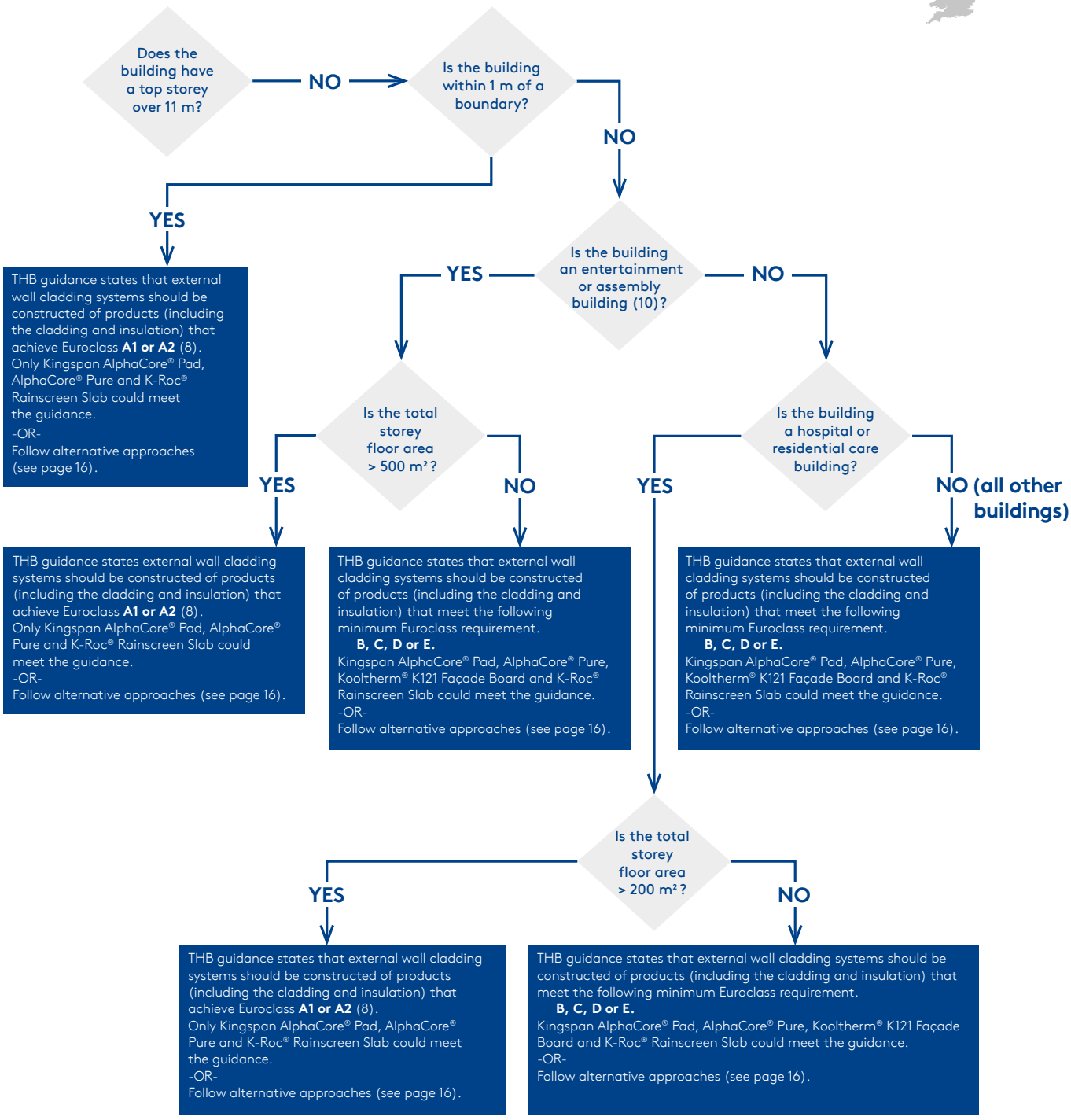
Key

- Building Regulation
- Technical Handbook

Compliance with fire regulations

Scotland





Compliance with fire regulations

Scotland



Alternative approaches

Meet the performance criteria given in BRE report BR 135 for external walls using full-scale test data from BS 8414-1 or BS 8414-2 (click here for details of Kingspan Insulation test data).

—OR—

Assessment in lieu of test to BS 9414 using BS 8414 test data (note the tested system must match what is built (7)

—OR—

Fire safety engineering might provide an alternative approach to fire safety. Fire safety engineering may be the only practical way to achieve a satisfactory standard of fire safety in some complex buildings and in buildings that contain different uses. In such cases a holistic approach is desirable from first principles rather than following, in part or wholly, the guidance contained in the Technical Handbooks. In such cases the building standards verifier and the fire and rescue service should be consulted as part of the Qualitative Design Review (QDR) process. Fire safety engineering may also be suitable for solving a specific problem with a design that otherwise follows the provisions of the Technical Handbooks. A fire engineering professional should be consulted. Please note that when using this route you will need to consider the certification for the products, for example BBA approvals of some products restrict the use above 11 m.
Please contact **highrisetechnical@kingspan.com** for further advice.

A designer may put forward other ways of meeting the regulations, in the form of alternative solutions.

Additional guidance for traditional buildings is available, issued under Section 4(1) of the Building (Scotland) Act 2003, for example 'Guide for practitioners 7: Fire Safety Management in Traditional Buildings' published by Historic Environment Scotland.

Compliance with fire regulations

Scotland



NB Where a BS 8414/BR 135 test, BS 9414 assessment or fire safety engineering is chosen, acceptance is subject to agreement with the local authority verifier at an early stage. Evidence of system equivalence and construction compliance is required.

NOTES:

(1) Regulation 8(6) sets out that the term "relevant building" means a building having a storey, or creating a storey (not including roof-top plant areas or any storey consisting exclusively of plant rooms) at a height of 11 m or more above the ground and which contains any of the following: a dwelling, a building used as a place of assembly, or as a place of entertainment or recreation, a hospital, a residential care building or sheltered housing complex, or a shared multi-occupancy residential building, a hotel, guest house, boarding house or hostel. Regulation 8(3) requires that work must be carried out so that materials which form part of an external wall cladding system, or specified attachment, of a relevant building are of Euroclass A2-s1,d0 or A1.

(2) The following materials are exempt from the Requirement for A1 / A2 materials:

- *cavity trays*
- *cavity vents*
- *any part of a roof (other than a roof pitched at an angle 70 degrees or more to the horizontal) if that part is connected to an external wall*
- *door frames and doors*
- *insulation and water proofing materials used below the ground and up to 300 mm above the ground*
- *intumescent and fire stopping materials, fire barriers and cavity barriers where the inclusion of the materials is necessary to meet the requirements in section 2 (fire) of schedule 5*
- *membranes*
- *seals, gaskets, fixings, sealants and backer rods*
- *thermal break materials*
- *window frames and glass.*

(3) Regulation 8(5) requires that "Work must be carried out so that an external wall cladding system or internal lining does not comprise highly combustible metal composite material." Regulation 8(6) defines a "highly combustible metal composite material" as any panel or sheet, having a thickness of no more than 10 mm, which consists of a number of layers, two or more of which are made of metal, alloy, or metal compound and one or more substantial layer of which is made of material having a gross calorific value of more than 35 MJ/kg.

(4) External wall cladding systems are defined as non load-bearing components attached to the buildings structure, for example, composite panels, clay or concrete tiles, slates, precast concrete panels, stone panels, masonry, profiled metal sheeting including sandwich panels, rendered external thermally insulated cladding systems, glazing systems, timber panels, weather boarding and ventilated cladding systems. For the purposes of compliance with the building regulations and associated standards, external wall cladding systems also include spandrel panels and infill panels. Many systems incorporate support rails, fixings, thermal insulation, fire barriers and cavity barriers located behind the outer cladding.

(5) "Specified attachment" means a balcony, solar shading or a solar panel attached to an external wall. Where a relevant building has a storey at a height of 11 m or more above the ground, specified attachments must be constructed of products achieving European Classification A1 or A2. Where a building (other than a relevant building) has a storey at a height of 11 m or more above the ground, specified attachments should also be constructed of products achieving European Classification A1 or A2. Extendable and retractable solar shading products such as awnings and canopies are not considered to be fixed solar shading attachments within the context of Regulation 8. However, awnings and canopies should still be considered on a risk based approach to assess the potential for vertical fire spread in accordance with Standard 2.7. For example, multiple canopies vertically aligned on every storey of building having a storey at a height of 11 m or more above the ground possess a much greater risk of vertical fire spread compared with an awning or canopy located on the ground or basement storey only. Signage is not considered to form part of an external wall cladding system or specified attachment.

(6) There is no requirement for sheathing boards to be A1/A2. However, if combustible sheathing is used, a BS 8414 (7) test is required.

(7) BS 8414 is no longer cited in the main text of the Technical Handbook but is situated in the Annexes. This large scale facade test may be used as an alternative to Euroclass A1 or A2 where the external wall cladding system is used in the following scenarios;

- *a domestic building is less than 1 m to the boundary and the building has no storey at a height of 11 m or more above the ground or*
- *non-relevant buildings having a storey at a height of 11 m or more above the ground or*
- *hospitals, care homes, entertainment buildings and assembly buildings having a storey at a height of less than 11 m above the ground.*

In all cases the local authority verifier must notify the Building Standards Division where any proposal is supported by BS 8414 fire tests and BR 135 classification reports. Rigorous compliance checking of the design and construction must be undertaken and evidence recorded.

(8) Except cladding to a house where: the cladding achieves a Euroclass B; the wall behind the cladding has the appropriate fire resistance duration from both sides; and the topmost storey is less than 11 m above the ground.

(9) Whilst the Technical Handbook does not provide any specific requirements for the insulation in this instance, In relation to buildings of any height or use, consideration should be given to the choice of materials (including their extent and arrangement) used for the external wall, or attachments to the wall, to reduce the risk of fire spread over the wall.

(10) Please see Appendix A of the non-domestic Technical Handbook for definition of assembly and entertainment buildings.

Case study
Ashburton Triangle





Sector
Residential

—

Location
London, UK

—

Product
Kingspan AlphaCore® Pad





Situated on the northern corner of Arsenal's Emirates Stadium development, Ashburton Triangle houses 250 dwellings and the football club's museum. Originally completed in 2007, the building is currently undergoing refurbishment. The works include a refreshed façade which features a number of spandrel and accent panels around windows and inset balconies. To effectively insulate these areas whilst also meeting the reaction to fire performance requirements for the façade insulation, Kingspan AlphaCore® Pad was installed.

To reflect the design of the Emirates stadium, the revised façade system is primarily finished in metallic grey panels, with certain details around windows and balconies picked out in the club's red. These red areas posed a challenge as there was less available depth for insulation compared with the rest of the façade. Fitting a traditional A1 or A2-s1,d0 rated insulation would have meant compromising on the thermal performance in these areas due to this lack of space. AlphaCore® Pad provided the solution.

Case study
Greater Manchester Major Trauma Hospital



Sector
Health & pharmaceutical

—

Location
Salford, UK

—

Product
Kingspan K-Roc® Rainscreen Slab



The project required completion of a building within both the Guaranteed Maximum Price (GMP) and the tight programme timescales due to the urgent need for extra capacity.

With the hospital committed to achieve an 80% reduction in the carbon emissions they directly control by 2028 – 2032, it was also essential that the facility was well insulated to reduce the demand on its heating systems. To deliver this, whilst meeting the project requirements for a European Classification (Euroclass) A1 or A2 rated façade insulation, was fitted as part of the building's rainscreen façade.

The versatile rainscreen insulation solution, which was fitted behind an aluminium rainscreen cladding system, achieves a thermal conductivity of 0.034 W/mK. This allowed the external walls to achieve a U-value of 0.20 W/m²K.







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

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 Group, Ireland

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

Our head office is located in Pembridge, in the heart of rural Herefordshire. Our northern hub is near Selby in North Yorkshire. We also have a hub in Castleblayney, Ireland. All three sites are accredited to the independent compliance standard ISO 37301: 2021.


Kingspan Insulation, Pembridge

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, including a Façades team, to support projects.


Product awareness

- 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.


Tapered Roofing Services

- CPDs – Kingspan Insulation offer 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 online learning courses can be found online.
- Product awareness training – build your team's knowledge with on-site training and support with one of our experienced product technicians who cover the full range of Kingspan products and applications, from flooring to roofing and everything in-between with both internal and external wall insulations.

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