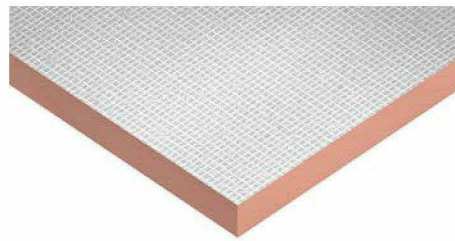


This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated

## Kingspan Kooltherm K15 Rainscreen Board

### Description of Product

Kooltherm K15 Rainscreen Board is a rigid phenolic insulation board incorporating foil composite facings. It is intended for use as a thermal insulation layer to be applied to the external face of new and existing masonry or metal framed walls as part of a rainscreen cladding system. K15 has been tested to comply with BR135:2013 for use in rain screen applications above 18 metres in height however see scope and conditions of certificate for more information.



### Key Factors Assessed

- Mechanical Resistance & Stability
- Safety in case of Fire
- Health, Hygiene and Environmental
- Safety in Use
- Energy Economy and heat retention
- Durability serviceability and identification

### Validity

This certificate was first issued on 28<sup>th</sup> August 2013 and is valid until 30<sup>th</sup> March 2016  
Issue Dated 30<sup>th</sup> March 2015

## Scope of Registration

This Certificate relates to Kooltherm K15 Rainscreen Insulation Board, a rigid phenolic board with foil composite facings, for use as external thermal insulation on new and existing steel frame or masonry walls. The board is used in domestic and non-domestic buildings in conjunction with masonry or ventilated rainscreen cladding systems. **An appropriate classification report and/or supplementary report MUST evidence suitability of the proposed makeup.**

It is important that the use of this product over 18m in height is agreed with Warranty providers prior to installation to ensure that its performance has been considered as part of the overall risk assessment of the finished building.

This is because Approved Document B makes no reference to the need to protect people from falling debris from a fire higher up the building, it is considered that, except in circumstances which are specific to the building, the 'Mechanical Performance' criterion of BR 135 is unlikely to feature as part of the Building Control approval process. However, it should be given due consideration by the specifier under any other applicable legislation, insurance or warranty requirements.

The thermal conductivity of the board improves with thickness. At 24mm or less, the thermal conductivity is 0.023 W/m.K, at 25 – 44mm it is 0.021 W/m.K and 45mm or greater it is 0.020 W/m.K.

## Conditions of Certificate

The design shown and the material specified shall not be changed without reference to the local authority responsible for certifying the system.

Where reference is made on plan to any Code of Practice, British Standard or manufacturers instruction it shall be construed as a reference to such publication in the form in which it is in force at the date of this certificate.

A series of cavity barriers must be detailed on a project-specific basis to prevent fire spread around compartment floors or walls and to observe undivided cavity limits as set out in Table 13 of Approved Document B (Fire safety) – Volume 2 - Buildings other than dwelling houses (2006 Edition incorporating the 2013 and 2013 amendments) The performance of the barriers and the method of fixing must ensure that they will remain in place and maintain fire resistance for at least 30 minutes, or match the period set for the compartment wall/floor which they abut (whichever is the greater).

This certificate should not be construed as a formal approval under the building regulations.

K15 has been successfully tested to BS 8414-1:2002 and BS 8414-2:2005, meeting the criteria set out in BR135: 2013 and therefore is acceptable for use in buildings with storeys above 18m in height (subject to matching the explicit criteria identified in the tested specifications below and overall risk assessment of the finished building in relation to B4 – see scope above) as alternative compliance to AD B.

**From BBA 08/4582 tested to BS 8414-1 : 2002**, The system, as tested comprised:

K15 insulation board 60 mm by 1200 mm by 900 mm, mechanically fixed to a non-combustible substrate then over boarded with a 6 mm cement particle board finish mechanically fixed at 600 mm centres to an aluminium railing system onto the substrate. A 40 mm deep ventilated cavity was provided between the K15 and the cement particle board with fire stopping of 2.5 mm thick graphite-based intumescent strip bonded to a nominal 0.6 mm thick galvanized steel sheet, positioned 0.5 m and 4 m above the fire chamber on both the main face and the wing face.

**BRE Classification Report 291642 and Test reference:297099 to BS 8414-2:2005**, as tested comprised:

Double layer of 12.5 mm wall board on 150mm steel frame system (SFS) with a 12mm Cement Bonded particle board on the front face of SFS. Aluminium Top hat section and Aluminium Helping hand brackets mechanically fixed to the sheathing board using self-drilling 5.5 x 25mm and 50mm screws with 80mm K15 Kooltherm insulation board mechanically fixed over the sheathing board with 100mm self-tapping screws and plastic washers. Lamatherm CW-RHS horizontal non-expanding fire break at 3.5metre centres and Lamatherm CW-RSV vertical non expanding fire breaks at openings/party wall junctions and if applicable every 20metre's. External finish comprised 30mm Terracotta Rainscreen Panel held in place using Manufacturer's tile clips and suitable fixings. Fixfast.-R-AC 4.8 x 15mm fixings rivets, which were fixed to the Taylor Maxwell Leg Tee support.

For Scotland purposes:

That the specifications and materials referred to have been assessed and approved in accordance with the Building (Scotland) Regulations 2004 and in accordance with the supporting guidance in the Domestic Technical Handbooks which came into force with effect from 1 October 2013.

That where reference is made on a plan or specification document to any Code of Practice, British or European Standard or manufacturer's instruction it shall be construed as a reference to such publication in the form in which it is in force at the date of this registered detail.

That the materials specified shall not be changed without first gaining approval so to do. Failure to do so will invalidate the registered detail.

This registered detail should not be regarded as a formal approval under the building warrant process prescribed by the Building (Scotland) Act 2003 enacted from 1 May 2005

That this Registered Detail shall contribute to compliance with relevant Mandatory Standards specified under the Building (Scotland) Regulations 2004 as amended when read with the Limitations of Use Section to this Registered Detail.



LABC and LABSS consider that, Kingspan Koolthem K15 Rainscreen Board, will meet the functional requirements of the Building Regulations (listed below) if the criteria detailed in this certificate are met;

## The Building Regulations 2010 (as amended) England & Wales

Regulation 7	Materials and workmanship
Note:	Independent test data has shown Koolthem K15 to be suitable for the purpose for which it is approved. When installed in accordance with the manufacturers recommendations, no short term maintenance is required and the board can be expected to have a lifespan equal to that of the structure to which it is incorporated.
AD A	Structure
Note:	K15 is capable of carrying its own self-weight when fixed in accordance with the manufacturers recommendations, but otherwise cannot be considered to contribute towards the structural stability of the building in any way. Detailing should ensure that any wind or other loadings are transferred to the structural frame/wall as appropriate.
AD B	Fire Safety
Note:	Thermosetting insulants (rigid polyurethane foam boards) do not meet the limited combustibility requirements of AD B2 Table A7 and so should not be accepted as meeting AD B2 paragraph 12.7. However, if they are included as part of a cladding system tested to BR135 & BS8414 for use above 18m, the complete assembly may ultimately prove to be acceptable. Where the substrate is a metal-framed wall system rather than masonry or concrete, a sheathing board such as a cement bonded particle board or in some instances a more robust lining such as, but not limited to a non-combustible sheathing board may be required and will be fixed to the external face of the metal frame wall (Magnesium Oxide/calcium silicate/Cement particle boards or similar performing can all potentially be used but suitability must be determined on a project specific basis)
AD C	Site Preparation and Resistance to Ground Moisture
Note:	With a clear cavity of 50mm maintained between the rainscreen cladding system, moisture will not be conveyed to the substrata irrespective of the height of the building. Provided the thermal transmittance 'U' value of the wall does not exceed 0.7 Wm <sup>2</sup> K at any point (in line with guidance from Approved Documents relating to Requirement L1), and that all junctions and interfaces are detailed to avoid thermal bridging* then Koolthem K15 would be expected to adequately limit both interstitial and surface condensation in walls.
AD L1 & L2	Conservation of fuel and power
Note:	For the purposes of calculating u-values in order to demonstrate performance under this requirement, Koolthem K15 can be taken to have thermal conductivity values as set out in the table within the limitations section of this certificate.



## The Building Regulations 2010 (as amended) England

None presently



## The Building Regulations 2010 (as amended) Wales

None presently



## The Building (Scotland) Regulations 2004 (as amended)

Technical Handbooks Domestic and Non-Domestic

Regulation 8 Durability, workmanship and fitness of materials

0.8.5: Ways of establishing the fitness of materials

Regulation 9 Building Standards applicable to construction

Note: Construction shall be carried out so that the work complies with the applicable requirements of schedule 5.

Mandatory

Standard 3.15 Condensation

Note: When used in conjunction with an appropriate vapour control layer the product will be unrestricted under this Standard, with reference to clauses 3.15.1, 3.15.4 and 3.15.5 of the Domestic and Non Domestic Handbooks. See sections 7.2 and 7.3 of the BBA Certificate.

Mandatory

Standard 6.1(b) Carbon dioxide emissions

Note: The thermal insulation performance of this product should be considered in the context of the contribution made to the overall performance of the building.

Mandatory

Standard 6.2 Building insulation envelope

Note: The thermal insulation performance of this product should be considered in the context of the contribution made to the overall performance of the building envelope.

## Non-Regulatory Information



### LABC Warranty

The use of the Kingspan Koolthem K15 Rainscreen Board is acceptable to warranty insurance schemes administered by MD Insurance Services Ltd including LABC Warranty subject to the cladding system being installed to meet the requirements of LABC technical manual.

## Supporting Documentation

Ninth Issue 2011 Kingspan publication "Koolthem K15 Rainscreen Board"

08/4582; 17<sup>th</sup> December 2013 British Board of Agrément Certificate

BRE Test Report 297099 Issue: 1, to BS8414-2 : 2006 together with Classification Report 291642

Assessment Report Number CC 301393

## Contact Information

Kingspan Insulation Limited

Pembridge

Leominster

Herefordshire

HR6 9LA

Tel: [REDACTED]

Email: [info@kingspaninsulation.co.uk](mailto:info@kingspaninsulation.co.uk)

Web: [www.kingspaninsulation.co.uk](http://www.kingspaninsulation.co.uk)