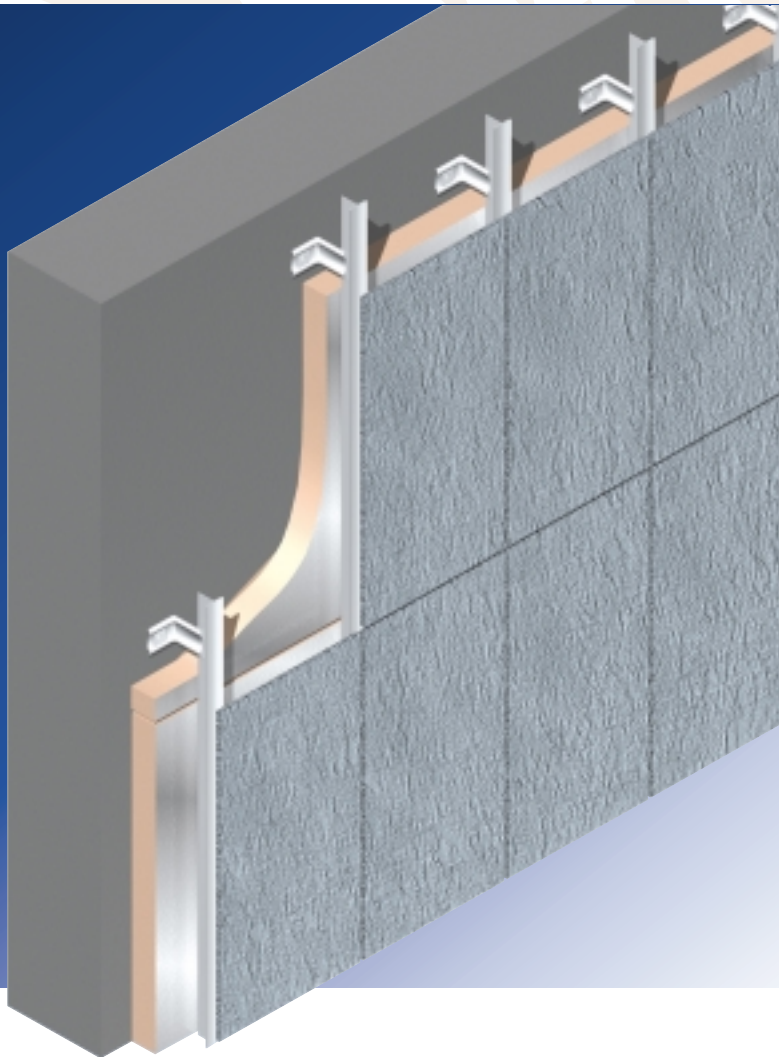


Kooltherm® K15 Rainscreen Board

INSULATION FOR USE BEHIND RAINDRIP CLADDING SYSTEMS



- ▼ Premium performance rigid phenolic insulation – thermal conductivity 0.022–0.024 W/m.K
- ▼ Class O fire rating/low risk
- ▼ Negligible smoke emission
- ▼ Suitable for use in rainscreen cladding systems
- ▼ Clear cavity is maintained – resists moisture penetration
- ▼ Unaffected by air movement
- ▼ Resistant to the passage of water vapour
- ▼ Easy to handle and install
- ▼ Ideal for newbuild or refurbishment
- ▼ CFC-free



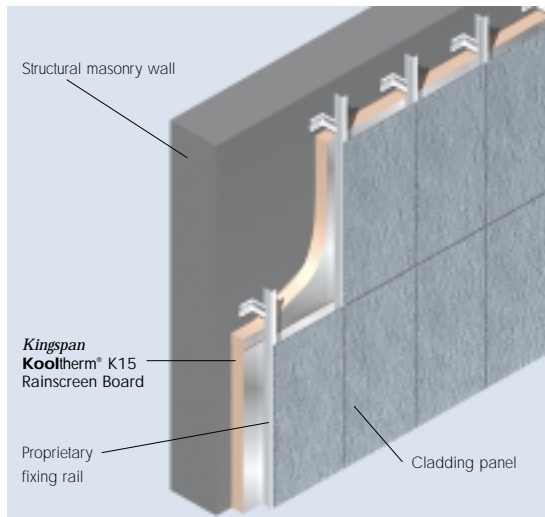
Manufactured to BS EN ISO 9002: 1994
Certificate No. 388/2

Kingspan Kooltherm® K15 Rainscreen Board

TYPICAL DESIGN DETAIL

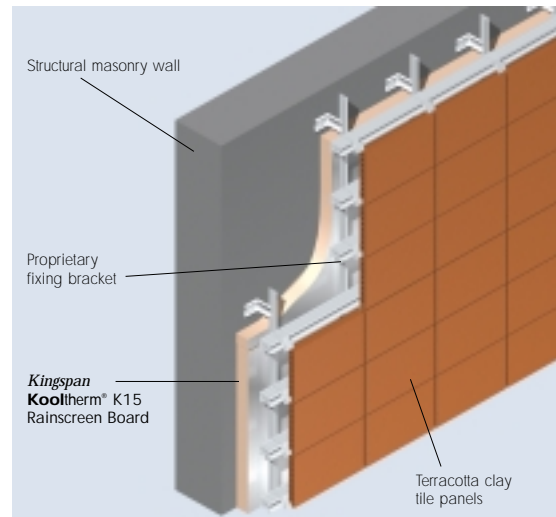
INSULATED RAINSCREEN CLADDING SYSTEM (non–proprietary external finish)

Figure 1



INSULATED RAINSCREEN CLADDING SYSTEM (terra cotta clay tile external finish)

Figure 2



SPECIFICATION CLAUSE

Kingspan Kooltherm® K15 Rainscreen Board should be described in specifications as:-

The wall insulation shall be **Kingspan Kooltherm® K15 Rainscreen Board** ____mm thick comprising a CFC-free rigid phenolic insulation core with composite foil facings on both sides manufactured in accordance with the requirements of BS EN ISO 9002: 1994 by Kingspan Insulation Limited and shall be applied in accordance with the instructions issued by them.

Details also available in NBS PLUS.



NBS users should refer to clause(s): H92 776 (Standard and Intermediate)

DESIGN CONSIDERATIONS

TYPICAL APPLICATIONS

Kingspan Kooltherm® K15 Rainscreen Board may be installed between a proprietary metal framework. The insulation boards are easily cut to individual studwork spacings. Once installed, **Kingspan Kooltherm® K15 Rainscreen Board** can exceed Building Regulations/Standards requirements for these applications.

COLD BRIDGING

When installed between a metal framework, the effects of cold bridging must be taken into account.

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 Services Department can provide a condensation risk analysis of your proposed design (see rear cover). Alternatively the designer can undertake an independent assessment by following the procedures set out in BS 5250: 1989 (1995) (Code of practice for the control of condensation in buildings).

The vapour resistance of the wall lining can be increased by the use of a vapour check plasterboard or by the application of two coats of Gyproc Drywall Sealer if required.

FIRE STOPS

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

TYPICAL U-VALUES

For typical U-values please contact Kingspan Insulation Technical Services.

SITWORK

INSTALLATION

Because rainscreen cladding systems are proprietary and utilise different mechanisms for attaching cladding panels to the wall structure, sitework guidance should be sought from system manufacturers.

However, in the absence of any other guidance **Kingspan Kooltherm® K15 Rainscreen Boards** can be fully restrained against the structural wall in a brick bond pattern with suitable insulation fasteners. A minimum number of four fasteners should be placed within the individual board area and be sited >50 mm but <150 mm from the edges and corners of the board.

CUTTING

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

AVAILABILITY

Kingspan Kooltherm® K15 Rainscreen Board is available through specialist insulation distributors and selected builders merchants throughout the UK, Ireland and Europe.

PACKAGING

The boards are supplied in labelled packs shrinkwrapped in polythene.

STORAGE

The packaging of **Kingspan Kooltherm® K15 Rainscreen Board** should not be considered adequate for long term outside protection. Ideally boards should be stored inside a building. If however, outside storage cannot be avoided the boards should be stacked clear of the ground and covered with a polythene sheet or weatherproof tarpaulin. Boards that have been allowed to get wet should not be used.

HEALTH AND SAFETY

Kingspan Insulation products are chemically inert and safe to use. A leaflet on this topic which satisfies the requirements set out in the Control of Substances Hazardous to Health Regulations 1988 (COSHH) is available from our Technical Services Department (see rear cover).

Please note that the reflective surface on this product is designed to enhance its thermal performance. As such, it will reflect light as well as heat, including ultraviolet light. Therefore, if this board 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.

Warning, do not stand on or otherwise support your weight on this board unless it is fully supported by a load bearing surface.

PRODUCT DESCRIPTION

THE FACINGS*

Kingspan Kooltherm® K15 Rainscreen Board is faced on both sides with a low emissivity composite foil facing which is highly resistance to the transmission of water vapour. This reflective, low emissivity surface effectively doubles the thermal resistance of the cavity in which the board is placed.

*Subject to availability, alternative colour facings can be provided.

THE CORE

The core of **Kingspan Kooltherm® K15 Rainscreen Board** is a CFC-free rigid phenolic insulant of typical density 40–42 kg/m³.

CFC-FREE*

Kingspan Kooltherm® K15 Rainscreen Board is produced using alternative blowing agents in compliance with the Montreal Protocol.

* **Kingspan Kooltherm® K15 Rainscreen Board** is also available CFC/HCFE-free subject to enquiry.

PRODUCT DATA

STANDARDS AND APPROVALS

Kingspan Kooltherm® K15 Rainscreen Board is manufactured to the highest standards under a quality control system approved to BS EN ISO 9002: 1994 (Quality systems. Model for quality assurance in production, installation and servicing).

STANDARD DIMENSIONS

Kingspan Kooltherm® K15 Rainscreen Board is available in the following standard size and thicknesses:

Nominal Dimension	Availability
Length (m)	1.2
Width (m)	0.6
Insulant Thickness* (mm)	20, 25, 30, 40, 50, 60, 70

*Other thicknesses are available subject to quantity.

INSULATION COMPRESSIVE STRENGTH

Typically exceeds 100 kPa at 10% compression when tested to BS EN 826: 1996 (Thermal insulating products for building applications. Determination of compression behaviour).

FIRE PERFORMANCE

The rigid phenolic insulation core of **Kingspan Kooltherm® K15 Rainscreen Board** will achieve the results given below which enables it to be classified by the Building Regulations as being Class O and low risk by the Technical Standards in Scotland.

Kingspan Kooltherm® K15 Rainscreen Board, when subjected to British Standard fire tests, achieves the following results.

Test	Result
BS 476: Part 6: 1989 (Fire Propagation Test)	Index of performance (I) not exceeding 12 and sub-index (I1) not exceeding 6 (for rigid phenolic insulation core)
BS 476: Part 7: 1997 (Surface spread of flame test)	Class 1 rating for rigid phenolic insulation core
BS 5111: Part 1: 1974 (Smoke Obscuration)	< 5%

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

THERMAL PROPERTIES

The λ -values and R-values quoted are in accordance with the Harmonised European Standard BS EN 13166: 2001 (Thermal insulation products for buildings – Factory made products of phenolic foam (PF) – Specification) using so called 90/90 principles. Comparison with alternative products may not be appropriate unless the same procedures have been followed.

THERMAL CONDUCTIVITY

The boards achieve a thermal conductivity (λ -value) of 0.024 W/m.K (insulant thickness 15–24 mm), 0.023 W/m.K (insulant thickness 25–44 mm), 0.022 W/m.K (insulant thickness \geq 45 mm).

CUSTOMER SERVICE

For quotations, order placement and details of despatches please contact our Building Fabric Insulation Customer Services Department on the numbers below:

UK – Telephone: +44 (0) 870 850 8555
– Fax: +44 (0) 870 850 8666
– email: commercial.uk@insulation.kingspan.com
Ireland – Telephone: +353 (0) 42 97 95000
– Fax: +353 (0) 42 97 46129
– email: commercial.ie@insulation.kingspan.com

TECHNICAL ADVICE

Kingspan Insulation Ltd support all of their products with a comprehensive Technical Advisory Service for specifiers, stockists and contractors.

This includes a free computer-aided service designed to give fast, accurate technical advice. Simply phone our **TECHLINE** with your project specification and we can run calculations to provide U-values, condensation/dew point risk, required insulation thicknesses etc... Thereafter we can run any number of permutations to help you achieve your desired targets.

We can also give general application advice and advice on design detailing and fixing etc... Site surveys are also undertaken as appropriate.

Please contact our Building Fabric Insulation Technical Services Department on the **TECHLINE** numbers below:



UK: – Telephone: +44 (0) 870 850 8555
– Fax: +44 (0) 1544 387 278
– email: techline.uk@insulation.kingspan.com
Ireland: – Telephone: +353 (0) 42 97 95032
– Fax: +353 (0) 42 97 46129
– email: techline.ie@insulation.kingspan.com

LITERATURE AND SAMPLES

Kingspan Insulation produces a comprehensive range of technical literature for specifiers, contractors, stockists and end users. The literature contains clear 'user friendly' advice on typical design; design considerations; thermal properties; sitework and product data.

Available as a complete Design Manual or as individual product brochures, Kingspan Insulation technical literature is an essential specification tool. For copies please contact our Marketing Department on the numbers below:

UK – Telephone: +44 (0) 1544 387 210
– Fax: +44 (0) 1544 387 299
– email: literature.uk@insulation.kingspan.com
Ireland – Telephone: +353 (0) 42 97 95038
– Fax: +353 (0) 42 97 46129
– email: literature.ie@insulation.kingspan.com

GENERAL ENQUIRIES

For all other enquiries contact Kingspan Insulation on the numbers below:

UK – Telephone: +44 (0) 870 850 8555
– Fax: +44 (0) 870 850 8666
– email: info.uk@insulation.kingspan.com
Ireland – Telephone: +353 (0) 42 97 95000
– Fax: +353 (0) 42 97 46129
– email: info.ie@insulation.kingspan.com

Kingspan Insulation reserve the right to amend product specifications without prior notice. Product thicknesses shown in this document should not be taken as being available ex-stock and reference should be made to the current Kingspan Insulation price-list or advice sought from Kingspan Insulation Sales department. The information, technical details and fixing instructions etc. included in this literature are given in good faith and apply to uses described. Recommendations for use should be verified as to the suitability and compliance with actual requirements, specifications and any applicable laws and regulations. For other applications or conditions of use, Kingspan Insulation offers a free Technical Advisory Service (see left) whose advice should be sought for uses of Kingspan Insulation products that are not specifically described herein. Please check that your copy of the literature is current by contacting our Marketing Department (see above).



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