

Kingspan Insulation at a Glance



Project: William Brookes School
Location: Much Wenlock, Shropshire, UK
Use: Education
Product: Kingspan **Kooltherm**® K3 Floorboard
Kingspan **Therma**roof® TR26 LPC/FM
Kingspan **Therma**wall® TW50
Kingspan **Therma**wall® TW55



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Welcome to Kingspan Insulation

Kingspan Insulation is a market leading manufacturer of premium and high performance rigid insulation products and insulated systems for building fabric and building services applications.

Kingspan Insulation has a vast product range including optimum performance next generation insulation solution **OPTIMA[®]**, premium performance rigid thermoset **Kooltherm[®]** insulation; high performance rigid thermoset **Therma[™]** insulation; and high performance rigid **Styrozone[®]** insulation. The extensive range of products is suitable for a variety of applications including:

- pitched roofs;
- flat roofs;
- tapered roofing systems;
- cavity walls;
- solid walls;
- insulated dry lining;
- timber and steel framing;
- externally insulated cladding systems;
- externally insulated render systems;
- floors;
- soffits; and
- ductwork in building services applications.

Kingspan Insulation also supplies:

- *Kingspan* **Thermabate[®]** Cavity Closer;
- *Kingspan* **TEK[®]** range of structurally insulated panels;
- the *Kingspan* **KoolDuct[®]** System of pre-insulated ducting;
- Pre-insulated plenum boxes; and
- *Kingspan* **nilvent[®]** – breathable membrane for roofs and walls.

Manufacturing excellence, first class customer service and unrivalled expertise in meeting the needs of the market are just some of the many strengths that Kingspan Insulation offers to designers, engineers and contractors.



Project: Olympic Stadium
Location: Stratford, London
Use: Sport and Leisure
Products: *Kingspan* **Kooltherm**® K10 Soffit Board
Kingspan **Kooltherm**® K15 Rainscreen Board

Kingspan Group

Kingspan Insulation is a Division of Kingspan Group plc, one of Europe's fastest growing building materials manufacturers. Kingspan Group was formed in the late 1960's and is a publicly quoted group of companies with its headquarters in Kingscourt, County Cavan, Ireland. Kingspan Insulation is consequently able to draw on the many resources and support of a focused, innovative group.

Kingspan Group has manufacturing, distribution and commercial operations throughout Europe, North America, Australasia and other locations across the globe.



1. Kingspan Insulation for Roofs, Walls and Floors



2. Kingspan Renewables



3. Kingspan Insulated Panels and Facades



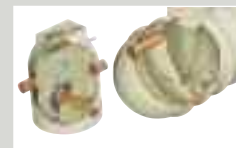
4. Kingspan KoolDuct System



5. Kingspan Water



6. Kingspan Raised Access Floors



7. Kingspan Environmental





Project: Dundrum Shopping Centre
Location: Dundrum, Ireland
Use: Retail
Products: Kingspan **Kooltherm**® K7 Pitched Roof Board
Kingspan **Kooltherm**® K10 Soffit Board
Kingspan **Kooltherm**® K12 Framing Board
Kingspan **Therma**roof® TR27 LPC/FM

Services

Technical Advice

In addition to the field and office based sales teams, Kingspan Insulation offers one of the most technically advanced support services in the industry. All products are supported 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 the Kingspan Insulation Technical Service Department with your project specification and any number of permutations can be provided to help you achieve your desired targets.

The Kingspan Insulation Technical Service Department can also give general application advice and advice on design detailing and fixing etc... Site surveys are also undertaken as appropriate.

Building Services Duct Insulation and The Kingspan KoolDuct® System

- Heat loss / gain calculations to ensure the optimum cost savings by choosing the correct insulation for the application.
- Recommended thickness calculations.
- Current specifications – advice given on the specifications used in the market place.

Building Fabric Insulation & Kingspan nilvent®

- U-value calculations to show compliance with current Building Regulations / Standards and best practice. Supported by a detailed report.
- Condensation prediction analysis – assessed in accordance with the requirements of BS 6229: 2003 and BS 5250: 2002. Supported by a detailed report.
- Wind loading calculations – assessed in accordance with the British Standard Code of Practice CP3: Chapter V: Part 2: 1972 (or BS 6399-2: 1977). Supported by a detailed report.
- SAP ratings – accredited Standard Assessment Procedure (SAP) calculations are undertaken on request. Carried out on receipt of adequate information as detailed in current Building Regulations / Standards. SAP calculations can incorporate NHER certificates if required.
- Site visits – technically qualified personnel are available to provide on-site assistance and advice where necessary.
- Advice on product selection and product data for the full range of Kingspan Insulation products.
- General application and fixing advice on all applications.
- Specification advice.

Customer Service

Kingspan Insulation prides itself on offering the highest levels of customer service, which are regularly monitored to ensure that customer expectations are always met. For quotations, order placement and details of despatches, please contact the Customer Service Department on the number on the rear cover.

Technical Presentations

Kingspan Insulation is committed to the provision of Continuing Professional Development (CPD) and operates an annual programme of technical presentations to specifiers. Kingspan Insulation technical personnel are available to visit companies to give a technical presentation on an agreed topic(s), lasting approximately one hour. The opportunity for an informal question and answer session is also provided. CPD certificates are issued to all attendees. If you are interested in a technical presentation, please contact Kingspan Insulation on the number on the rear cover.

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 the Kingspan Insulation Marketing Department or download the literature from www.kingspaninsulation.co.uk



Project: Passiehuis
Location: Duiven, Holland
Use: Accommodation
Products: Kingspan **Kooltherm**® K12 Framing Board

Low Energy Building

With European Union targets committed to cutting carbon emissions by 20% by 2020 and 60% by 2050, the impetus is there for the industry to produce low energy houses and buildings. This is backed up by Building Regulations and standards, such as Passivhaus, the Code for Sustainable Homes and BREEAM.

The next few years is likely to see demand for premium and high performance insulants grow as energy standards get tighter. This, coupled with higher fuel prices and consumer demand for low-energy buildings, will see this sector grow to become the norm.

Kingspan Insulation is at the forefront of the low energy building drive, helping architects and developers get the most energy efficient building envelope performance whilst taking up minimal space.



Project: Titanic Belfast
Location: Belfast, Northern Ireland
Use: Museum
Products: *Kingspan* **Kooliherm**® K3 Floorboard
Kingspan **Kooliherm**® K7 Pitched Roof Board
Kingspan **Kooliherm**® K10 Soffit Board
Kingspan **Kooliherm**® K17 Insulated Plasterboard
Kingspan **Kooliherm**® K18 Insulated Plasterboard
Metdeck
Kingspan **Thermawall**® TW50
Kingspan **Styrozone**®

Photograph courtesy of Donal McCann Photography



Project: RSPB Building
Location: Rainham Marshes, Essex
Use: Visitor Centre
Products: Kingspan **Therma**roof® TR27 LPC/FM
Kingspan **Therma**taper® TT47 LPC/FM
Notes: Gained BREEAM Excellent rating



Project: Olympic and Paralympic Village
Location: Stratford, London
Use: Athletes' Accommodation
Product: *Kingspan* **Kooltherm**® K3 Floorboard
Kingspan **Kooltherm**® K8 Cavity Board
Kingspan **Kooltherm**® K15 Rainscreen Board
Kingspan **Kooltherm**® K18 Insulated Plasterboard
Kingspan **Thermapitch**® TP10
Kingspan **Thermawall**® TW55

Refurbishment

Existing buildings offer the greatest opportunity to reduce carbon emissions from the stock. Whilst new buildings account for just 1 to 2% of the housing stock per annum, more than 70% of buildings standing today will still exist in 2050.

Programmes and initiatives to upgrade existing stock are in evidence in European markets for both domestic and non-domestic sectors.

Kingspan Insulation offers products and solutions for all types of refurbishment. The solutions offered for refurbishment will depend upon the individual circumstances of the project, such as room size; whether the building is in a conservation area; the desired thermal and air tightness performance; and the structural integrity of the refurbishment.



Project: Victorian House Refurbishment
Location: Tenbury Wells, Worcestershire, UK
Use: Private Domestic Residential
Products: Kingspan **Kooltherm**® K3 Floorboard
Kingspan **Kooltherm**® K7 Pitched Roof Board
Kingspan **Kooltherm**® K18 Insulated Plasterboard



Project: Low Energy Victorian House
Location: Camden, London
Use: Residential refurbishment
Products: Kingspan **Kooltherm**® K3 Floorboard
Kingspan **Kooltherm**® K7 Pitched Roof Board
Kingspan **Kooltherm**® K18 Insulated Plasterboard

Project: Baskerville House
Location: Birmingham
Use: Offices
Product: *Kingspan* **Kooltherm**® K10 Soffit Board



Refurbishment



Project: St Pancras Railway Station
Location: London
Use: Channel Tunnel Rail Link Terminus
Product: *Kingspan* **Therma**roof® TR27 LPC/FM



Project: Lakeside Development
Location: Blackley, Manchester, UK
Use: Residential refurbishment
Product: *Kingspan* **Kooltherm**® K18 Insulated Plasterboard

Public Sector Building

Public sector funding has grown in recent years becoming one of the key drivers of the construction industry.

Large scale government initiatives have been prominent in the following sectors:

- primary schools;
- secondary schools;
- colleges and further education establishments;
- hospitals and health facilities;
- military properties; and
- prisons and penal establishments.

Kingspan Insulation operates in all these sectors with products specified to meet often stringent thermal and environmental criteria. Design, architectural, specification and contractual teams are supported with full product back up and service meaning you can be fully confident in the materials provided.



Project: Broadgreen Hospital
Location: Liverpool, UK
Use: Health
Product: Kingspan **Kooltherm**® K15 Rainscreen Board

Project: Matthew Boulton College of Further and
Higher Education
Location: Birmingham, UK
Use: Education
Products: Kingspan **Kooltherm**® K12 Framing Board
Kingspan **Therma**wall® TW50





Project: Djanogly City Academy
Location: Nottingham, Nottinghamshire, UK
Use: Education
Product: *Kingspan* **Therma**taper® TT47 LPC/FM



Project: University of Hertfordshire de Havilland Campus
Location: Hatfield, Hertfordshire, UK
Use: Education
Product: *Kingspan* **Therma**roof® TR26 LPC/FM

Building Fabric Insulation Overview

Introduction

Kingspan Insulation offers the widest range of building fabric insulation products available from any UK or Irish manufacturer. Its products are among the most thermally efficient and technically advanced insulation materials available and have many advantages over traditional insulation materials such as man-made mineral fibre.

This extensive range of roof, wall and floor insulation products comprises:

- *Kingspan* **OPTIM-R** optimum performance insulation;
- *Kingspan* **Kooltherm**® premium performance insulation;
- *Kingspan* **Therma**™ high performance insulation; and
- *Kingspan* **Styrozone**® high performance insulation for specialist applications.

Kingspan Insulation has an impressive track record in the construction industry.

Its extensive range of products has been used to insulate buildings in both new build and refurbishment projects in all construction sectors:

- private housing;
- social housing;
- health;
- education;
- defence;
- retail;
- hotels and leisure;
- commercial;
- offices; and
- industrial.

Project: University of Surrey
Location: Guildford, UK
Use: Education Residential
Products: *Kingspan* **Kooltherm**® K3 Floorboard
Kingspan **Kooltherm**® K8 Cavity Board
Kingspan **Kooltherm**® K10 Soffit Board





Kooltherm® K-Range

Introduction

The Kingspan **Kooltherm**® K-range is an extensive range of premium performance insulation products for roofs, walls and floors.

Benefits

- With a thermal conductivity as low as 0.020 W/m·K, it utilises the thinnest commonly used insulation board to achieve U-values.
- It easily achieves required U-values with minimum board thickness.
- Achieves an A+ BRE Green Guide Rating.
- It exhibits class leading fire performance that can be equivalent to man-made mineral fibre.
- The rigid thermoset **Kooltherm**® insulation core achieves a Class 0 fire rating to the Building Regulations and Low Risk to the Building Standards.
- It achieves the best possible rating of < 5% smoke obscuration when tested to BS 5111-1: 1974.
- Its closed cell structure resists both moisture and water vapour ingress – problems which can be associated with open cell materials such as man-made mineral fibre and which can result in reduced thermal performance.
- It is unaffected by air infiltration – a problem that can be experienced with man-made mineral fibre and which can reduce thermal performance.
- It is safe and easy to install – it does not produce irritative fibres.
- It provides reliable long term thermal performance over the lifetime of a building.
- Non-deleterious material.
- BRE certified Life Cycle Assessment (LCA) data is available.
- Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP).





Project: International Broadcast Centre / Main Press Centre Complex
Location: Stratford, London
Use: Broadcasting and Media Facility
Products: *Kingspan* **Kooltherm**® K15 Rainscreen Board
Kingspan **Styrozone**® H 350 R



Project: Venus
Location: Manchester, UK
Use: Offices
Products: Kingspan **Kooltherm**® K15
Rainscreen Board



Project: Fingal County Council
Location: Blanchardstown, Ireland
Use: Library and Offices
Products: *Kingspan* **Kooltherm**® K10 Soffit Board
Kingspan **Kooltherm**® K15 Rainscreen Board
Kingspan **Therma**roof® TR27 LPC/FM

Kingspan **Therma taper**® Range

Introduction

*Kingspan **Therma taper**® Systems* have been developed to solve problems associated with rainwater ponding on flat roofs. *Kingspan **Therma taper**® Systems* comprise tapered insulation boards, flat packer boards, pre-mitred hip and valley boards and the market's leading tapered roofing design service. *Kingspan **Therma taper**® products* are designed: for use under most waterproofing membranes; to provide required roof falls; and to provide insulation to meet the requirements of Building Regulations / Standards.

Benefits

Simpler

On new roofs, the use of *Kingspan **Therma taper**® Systems* eliminates the need to incorporate a fall into the design of the roof deck. On existing roofs, a *Kingspan **Therma taper**® Systems* and a new waterproofing membrane can be laid on top of the original waterproofing. This eliminates the need for stripping down the roof to deck level, and the provision of a vapour check may not be required.

Cheaper

Using *Kingspan **Therma taper**® Systems* to achieve a U-value of 0.16 W/m²-K could be up to or over 26% cheaper than using alternative methods (e.g. timber firrings or screed) to create a fall in a flat roof for rainwater drainage purposes.

Quicker

*Kingspan **Therma taper**® Systems* avoid a wet trade and do not need time to dry out saving time in the scheduling of a construction project. It has been estimated that screed to falls systems may require up to 195 days or more to dry.

Lighter

*Kingspan **Therma taper**® Systems* are also a lighter weight alternative to screeding and they do not present the risk of an overloaded structure due to excessive screed depths. *Kingspan **Therma taper**® Systems* can be as little as 1.5% or less of the weight of a solution using screed to falls with a flat insulation board.

Less Waste

Pre-mitred boards reduce waste from the installation process. Insulation boards are cut in half by Kingspan Insulation in its factory to make mitred hip and valley boards. These are single picked to match the tapered system design so as to reduce waste from cutting hips and valleys on site. Both (hip and valley) halves of the cut board are used and the only waste is the dust generated by sawing. Whereas when boards are cut on site, up to 50% of the cut boards could be wasted, depending on the particulars of the specific board layout and falls design.

Project: BP Sunbury
Location: Sunbury-on-Thames, UK
Use: Business and Technology Park
Products: *Kingspan **Therma taper**® TT47 LPC/FM*





Image courtesy of
Edmund Sumner Photography

Project: Aquatics Centre
Location: Stratford, London
Use: Sport and Leisure
Products: *Kingspan* **Thermataper**® TT47 LPC/FM
Kingspan **Therma**roof® TR27 LPC/FM
Kingspan **Kooli**herm® K15 Rainscreen Board
Kingspan **Styro**zone®

Kingspan Thermataper® Design Service

Efficiency by Design

Kingspan Thermataper® Systems come with first class design services. This ensures that the most cost-effective solution for a roof is identified and that the end result is a tapered system design which meets the roof's rainwater run-off and insulation requirements.

Board Layout & Falls Design

The board layout and falls of even the most complex tapered system can be designed quickly and effectively, ready for client approval. The design will illustrate the required direction of drainage and will also take into account U-value, condensation risk and wind uplift requirements, as well as minimum / maximum rise restrictions. Client amendments or revisions can be easily incorporated. This board layout and falls design service operates under a quality control system certified to BS EN ISO 9001: 2000 (Quality management systems. Requirements).

Once the final design has been accepted by the client and the *Kingspan Thermataper®* Systems is ordered, a working drawing will be produced on waterproof paper. This drawing will clearly set out the fall pitch, fall direction and fixing of each board type and will clearly

match the markings on the boards to create an easy to install system that is delivered direct to site. Installation of *Kingspan Thermataper®* Systems is simple using these easy to follow drawings and, to facilitate installation, each board type is packed separately in labelled shrink wrapped packs.

Condensation Risk Analysis

Included in the design service is the calculation of condensation risk in accordance with BS 5250: 2002 (Code of practice for control of condensation in buildings). This ensures that any predicted dew-point is above the vapour control layer at the point in the *Kingspan Thermataper®* Systems with the thinnest insulation layer, whilst also ensuring any condensation risk is within the limits given in BS 5250: 2002.

Calculation of U-values

U-values for *Kingspan Thermataper®* Systems are calculated in accordance with Annex C of BS EN ISO 6946: 1997 (Building Components and Building Elements). Annex C outlines the calculation procedure to determine the total thermal transmittance of tapered insulation - termed the 'Annex C U-value'.

Project: Dublin Airport Pier D
Location: Dublin, Ireland
Use: Airport
Products: *Kingspan Thermaroof®* TR27 LPC/FM
Kingspan Thermataper® TT47 LPC/FM
Kingspan Kooliherm® K10 Soffit Board





Project: Meath County Council Offices
Location: Dunshaughlin, County Meath
Use: Local Government Offices
Products: *Kingspan* **Thermataper**® TT46 LPC/FM
Kingspan **Thermawall**® TW50
Kingspan **Kooltherm**® K8 Cavity Board
Kingspan **Kooltherm**® K10 Soffit Board

Therma[®]roof Range

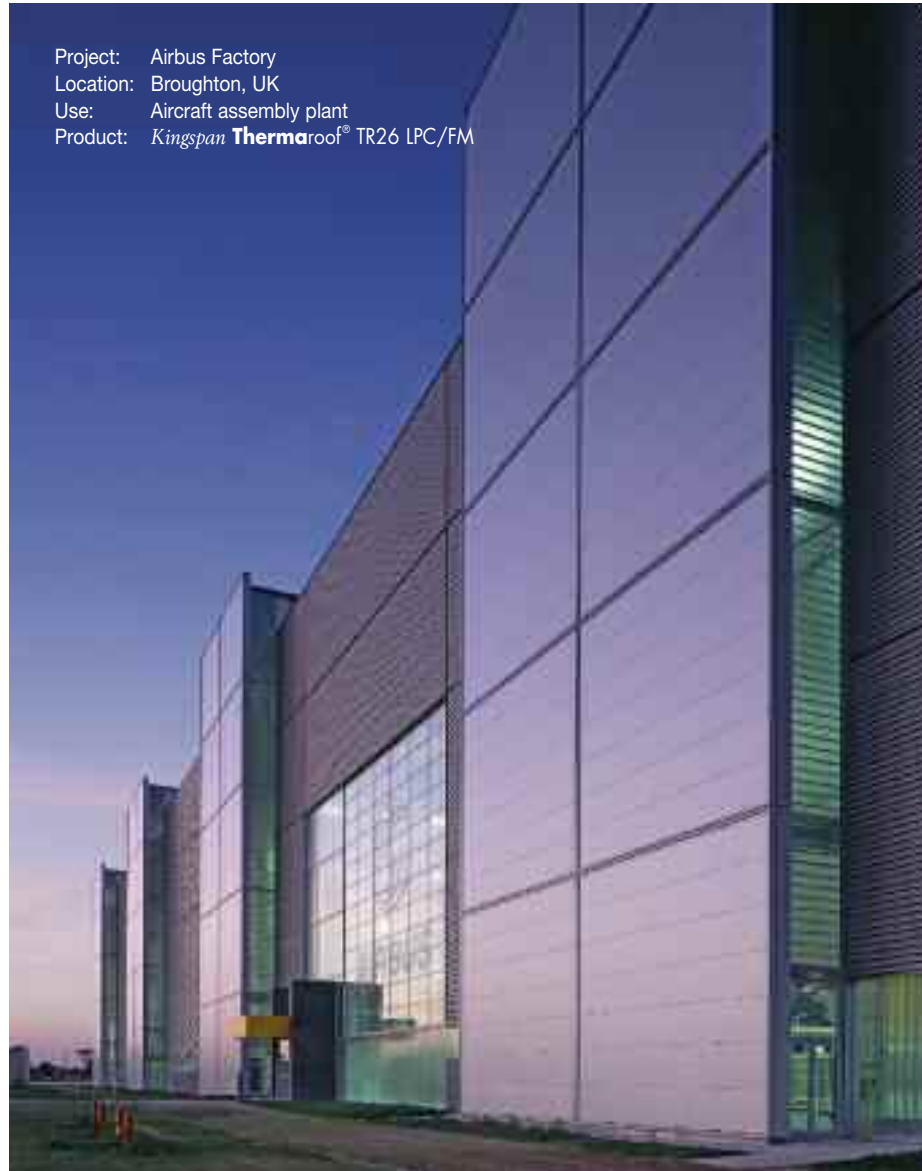
Introduction

The *Kingspan* **Therma[®]roof** Range is an extensive range of high performance insulation products for roofs, walls and floors.

Benefits

- With a thermal conductivity as low as 0.022 W/m·K, it is one of the more thermally efficient insulation products commonly used.
- It achieves the required fire performance for the intended application.
- LPCB and FM approved solutions available.
- Its closed cell structure resists both moisture and water vapour ingress – problems which can be associated with open cell materials such as man-made mineral fibre and which can result in reduced thermal performance.
- It is unaffected by air infiltration – a problem that can be experienced with man-made mineral fibre and which can reduce thermal performance.
- It is safe and easy to install – it does not produce irritative fibres.
- It provides reliable long term thermal performance over the lifetime of a building.
- Non-deleterious material.
- BRE certified Life Cycle Assessment (LCA) data is available.
- Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP).
- Achieves a BRE Green Guide A+ (TR26 LPC/FM and TT46 LPC/FM) and an A Rating for TR27 LPC/FM, TT47 LPC/FM and TR21).

Project: Airbus Factory
Location: Broughton, UK
Use: Aircraft assembly plant
Product: *Kingspan* **Therma[®]roof** TR26 LPC/FM



Project: BALTIC
Location: Gateshead, UK
Use: Contemporary Arts Centre
Product: *Kingspan* **KoolDuct**®

Project: The Sage
Location: Gateshead, UK
Use: Music Centre
Product: *Kingspan* **Therma**roof® TR26 LPC/FM



Project: Burton Hall
Location: Dublin, Ireland
Use: Office
Products: *Kingspan* **Kooltherm**® K10 Soffit Board
Kingspan **Therma**roof® TR21
Kingspan **Therma**roof® TR26 LPC/FM
Kingspan **Therma**wall® TW50



Project: Odyssey Complex
Location: Belfast, Northern Ireland
Use: Leisure complex
Products: *Kingspan* **Therma**roof® TR26 LPC/FM

Styrozone® Range

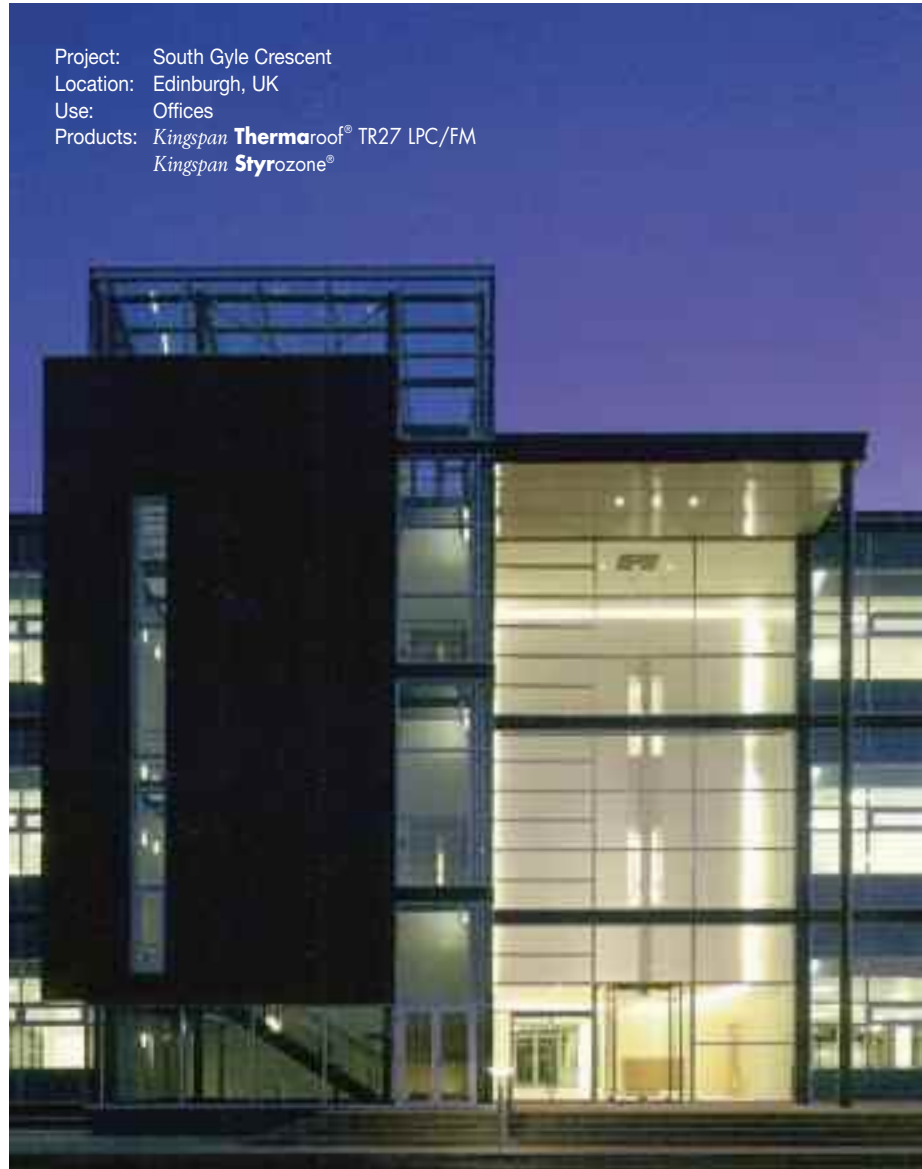
Introduction

The *Kingspan Styrozone®* Range is an extensive range of high performance insulation products for inverted roofs, car park decks, basements and heavy-duty floors.

Benefits

- It is ideal for specialist applications such as inverted roofing and heavy-duty floors.
- High performance rigid extruded polystyrene insulation - thermal conductivity 0.029-0.038 W/m.K.
- It easily achieves required U-values with minimum board thickness.
- It achieves the required fire performance for the intended application.
- Compatible with green roofing systems.
- Its closed cell structure resists both moisture and water vapour ingress – problems which can be associated with open cell materials such as man-made mineral fibre and which can result in reduced thermal performance.
- It is unaffected by air infiltration – a problem that can be experienced with man-made mineral fibre and which can reduce thermal performance.
- It is safe and easy to install – it does not produce irritative fibres.
- It provides reliable long term thermal performance over the lifetime of a building.
- Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP).

Project: South Gyle Crescent
Location: Edinburgh, UK
Use: Offices
Products: *Kingspan Thermo*roof® TR27 LPC/FM
Kingspan Styrozone®





Project: Copper Box
Location: Stratford, London
Use: Handball Arena / Sport and Leisure
Products: Kingspan **Styrozone**® N 300 R
Kingspan **Styrozone**® H 350 R

Kingspan **TEK**® Building System Overview

Introduction

The *Kingspan **TEK**® Building System* comprises SIP panels connected with a unique jointing system for walls, roofs and intermediate floors using I-beams or open web joists. Design and structural calculation services are also an integral part of the System.

Benefits

- Highly energy efficient.
- U-value range between 0.10 W/m²·K and 0.23 W/m²·K.
- Airtight construction – as low as 0.08 air changes per hour at normal air pressures or 0.91 air changes per hour at 50 Pa (approximately 1 m³/hour/m² at 50 Pa).
- Low site wastage as schemes are designed, cut and palletised in the factory meaning no excess building materials are delivered to site.
- All the components for a typical *Kingspan **TEK**® Building System* scheme e.g. panels and ancillaries, come from one source, therefore there are fewer deliveries compared to more traditional construction methods where components can often be sourced from and delivered by a number of different distributors or manufacturers. The overall result is less transport, which reduces the project's impact on the environment.



Project: School Cube
Location: Southwark, London
Use: Education
Products: *Kingspan **TEK**® Building System*

- PEFC Certificated - Chain of Custody.
- Green Guide A+ or A rating depending on cladding.
- Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low GWP (Global Warming Potential).



Project: Reema
Location: Petersfield, UK
Use: Private and Social Housing
Products: Kingspan **TEK**® Building System



Project: Irish Traditional
Location: Clane, County Kildare
Use: Private Residential
Products: Kingspan **TEK**® Building System





Project: Hospice
Location: Scarborough, UK
Use: Healthcare
Products: Kingspan **TEK**® Building System

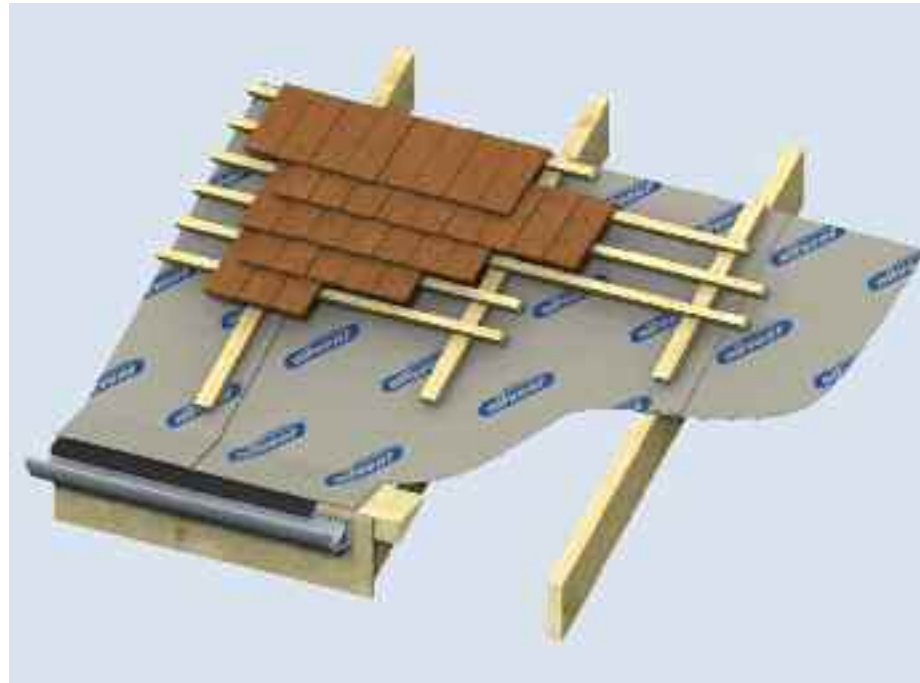
Breathable Membranes Overview

Introduction

Kingspan **nilvent**[®] is a breathable membrane for unventilated pitched roofs, framed walls and structural insulated panel walls.

Benefits

- Non-tenting.
- Inherently airtight.
- Excellent water vapour permeability – no condensation risk.
- Strong – excellent nail tear and tensile strengths.
- Durable – heat and UV stable.
- Lightweight.
- Easy to handle and install.
- Ideal for newbuild roofs and walls or re-roofing.



Project: The Way
Location: Beswick, Manchester
Use: Residential
Products: *Kingspan* **nilvent**[®]
Kingspan **TEK**[®] Building System





Cavity Closers Overview

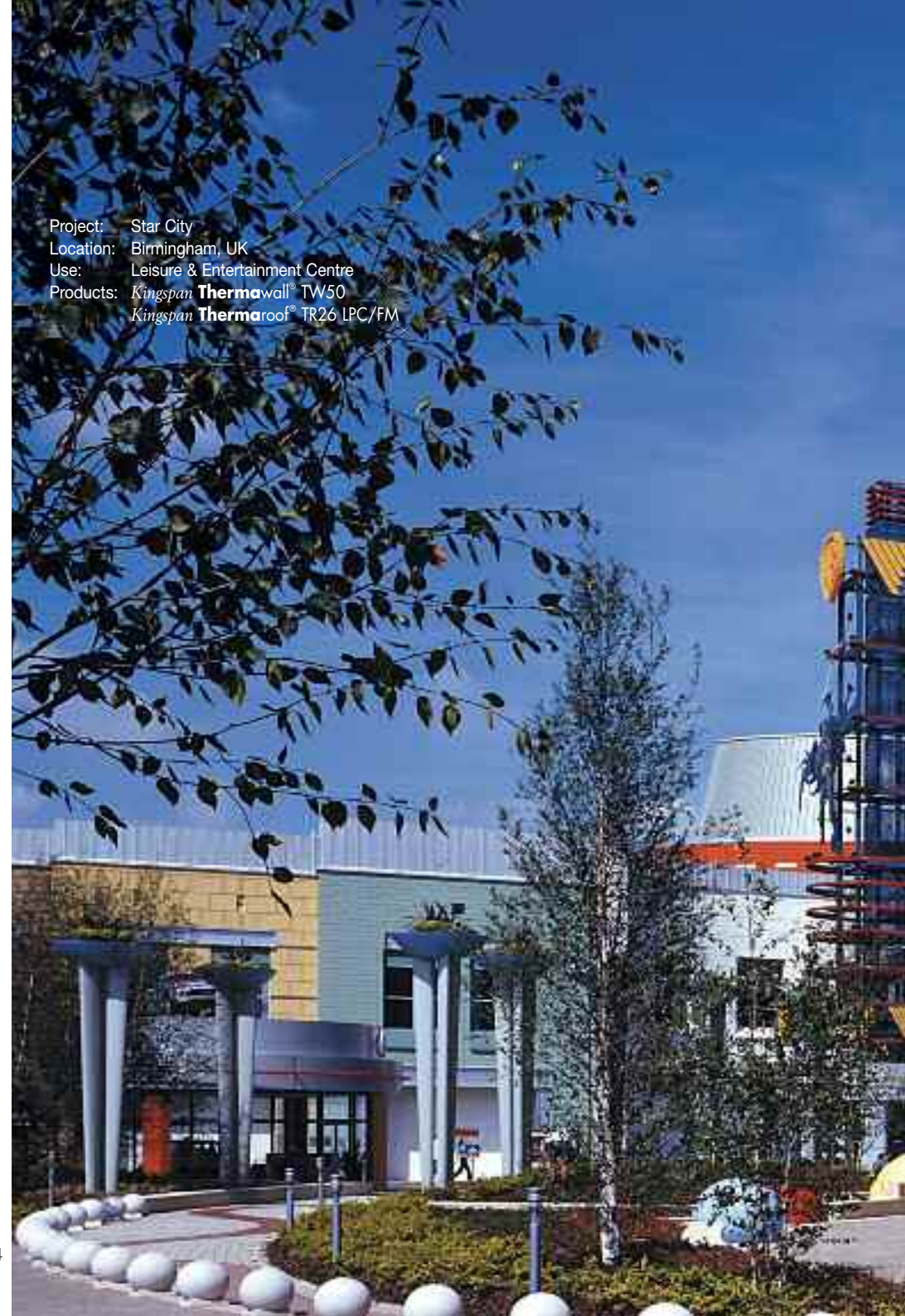
Introduction

Cavity Closers are used to close wall cavities at openings. The *Kingspan Kooltherm*® Cavity Closer is an insulated extrusion with a premium performance rigid thermoset insulation core. The *Kingspan Thermabate*® Cavity Closer is a PVC-U extrusion with a high performance (PIR) insulation core.

Benefits

- Moisture controlling – prevents condensation, pattern staining and mould growth.
- Flexible – can either be built in with frames or used to pre-form openings when frames are fitted later.
- Simplicity – one basic section satisfies all requirements.
- Easy to handle and install.
- Non-deleterious material.
- Continuous insulation – maintains a continuous insulated cavity closer around window and door openings.
- Simplified construction – avoids the need for cut bricks, blocks or special reveal blocks.
- Reduced heat loss – avoids thermal bridging.
- Weather resistant – forms an integral DPC.

Project: Star City
Location: Birmingham, UK
Use: Leisure & Entertainment Centre
Products: *Kingspan Thermawall*® TW50
Kingspan Thermaroof® TR26 LPC/FM





KoolDuct® System Overview

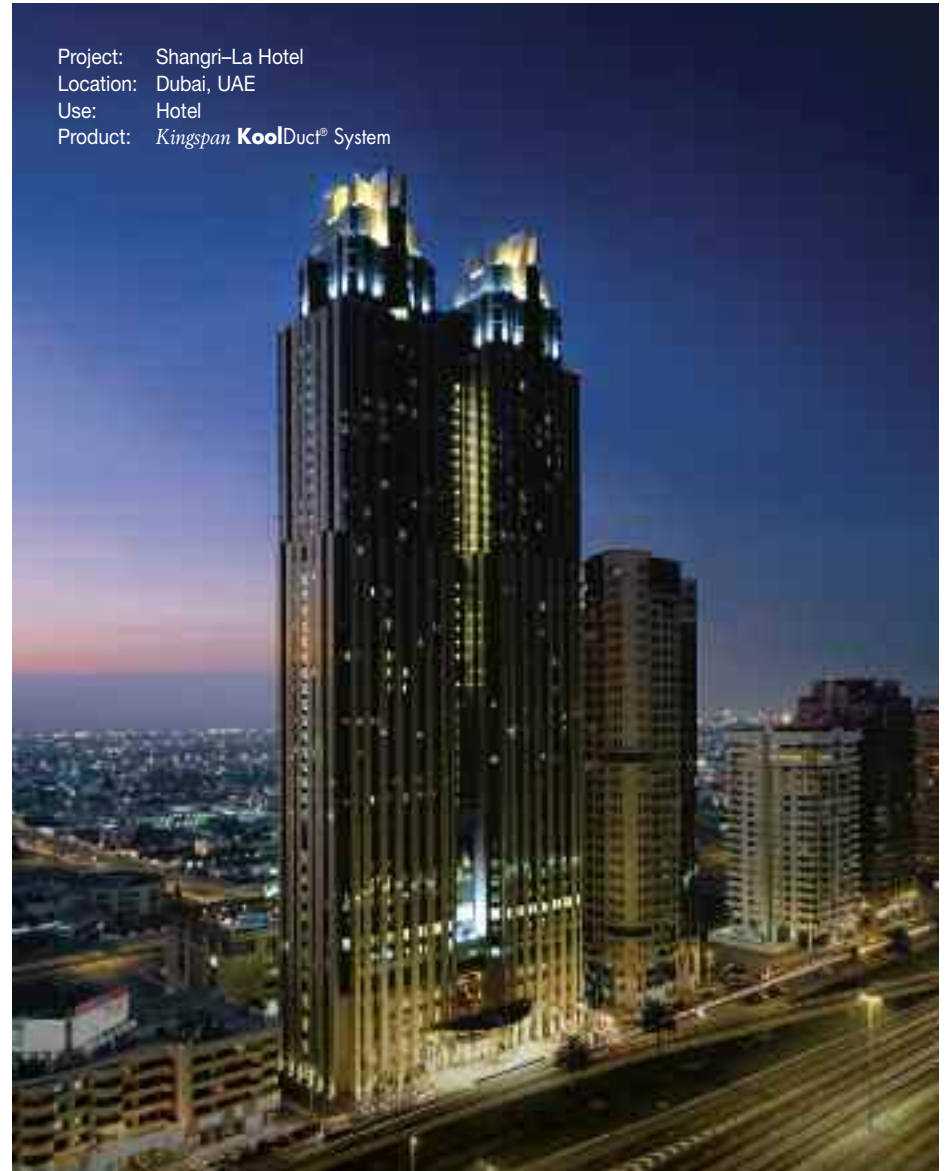
Introduction

The *Kingspan KoolDuct®* System is an advanced and innovative pre-insulated rectangular HVAC ductwork system. This cutting edge System offers the triple benefits of cutting energy use, cutting operational CO₂ emissions and cutting costs.

Benefits

- *Kingspan KoolDuct®* System is the only premium performance pre-insulated ductwork in the world to be UL Listed as a Class 1 Air Duct, to Standard for Safety UL 181, when fabricated to a specification clearly defined by UL;
- Ductwork can weigh up to 75% less than ductwork constructed from galvanised sheet steel and insulated with mineral fibre – this makes it ideal for refurbishment projects, where existing building structures have insufficient load capacities for new service loads.
- Faster installation speeds as a result of low weight ductwork fabricated in sections up to 3.93 m /13 ft long, single-fix installation and no need to install insulation as a second operation.
- It typically saves up to 150–200 mm / 6-8" in a single dimension, allowing ductwork to be installed flush to ceilings, walls and floors, as well as to surfaces within confined enclosures.
- Reduced labour and materials can provide an ideal value engineered ductwork solution without compromising performance.
- Low ductwork air-leakage can yield significant electrical consumption and CO₂ emissions savings because of reduced heating and cooling loads and fan energy usage.
- Low embodied environmental impact – up to 65% less than that of rock mineral fibre insulated galvanised sheet steel ductwork.
- *Kingspan KoolDuct®* panels have an A BRE Green Guide Rating.

Project: Shangri-La Hotel
Location: Dubai, UAE
Use: Hotel
Product: *Kingspan KoolDuct®* System





Project: Burj Al Arab Hotel
Location: Jumeirah Beach, Dubai
Use: Hotel
Product: *Kingspan* **Kooltherm**® Duct Insulation

Kooltherm® Duct Insulation Overview

Introduction

The *Kingspan Kooltherm®* Duct Insulation System is a premium performance thermal insulation system designed for use on ductwork in Building Services / HVAC applications. It comprises Kooltherm Duct Insulation and duct support inserts.

Benefits

- **Kooltherm®** Duct Insulation is FM Approved for use as thermal insulation on ductwork.
- It has the lowest thermal conductivity of any commonly used duct insulation material at 0.021 W/m·K which allows thinner insulation to achieve the required thermal performance.
- Its rigidity enables the specified thickness of insulation to be maintained at the corners of ductwork which ensures the integrity of its thermal performance is preserved.
- **Kooltherm®** Duct Insulation includes a factory applied aluminium foil vapour barrier jacket with low emissivity for increased energy efficiency.
- The risk of moisture penetration as a result of damage to the vapour barrier jacket is greatly reduced as it has a closed cell structure.
- It is suitable for use on high specification projects in the food, beverage and pharmaceutical industries in addition to medical and other hygiene controlled environments.
- Achieves an A+ BRE Green Guide Rating.



Project: Preston Football Museum
Location: Preston, UK
Use: Museum
Products: *Kingspan Kooltherm®* Duct Insulation
Kingspan Thermaroof® TR26 LPC/FM
Kingspan Kooltherm® K10 Soffit Board
Kingspan Kooltherm® K15 Rainscreen Board

Project: BBC Scotland
Location: Glasgow, UK
Use: Broadcast Centre & Offices
Product: *Kingspan* **KoolDuct**® System



Notes

Contact Details

Customer Service

For quotations, order placement and details of despatches please contact the Kingspan Insulation Customer Service Department on the numbers below:

UK – Tel: +44 (0) 1544 388 601	Ireland – Tel: +353 (0) 42 979 5000
– Fax: +44 (0) 1544 388 888	– Fax: +353 (0) 42 975 4299
– email: customerservice@kingspaninsulation.co.uk	– email: info@kingspaninsulation.ie

Literature & 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 the Kingspan Insulation Marketing Department, or visit the Kingspan Insulation website, using the details below:

UK – Tel: +44 (0) 1544 387 384	Ireland – Tel: +353 (0) 42 979 5000
– Fax: +44 (0) 1544 387 484	– Fax: +353 (0) 42 975 4299
– email: literature@kingspaninsulation.co.uk	– email: info@kingspaninsulation.ie
– www.kingspaninsulation.co.uk/literature	– www.kingspaninsulation.ie/literature

Tapered Roofing

For technical guidance, quotations, order placement and details of despatches please contact the Kingspan Insulation Tapered Roofing Department on the numbers below:

UK – Tel: +44 (0) 1544 387 383	Ireland – Tel: +353 (0) 42 975 4297
– Fax: +44 (0) 1544 387 483	– Fax: +353 (0) 42 975 4296
– email: tapered@kingspaninsulation.co.uk	– email: tapered@kingspaninsulation.ie

Technical Advice / Design

Kingspan Insulation supports all of its products with a comprehensive Technical Advisory Service for specifiers, stockists and contractors.

This includes a computer-aided service designed to give fast, accurate technical advice. Simply phone the Kingspan Insulation Technical Service Department with your project specification. Calculations can be carried out to provide U-values, condensation / dew point risk, required insulation thicknesses etc... Thereafter any number of permutations can be provided to help you achieve your desired targets.

The Kingspan Insulation Technical Service Department can also give general application advice and advice on design detailing and fixing etc... Site surveys are also undertaken as appropriate.

The Kingspan Insulation British Technical Service Department operates under a management system certified to the BBA Scheme for Assessing the Competency of Persons to Undertake U-value and Condensation Risk Calculations.



Please contact the Kingspan Insulation Technical Service Department on the numbers below:

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General Enquiries

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

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The National Insulation Association (NIA)



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