



Aerofullfil[™] Platinum[®]

FULL FILL CAVITY WALL INSULATION



- High performance thermal insulation
- Engineered moulded panel design
- Tight tongue & groove joints to prevent air movement
- Proven moisture management system
- Moulded wall tie slots for accurate placement
- Suitable for installation in all weather conditions
- Waterproof
- Not damaged by direct contact with mortar
- Easy to handle and install
- CFC, HCFC & HFC - free
- Manufactured with a blowing agent that has zero ODP and low GWP
- Recyclable
- Contains recycled raw materials



*Low Energy –
Low Carbon Buildings*

Design Considerations

Typical Construction and U-values

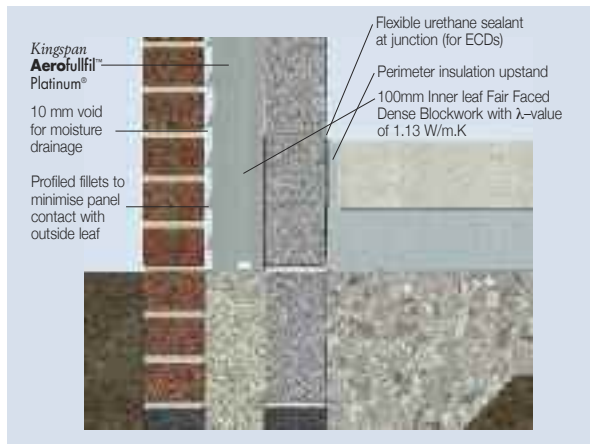


Figure 1

Insulant Thickness (mm)	U-values (W/m ² .K) for Various Thicknesses of Kingspan Aerofullfil™ Platinum®	
	Overall Wall Thickness (mm)	U-value (W/m ² .K)
95	305	0.27
120	330	0.22
140	350	0.20
190	400	0.15

Green Guide Rating

Kingspan Aerofullfil™ Platinum® corresponds to the BRE Global Green Guide online generic specification 'Expanded polystyrene (EPS) – density 15kg/m³' (ref. 815320022) which achieves a summary rating of A+.

Moisture Management

A series of moulded fillets on the external face of the board ensure a 10 mm moisture management gap is maintained, any moisture that enters the cavity is returned to the external leaf. Lateral joints on the board are protected from moisture ingress by a simple 'bell cast' overlap, additional protection is offered by the vertical tapered tongue and groove.

Kingspan Aerofullfil™ Platinum® is suitable for use in new masonry walls (brick or block) and is suitable for use in new buildings up to and including 12 metres in height in all exposure regions.

Corner Detailing

When brick is being used for the external leaf, both external and internal corner details must incorporate a vertical DPC, positioned between the board and the external brick leaf, returning a minimum of 150 mm on either side of the corner joint (a vertical DPC is not required if the external leaf is rendered).

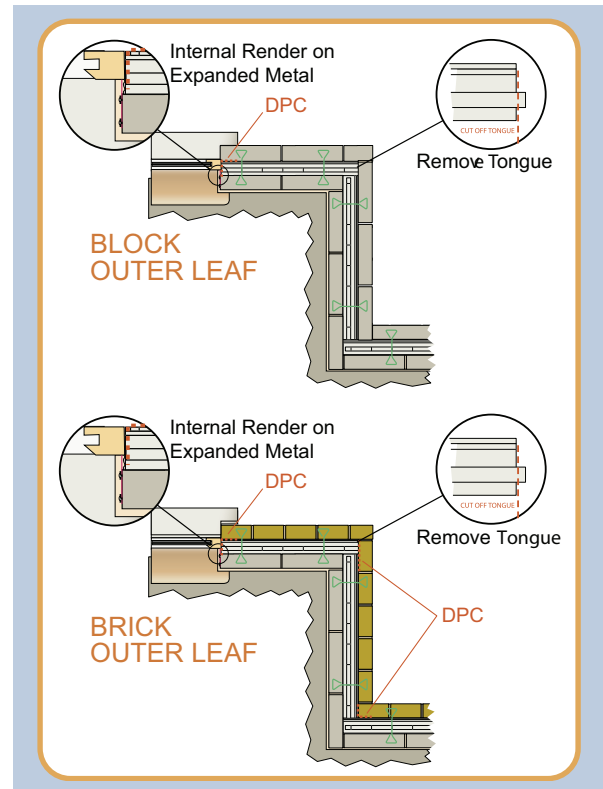


Figure 2

Design Standards

NHBC standards 2008 accepts the use of Kingspan Aerofullfil™ Platinum® cavity wall boards, when installed in accordance with Chapter 6.1 external masonry walls.

Sitework

Wall Ties

- There is a specific wall tie designed for use with the **Kingspan Aerofullfil™ Platinum®**. The wall tie is contoured with triangular shapes on both ends, which allows for proper anchorage in the mortar joint. The contoured shape aligns itself with the slope of the bell cast on the base of the boards. There is no requirement for insulation retaining devices on the wall ties as the insulation boards are held in place between both leaves of the wall. The ties are supplied with the insulation boards @ 3 ties/m² for the 95 mm & 100 mm boards and @ 4.9 ties/m² for the 120 mm, 140 mm and 190 mm boards.

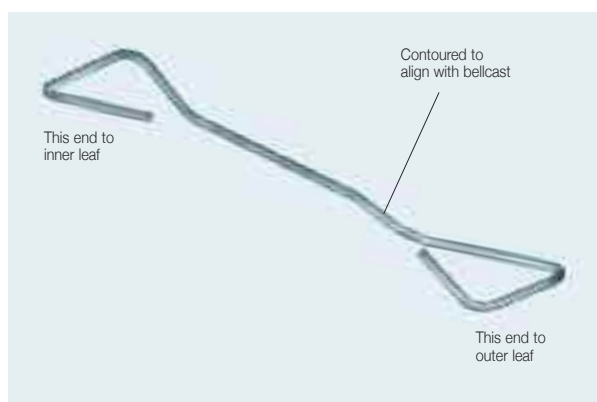


Figure 3

Services

- **Kingspan Aerofullfil™ Platinum®** must not be used in contact with electrical cables or hot water pipes, (max 80°C). Electric cables in contact with the polystyrene must be enclosed in a suitable conduit, e.g. rigid PVC as outlined in the National Rules of the Electro Technical Council of Ireland (ET101).

General

Handling and Storage

- **Kingspan Aerofullfil™ Platinum®** is safe, easy to handle and easily cut. It is delivered to site wrapped in opaque polythene. Store the panels in the original wrapping under cover and protect from direct sunlight until use. Contact with solvents and organic based materials such as timbers, which have been either newly creosoted or coal tarred, should be avoided. The product must not be exposed to naked flame or other ignition sources. Handling and storage arrangements must comply with the recommendations of Paragraph 7 of BS 6203: 1991.

Fixing Details

The following procedure should be followed when installing **Kingspan Aerofullfil™ Platinum®**. Site supervision by qualified personnel is recommended during installation.

- Raise the inner leaf at least 450 mm above the foundations.
- Set the first row of boards against the inner leaf, with the bottom edges at least 225 mm below the top of floor perimeter insulation.
- Install boards with tongue upwards and flutes facing outward.
- Ensure all board joints are lightly butted with vertical joints staggered.
- Slots are provided in the tongued feature along the top of the board into which the wall ties are inserted.
- The wall ties must be placed at 750 mm horizontal centres for 95 mm board thicknesses and at 450 mm horizontal centres for 120 mm / 140 mm / 190 mm board thicknesses.
- All boards are at 450 mm vertical centres.
- Wall ties should be correctly aligned to follow the contour of the boards.
- Raise the outer leaf by 450 mm.
- Repeat the above sequence until the wall is complete.
- Carry the cavity boards to the highest level of wall, except where protected by a cavity tray.
- The recommendations of BS 5628-3: 2001 should be followed.
- If working from outside, the above sequence can be reversed to suit.
- Damp proofing at lintel level must be provided with stop-ends and weep holes.
- The insulation acts as a spacer between the wall leaves. Once the first leaf is plumbed, the second leaf will automatically be plumb when pressed against the insulation. The risk of upsetting the first leaf is reduced if allowed to set prior to commencing the second leaf.

Product Details

Description

Kingspan Aerofullfil™ Platinum® is a tightly interlocking moulded cavity wall insulation board with unique water management features. *Kingspan Aerofullfil™* Platinum® thermal performance is sustainable over the lifespan of the building.

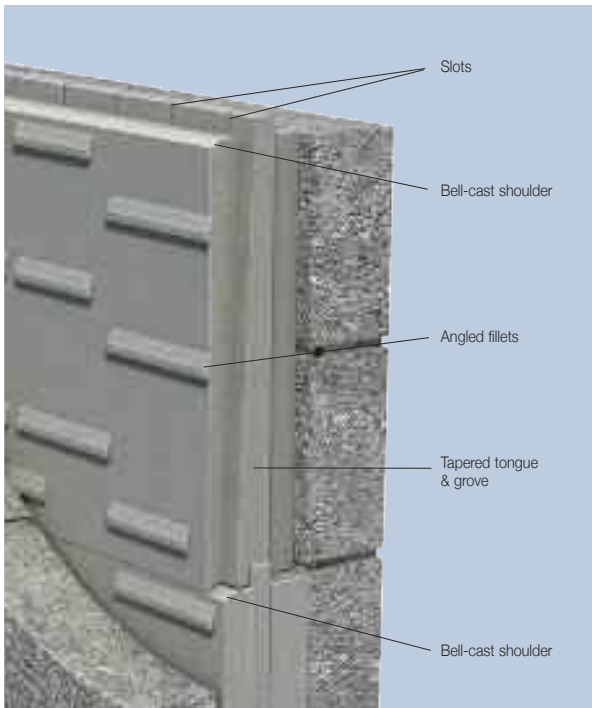


Figure 4

Standards and Approvals

Kingspan Aerofullfil™ Platinum® successfully passed all rigorous testing for driving rain conditions in all exposure zones and has been awarded NSAI Agrément Certificate 03/0188.



Standard Dimensions

Kingspan Aerofullfil™ Platinum® is available in thicknesses of 95, 120, 140 and 190 mm and in board sizes 1200 mm long x 450 mm high. The 10 mm thick tapered flutes are not included within the board thickness, hence the cavity width design sizes are 105, 130, 150 and 200 mm respectively.

Physical Properties

Kingspan Aerofullfil Platinum	Value
Thermal Conductivity (W/m·K)	0.031*
Water Vapour Resistance Factor (μ)	20-40*
Water Vapour Permeability (mg/Pa·h·m)	0.018 - 0.036*
Dimensional Stability	DS(N)5*

* Quoted in accordance with BS / I.S. EN 13163: 2008

Durability

Kingspan Aerofullfil™ Platinum® is rot proof, dimensionally stable and will act as a long lasting effective insulant with no reduction of insulation value during the lifetime of the building. Typical onsite handling and storage will not compromise the performance of *Kingspan Aerofullfil™* Platinum®, it is not necessary to protect *Kingspan Aerofullfil™* Platinum® with a separating layer when used in contact with wet or moist concrete.

Fire Performance

Kingspan Aerofullfil™ Platinum® does not prejudice the fire performance properties of the wall if it is used as recommended in BS 6203. It is unlikely to become ignited within the cavity when properly installed. If fire does penetrate into an unventilated cavity, the amount of air present will be insufficient to support combustion, and flame spread will be minimal. Additional care should be taken during the construction phase while the cavity remains open.

The reaction to fire classification of *Kingspan Aerofullfil™* Platinum® boards as supplied on the market is Euroclass E. However, the classification of construction works incorporating *Kingspan Aerofullfil™* Platinum® boards (end use application) will be considerably better. When used in a masonry cavity wall a Euroclass B classification can be expected.

Kingspan Insulation Division

Divisional Details

The Kingspan Insulation Division 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.

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

Products & Applications

The Kingspan Insulation Division has a vast product range. Kingspan Insulation Division products are suitable for both new build and refurbishment in a variety of applications within both domestic and non-domestic buildings.

Insulation for:

- Pitched Roofs
- Flat Roofs
- Green Roofs
- Cavity Walls
- Solid Walls
- Timber and Steel Framing
- Insulated Cladding Systems
- Insulated Render Systems
- Floors
- Soffits
- Ductwork

Further Solutions:

- Insulated Dry-Lining
- Tapered Roofing Systems
- Cavity Closers
- *Kingspan KoolDuct*® Pre-Insulated Ducting
- *Kingspan nilvent*® Breathable Membranes
- *Kingspan TEK*® Building System

Insulation Product Benefits

Kingspan Kooltherm® K-range Products

- With a thermal conductivity of 0.020–0.023 W/m·K these are the most thermally efficient insulation products commonly used.
- The thinnest commonly used insulation products for any specific U-value.
- Rigid thermoset insulation core is Class 0, as defined by the Building Regulations in England, Wales & Ireland, and Low Risk, as defined by the Building Standards in Scotland.
- Rigid thermoset insulation core achieves the best possible rating of < 5% smoke obscuration when tested to BS 5111: Part 1: 1974.
- Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).

Kingspan Therma™ Range Products

- With a thermal conductivity of 0.022–0.027 W/m·K these are amongst the more thermally efficient insulation products commonly used.
- Each product achieves the required fire performance for its intended application.
- Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).

Kingspan Styrozone® Range Products

- Rigid extruded polystyrene insulation (XPS) has the necessary compressive strength to make it the product of choice for specialist applications such as heavy duty flooring, car park decks and inverted roofing.
- Each product achieves the required fire performance for its intended application.
- Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP).

Kingspan Aerobord™

- With a thermal conductivity of 0.031–0.037 W/m·K, these products offer high performance in a range of standard applications.
- Each product achieves the required fire performance for its intended application.
- Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP).

Contact Details

Customer Service

For quotations, order placement, details of despatches and general enquiries.

Kingspan Aerobord Tel: +353 (0) 42 979 5000

Kingspan Springvale Tel: +44 (0) 2893 340203

email: info@kingspaninsulation.ie

Technical Advice / Design

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

Tel: +353 (0) 42 975 4297

Fax: +353 (0) 42 975 4296

email: technical@kingspaninsulation.ie



Aerobord Limited

Askeaton, County Limerick,
Ireland

www.kingspanaerobord.ie

Springvale Insulation Limited

75 Springvale Road, Ballyclare, County
Antrim, BT39 OSS

www.kingspanspringvale.co.uk

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