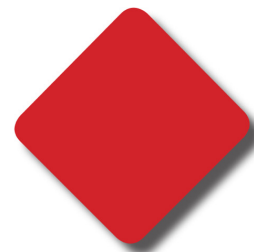
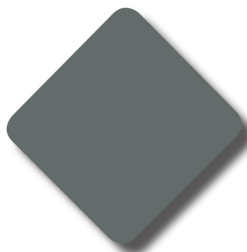




Paratherm G Data Sheet





Moy Materials – Paratherm G PIR Insulation

INSULATION FOR FLAT ROOFS WATERPROOFED WITH FULLY ADHERED SINGLE-PLY, PARTIALLY BONDED BUILT-UP FELT, MASTIC ASPHALT AND COLD LIQUID APPLIED WATERPROOFING (WITH CARRIER MEMBRANE)

- High performance rigid thermoset insulation – thermal conductivities as low as 0.024 Wm²K
- FM approved for Class 1 steel deck roof assemblies
- Fully compatible with Moy single-ply non-bituminous membranes that are fully bonded with solvent based adhesive systems
- Fully compatible with Moy bitumen based and mastic asphalt waterproofing systems
- Compatible with Moy green roof systems
- Resistant to the passage of water vapour
- Easy to handle and install
- Ideal for new build and refurbishment
- Non-deleterious material
- Manufactured with a blowing agent that has zero ODP and low GWP

Green Guide Rating

An Eco-profile, certified by BRE Certification to the 2008 BRE Environmental Profiles Methodology, has been created for Paratherm G PIR Insulation produced under licence at Kingspan Insulation's British manufacturing facilities. The BRE has assigned the product a 2008 Green Guide Summary Rating of A.

Responsible-Sourcing

Paratherm G PIR Insulation produced under licence at Kingspan Insulation's Pembridge, Herefordshire and Selby, North Yorkshire manufacturing facilities is certified to BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) 'Excellent'.

Paratherm G PIR Insulation is manufactured under a management system certified to ISO 14001: 2004.

Wind Loading

Wind loadings should be assessed in accordance with BS / I.S. EN 1991-1-4: 2005 + A1: 2010 (National Annex to Eurocode 1 Actions on Structures. General Actions. Wind Actions) taking into account:

- length / width / height of the building;
- orientation of the building;
- wind speed;
- aspect (e.g. on a hill side); and
- topographical value of the surrounding area.



Roof Waterproofing

Paratherm G PIR Insulation is suitable for use with Moy fully adhered single-ply waterproofing membranes. When using Paratherm G PIR Insulation with Moy fully adhered single-ply waterproofing membranes, the joints between boards and cut edges, immediately below the waterproofing membrane, must be taped with a min. 50 mm wide foil tape. Please contact the Moy Technical Service Department (see rear cover) to check waterproofing membrane and proprietary adhesive system compatibility. Advice should be sought from Moy in relation to the requirement for the use of a fleece backed membrane with the waterproofing membrane in question.

Paratherm G PIR Insulation is also suitable for use with Moy bitumen based waterproofing systems including high performance types which incorporate a Type 3G perforated base layer to BS EN 13707: 2013 (Flexible sheets for waterproofing. Reinforced bitumen sheets for roof waterproofing. Definitions and characteristics). The 3G felt layer should be laid dry and loose, mineral face down with a fully bonded perimeter zone.

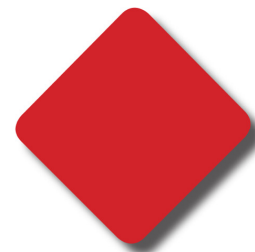
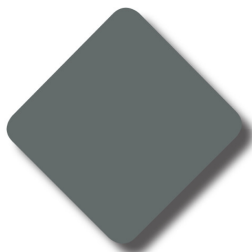
Partially bonded built-up felt waterproofing should be laid, where applicable, in accordance with BS 8217: 2005 (Reinforced bitumen membranes for roofing. Code of practice).

Paratherm G PIR Insulation FM is also suitable for use with Moy mastic asphalt waterproofing systems. Mastic asphalt waterproofing should be laid, where applicable, in accordance with BS 8218: 1998 (Code of practice for mastic asphalt roofing). Mastic asphalt should always be laid over an isolating layer of loose-laid Type 4A sheathing felt to BS EN 13707: 2013 (Flexible sheets for waterproofing. Reinforced bitumen sheets for roof waterproofing. Definitions and characteristics). The exposed face of insulation upstands, at parapets and abutments, must be lined with 18 mm exterior grade plywood, prior to the mastic asphalt waterproofing being laid. The plywood is used as an anchor point for the expanded metal substrate onto which the vertical mastic asphalt is laid.

When Paratherm G PIR Insulation is to be used to insulate balconies, waterproofed with mastic asphalt with a porous promenade tile overlay, a 20mm cork roofboard should be bitumen bonded to the Paratherm G PIR Insulation prior to laying the Type 4A sheathing felt and mastic asphalt.

Paratherm G PIR Insulation is also suitable for use with Moy cold liquid applied waterproofing systems. When using Paratherm G PIR Insulation with Moy cold liquid applied waterproofing systems, a Moy carrier membrane for the waterproofing must be installed over the insulation boards. Advice should be sought, from Moy, about the specification of the carrier membrane and the compatibility of the waterproofing system with Paratherm G PIR Insulation. For further advice please contact the Moy Technical Service Department (see rear cover).

NB Paratherm G PIR Insulation is also suitable for use with mechanically fixed single-ply waterproofing membranes.



Water Vapour Control

Paratherm G PIR Insulation should be installed over a separate vapour control layer, in new build roofs, unless it is being used in conjunction with a sealed metal deck. Regardless of the deck type it is recommended that a condensation risk analysis is carried out for every project.

For refurbishment projects, involving the addition of insulation to existing insulated flat roofs, or roofs constructed of insulated steel faced composite panels, it is imperative that a U-value calculation and condensation risk analysis is carried out for every project, in order to ensure that the correct thickness of insulation is installed to achieve the required thermal performance, whilst avoiding interstitial condensation.

In refurbishment projects, where Paratherm G PIR Insulation is to be installed over an existing bituminous waterproofing membrane, the membrane can be used as a vapour control layer, as long as it is in a good water tight condition. Where this is not the case, a separate vapour control layer should be installed.

The type of separate vapour control layer required will be dependent upon the chosen method of fixing the insulation boards.

For mechanically fixed applications, a minimum vapour control layer should consist of a 1000 gauge (250 micron) polythene sheet, with all joints lapped and then sealed with double sided self-adhesive tape.

For applications where the insulation boards are to be bonded to the vapour control layer, a minimum vapour control layer should consist of a coated roofing felt complying with Type 3B to BS EN 13707: 2013 (Flexible sheets for waterproofing. Reinforced bitumen sheets for roof waterproofing. Definitions and characteristics), or S1P1 to BS 8747: 2007 (Reinforced bitumen membranes (RBMs) for roofing. Guide to selection and specification), or any appropriate metal-cored vapour control layer. Where the separate vapour control layer is to be bonded, allowance should be made for adequate bonding of the vapour control layer to the substrate, so as to provide a suitable surface upon which to lay the insulation boards and sufficient resistance to wind up-lift (see 'Wind Loading').

Roof Loading / Traffic

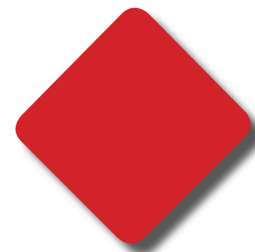
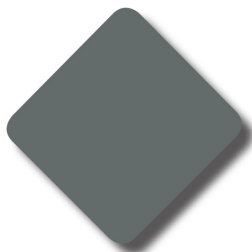
Paratherm G PIR Insulation is suitable for use on access roof decks subject to limited foot traffic.

Where inappropriate foot traffic is liable to occur, it is recommended that, for roofs waterproofed with mastic asphalt, a 20mm cork roofboard is bitumen bonded to the Paratherm G PIR Insulation prior to waterproofing, and the roof surface is protected by promenade tiles.

Where inappropriate foot traffic is liable to occur, it is recommended that, for roofs waterproofed with partially bonded built-up felt, the roof surface is protected by promenade tiles.

Where inappropriate foot traffic is liable to occur, it is recommended that, for roofs waterproofed with Moy fully adhered single-ply or cold liquid applied waterproofing systems, the roof surface is protected by specially constructed walk-ways.

For further advice on the acceptability of specific foot traffic regimes, please contact the Moy Technical Service Department (see rear cover).



Spanning on Metal Decks

Insulation boards should comply with the minimum thicknesses shown in the table below, when used over metal decks with trough openings.

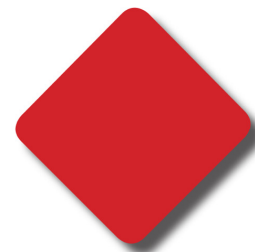
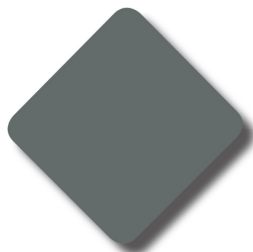
Trough Opening (mm)	Minimum Insulant Thickness (mm)
≤ 75	25
76–100	30
101–125	35
126–150	40
151–175	45
176–200	50
201–225	55
226–250	60

Board Size Selection

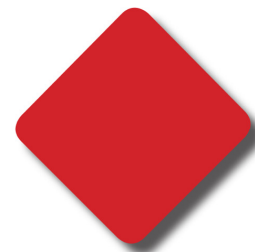
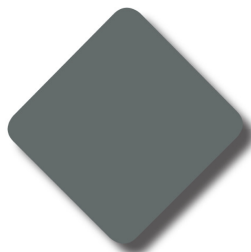
- If consideration is being given to bonding Paratherm G PIR Insulation, either in hot bitumen or with the use of a suitable alternative proprietary adhesive system, it is recommended that 1.2 x 0.6 m boards (in Britain) or 1.2 x 1.2 m boards (in Ireland) are used.
- All sizes of board are suitable for mechanical fixing.

Installing over Metal Decks

- Where an FM or LPCB approved construction is required, please refer to 'LPCB & FM Certification' on page 16.
- Metal decks should be clean, dry, without large projections, steps or gaps, and should be graded to allow correct falls to all rainwater outlets.
- If using a sealed metal deck there is no requirement for a separate vapour control layer.
- If the metal deck is not sealed, and the insulation boards are to be bonded down, in order to ensure an adequate bond between the metal deck and the vapour control layer, the metal deck should be suitably primed, in accordance with Moy's instructions, prior to the application of the hot bitumen, or suitable alternative proprietary adhesive system, used to bond the vapour control layer to the deck.
- If the metal deck is not sealed, and the insulation boards are to be mechanically fixed, the vapour control layer should be loose-laid.
- Where one run of the specified vapour control layer laps another, there should be minimum 150mm side and end overlaps, which should be adequately sealed.
- Turn up the vapour control layer at the edge of the roof to a height appropriate to the specified waterproofing membrane.
- Boards of Paratherm G PIR Insulation should be secured to the deck using mechanical fixings e.g. telescopic tube fasteners (see 'Mechanical Fixings').
- Alternatively, the insulation boards should be bonded down by laying into hot bitumen (max. temperature 240°C) mopped or poured over the vapour control layer / sealed metal deck, or with the use of a suitable alternative proprietary adhesive system.

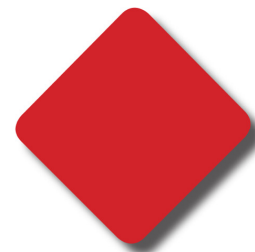
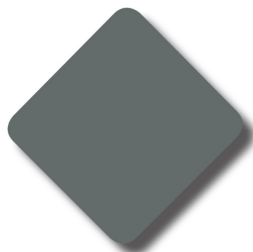


- Insulation boards should always be laid break-bonded, either with their long edges at right angles to the trough openings, or diagonally across the corrugation line, and with joints lightly butted. There should be no gaps at abutments.
- Roof-light or ventilator kerbs etc. should always be insulated with the same thickness of Paratherm G PIR Insulation as the general roof area.
- A 25mm thick Paratherm G PIR Insulation upstand should be used around the perimeter of the roof on the internal façade of parapets.
- A minimum distance of 300mm should be maintained between the top of the insulation upstand and the bottom of the horizontal roof insulation.
- For roofs without parapets, a timber edging batten of the same height of the insulation is to be used to fix the fascia board to the gutter system. Please contact Moy for more details.
- The waterproofing membrane is installed in accordance with Moy's instructions, over the whole insulated area including any insulation upstands, as soon as possible after laying the insulation boards.



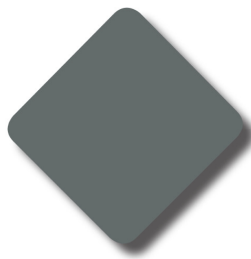
Installing over Concrete Decks

- Concrete decks should be clean, dry, without large projections, steps or gaps, and should be graded to allow correct falls to all rainwater outlets.
- If the insulation boards are to be bonded down, in order to ensure an adequate bond between the vapour control layer and the concrete deck, the concrete or screeded surface should be suitably primed, in accordance with Moy's instructions, prior to the application of the hot bitumen, or suitable alternative proprietary adhesive system, used to bond the vapour control layer to the deck.
- If the insulation boards are to be mechanically fixed, the vapour control layer should be loose-laid.
- Where one run of the specified vapour control layer laps another, there should be minimum 150mm side and end overlaps, which should be adequately sealed.
- Turn up the vapour control layer at the edge of the roof to a height appropriate to the specified waterproofing membrane.
- Boards of Paratherm G PIR Insulation should be bonded down by laying into hot bitumen (max. temperature 240°C) mopped or poured over the vapour control layer, or with the use of a suitable alternative proprietary adhesive system.
- Alternatively, the insulation boards should be secured to the deck using mechanical fixings e.g. telescopic tube fasteners (see 'Mechanical Fixings').
- Insulation boards should always be laid break-bonded, either with their long edges at right angles to the edge of, or diagonally across the roof, and with joints lightly butted. There should be no gaps at abutments.
- Roof-light or ventilator kerbs etc. should always be insulated with the same thickness of Paratherm G PIR Insulation as the general roof area.
- A 25mm thick Paratherm G PIR Insulation upstand should be used around the perimeter of the roof on the internal façade of parapets.
- A minimum distance of 300mm should be maintained between the top of the insulation upstand and the bottom of the horizontal roof insulation.
- For roofs without parapets, a timber edging batten of the same height of the insulation is to be used to fix the fascia board to the gutter system. Please contact the Moy for more details.
- The waterproofing membrane is installed in accordance with Moy's instructions, over the whole insulated area including any insulation upstands, as soon as possible after laying the insulation boards.



Installing over Plywood Decks

- Plywood decks should be clean, dry, without large projections, steps or gaps, and should be graded to allow correct falls to all rainwater outlets.
- If the insulation boards are to be bonded down, in order to ensure an adequate bond between the plywood deck and the vapour control layer, the plywood surface should be suitably primed, in accordance with Moy's instructions, prior to the application of the hot bitumen, or suitable alternative proprietary adhesive system, used to bond the vapour control layer to the deck.
- Alternatively, the vapour control layer can be nailed to the deck, in which case the nail heads will become sealed with the subsequent bonding of the insulation boards to the vapour control layer.
- If the insulation boards are to be mechanically fixed, the vapour control layer should be loose-laid.
- Where one run of the specified vapour control layer laps another, there should be minimum 150mm side and end overlaps, which should be adequately sealed.
- Turn up the vapour control layer at the edge of the roof to a height appropriate to the specified waterproofing membrane.
- Boards of Paratherm G PIR Insulation should be bonded down by laying into hot bitumen (max. temperature 240°C) mopped or poured over the vapour control layer, or with the use of a suitable alternative proprietary adhesive system.
- Alternatively, the insulation boards should be secured to the deck using mechanical fixings e.g. telescopic tube fasteners (see 'Mechanical Fixings').
- Insulation boards should always be laid break-bonded, either with their long edges at right angles to the edge of, or diagonally across the roof, and with joints lightly butted. There should be no gaps at abutments.
- Joints between insulation boards should not coincide with those between the plywood sheets.
- Roof-light or ventilator kerbs etc. should always be insulated with the same thickness of Paratherm G PIR Insulation as the general roof area.
- A 25mm thick Paratherm G PIR Insulation upstand should be used around the perimeter of the roof on the internal façade of parapets.
- For roofs without parapets, a timber edging batten of the same height of the insulation is to be used to fix the fascia board to the gutter system. Please contact the Moy for more details.
- The waterproofing membrane is installed in accordance with Moy's instructions, over the whole insulated area including any insulation upstands, as soon as possible after laying the insulation boards.



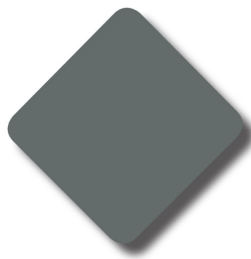
Installing over Existing Flat Roofs

- The existing waterproofing membrane surface should be clean, dry, without large projections, steps or gaps, and should be graded to allow correct falls to all rainwater outlets.
- Where the existing waterproofing membrane is not fit for purpose as a vapour control layer, and the new insulation boards are to be bonded down, a separate vapour control layer should be bonded to it with hot bitumen, or suitable alternative proprietary adhesive system. If the insulation boards are to be mechanically fixed, the vapour control layer should be loose-laid.
- Where one run of the specified vapour control layer laps another, there should be minimum 150mm side and end overlaps, which should be adequately sealed.
- Turn up the vapour control layer at the edge of the roof to a height appropriate to the specified new waterproofing membrane.
- Boards of Paratherm G PIR Insulation should be bonded down by laying into hot bitumen (max. temperature 240°C) mopped or poured over the vapour control layer, or with the use of a suitable alternative proprietary adhesive system.
- Alternatively, the insulation boards should be secured to the deck using mechanical fixings e.g. telescopic tube fasteners (see 'Mechanical Fixings').
- Insulation boards should always be laid break-bonded, either with their long edges at right angles to the edge of, or diagonally across the roof, and with joints lightly butted. There should be no gaps at abutments.
- Roof-light or ventilator kerbs etc. should always be insulated with the same thickness of Paratherm G PIR Insulation as the general roof area.
- A 25mm thick Paratherm G PIR Insulation upstand should be used around the perimeter of the roof on the internal façade of parapets.
- A minimum distance of 300mm should be maintained between the top of the insulation upstand and the bottom of the horizontal roof insulation.
- For roofs without parapets, a timber edging batten of the same height of the insulation is to be used to fix the fascia board to the gutter system. Please contact the Moy for more details.
- The waterproofing membrane is installed in accordance with Moy's instructions, over the whole insulated area including any insulation upstands, as soon as possible after laying the insulation boards.



Installing over Existing Composite Panel Roofs

- If the existing profile provides inadequate support for the insulation boards, the existing roof should be over-boarded, e.g. with plywood, prior to their installation.
- Boards of Paratherm G PIR Insulation should be secured to the deck using mechanical fixings. Please refer to the Moy Technical Advice Service (see rear cover) for advice on fixing specification.
- Insulation boards should always be laid break-bonded and with joints lightly butted. There should be no gaps at abutments. If the existing roof has been over-boarded, then insulation boards should be laid with their long edges at right angles to the edge of, or diagonally across the roof. If not, they should be laid either with their long edges at right angles to the trough openings, or diagonally across the corrugation line.
- Roof-light or ventilator kerbs etc. should always be insulated with the same thickness of Paratherm G PIR Insulation as the general roof area.
- The waterproofing membrane is installed in accordance with Moy's instructions, over the whole insulated area including any insulation upstands, as soon as possible after laying the insulation boards.



Mechanical Fixings

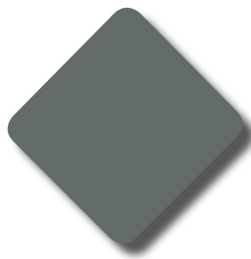
- The number of mechanical fixings required to fix Paratherm G PIR Insulation will vary with the geographical location of the building, the local topography, and the height and width of the roof concerned along with the deck type.
- A minimum of 4 fixings are required to secure 1.2 x 0.6 m boards of Paratherm G PIR Insulation to the deck.
- A minimum of 5 fixings are required to secure 1.2 x 1.2 m boards of Paratherm G PIR Insulation to the deck.
- A minimum of 6 fixings are required to secure 2.4 x 1.2 m boards of Paratherm G PIR Insulation to the deck.
- The requirement for additional fixings should be assessed in accordance with BS 6399–2: 1997 (Loadings for buildings. Code of practice for wind loads) or BS / I.S. EN 1991–1.4: 2005 + A1: 2010 (National Annex to Eurocode 1. Actions on structures. General Actions. Wind Actions).
- Mechanical fixings must be arranged in an even pattern.
- Fasteners at insulation board edges must be located > 50 and < 150 mm from edges and corners of the board and not overlap board joints.
- Please refer to page 14 for recommended fixing patterns.
- Each fixing should incorporate a square or circular plate washer (min. 50 x 50 mm or 50 mm diameter).
- If two layers of insulation are to be installed, the base layer should be mechanically fixed with minimum 1 No. fixing in the centre of the insulation board before fixing the top layer as described above.
- Where alternative mechanical fixing systems are specified, such as bar fixing systems, the specified system must give similar restraint to the insulation board as would be attained by the use of conventional telescopic tube fasteners.

Installing in Two Layers

- In situations where two layers of insulation are required, both layers should be installed in the same manner, as detailed in the preceding sections. However, if mechanical fixing methods are to be employed, refer to 'Mechanical Fixings' for guidance on the number of fixings to be used in each layer.
- In all cases, the layers should be horizontally offset relative to each other so that, as far as possible, the board joints in the two adjacent layers do not coincide with each other.

Following Trades

The roof must be adequately protected when building works are being carried out on or over the roof surface. This is best achieved by close boarding. The completed roof must not be used for storage of heavy building components such as bricks or air conditioning equipment.



Reflective Coatings

Bitumen based built up waterproofing systems laid over Paratherm G PIR Insulation should always incorporate a solar reflective layer such as chippings or a specialist coating.

Daily Working Practice

At the completion of each day's work, or whenever work is interrupted for extended periods of time, a night joint must be made in order to prevent water penetration into the roof construction.

Cutting

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

Packaging and Storage

- The polyethylene packaging of Paratherm G PIR Insulation products, which is recyclable, should not be considered adequate for outdoor protection.
- Ideally, boards should be stored inside a building. If, however, outside storage cannot be avoided, then the boards should be stacked clear of the ground and covered with an opaque polythene sheet or weatherproof tarpaulin. Boards that have been allowed to get wet should not be used.

Health and Safety

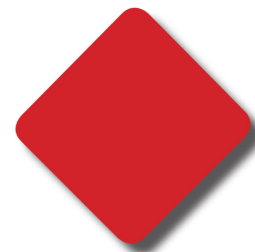
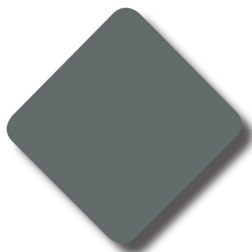
Paratherm G PIR Insulation products are chemically inert and safe to use.

Recommended Fixing Patterns

The number of fixings necessary should be assessed in accordance with BS / I.S. EN 1991-1-4: 2005 + A1: 2010 (National Annex to Eurocode 1. Actions on structures. General Actions. Wind Actions).

The Facings

Paratherm G PIR Insulation is faced on both sides with a coated glass tissue, autohesively bonded to the insulation core during manufacture.



The Core

The core of Paratherm G PIR Insulation is manufactured with Nilflam® technology, a high performance fibre-free rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).

Standards and Approvals

Paratherm G PIR Insulation is manufactured to the highest standards in accordance with the requirements of both BS 4841-3 (Rigid polyisocyanurate (PIR) and polyurethane (PUR) products for building end-use applications. Specification for laminated boards (roofboards) with auto-adhesively or separately bonded facings for use as roofboard thermal insulation under built-up bituminous roofing membranes) and BS 4841-4 (Rigid polyisocyanurate (PIR) and polyurethane (PUR) products for building end-use applications. Specification for laminated boards (roofboards) with auto-adhesively or separately bonded facings for use as roofboard thermal insulation under single-ply roofing membranes).

Paratherm G PIR Insulation is also manufactured to the highest standards under a management system certified to ISO 9001: 2008 (Quality management systems. Requirements), ISO 14001: 2004 (Environmental Management Systems. Requirements), BS / I.S. OHSAS 18001: 2007 (Occupational Health and Safety Management Systems. Requirements) and ISO 50001: 2011 (Energy Management Systems. Requirements with Guidance for Use).

Paratherm G PIR Insulation, produced under licence at Kingspan Insulation's Pembroke and Selby manufacturing facilities, is covered by BBA Certificate 16/5332.

Standard Dimensions

Nominal Dimension	Availability		
Length (m)	1.2	1.2	2.4
Width (m)	0.6	1.2	1.2

Compressive Strength

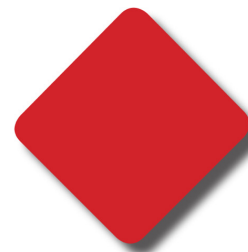
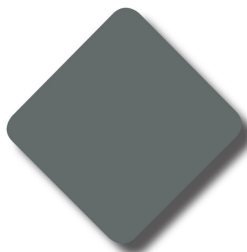
The compressive strength of Paratherm G PIR Insulation typically exceeds 150 kPa at 10% compression, when tested to BS / I.S. EN 826: 2013 (Thermal insulating products for building applications. Determination of compression behaviour).

Water Vapour Resistivity

The product typically achieves a resistivity greater than 300 MN.s/g.m, when tested in accordance with BS / I.S. EN 12086: 2013 (Thermal insulating products for building applications Determination of water vapour transmission properties). Paratherm G PIR Insulation should always be installed over a vapour control layer or sealed metal deck (see 'Water Vapour Control' on page 8).

Durability

If correctly installed, Paratherm G PIR Insulation can have an indefinite life. Its durability depends on the supporting structure and the conditions of its use.



Resistance to Solvents, Fungi & Rodents

The insulation core is resistant to short-term contact with petrol and with most dilute acids, alkalis and mineral oils. However, it is recommended that any spills be cleaned off fully before the boards are installed. Ensure that safe methods of cleaning are used, as recommended by the suppliers of the spilt liquid. The insulation core is not resistant to some solvent-based adhesive systems, particularly those containing methyl ethyl ketone. Adhesives containing such solvents should not be used in association with this product. Damaged boards or boards that have been in contact with harsh solvents or acids should not be used.

The insulation core and facings used in the manufacture of Paratherm G PIR Insulation resist attack by mould and microbial growth, and do not provide any food value to vermin.

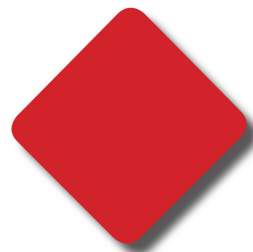
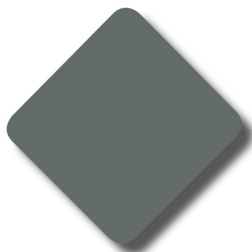
Fire Performance

Paratherm G PIR Insulation, when subjected to the British Standard fire test, specified in the table below, will achieve the result shown, when waterproofed with a Moy single-ply waterproofing membrane.

Test	Result
BS 476-3: 2004 (External fire exposure roof test)	Dependent on single-ply membrane adopted

Paratherm G PIR Insulation, when subjected to the British Standard fire test, specified in the table below, will achieve the result shown when waterproofed with 3 layer built-up felt and a loading coat of 10 mm chippings. For specifications without the chippings please consult the manufacturer of the mineral surfaced cap sheet for their fire classification details.

Test	Result
BS 476-3: 2004 (External fire exposure roof test)	FAA Rating



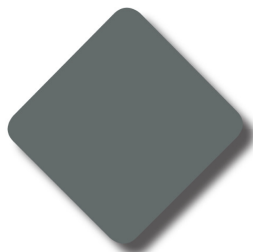
LPCB & FM Certification

FM Certification

Paratherm G PIR Insulation is certified as achieving Class 1 Insulated Steel Deck Pass to Factory Mutual Research Standard 4470: 2016 (Approval Standard for Single-Ply, Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and Non-combustible Roof Deck Construction), subject to the conditions of approval as a roof insulation product for use in Class 1 roof constructions as described in the current edition of the Factory Mutual Research Approval Guide.

Thermal Conductivity

The boards achieve a thermal conductivity (λ -value) of: 0.026 W/m·K (insulant thickness < 80 mm); 0.025 W/m·K (insulant thickness 80 – 119 mm); and 0.024 W/m·K (insulant thickness \geq 120 mm).



Thermal Resistance

Thermal resistance (R-value) varies with thickness and is calculated by dividing the thickness of the board (expressed in metres) by its thermal conductivity. The resulting number is rounded down to the nearest 0.05 (m²·K/W).

Insulant Thickness (mm)	Thermal Resistance (m ² ·K/W)
80	3.20
85	3.40
90	3.60
95	3.80
100	4.00
110	4.40
120	5.00
125	5.20
130	5.40
135	5.60
140	5.80
145	6.00
150	6.25
160	7.25

Paratherm PIR Insulation Range Products

With a thermal conductivity of 0.022–0.028 W/m·K these are amongst the more thermally efficient insulation products commonly used.

Manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).

Sectors



Data Centres



IT Processing



Pharmaceutical



Commercial



Education



Agricultural



**Mixed-Use
Development**

**Safe2
Torch**
REGISTERED



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