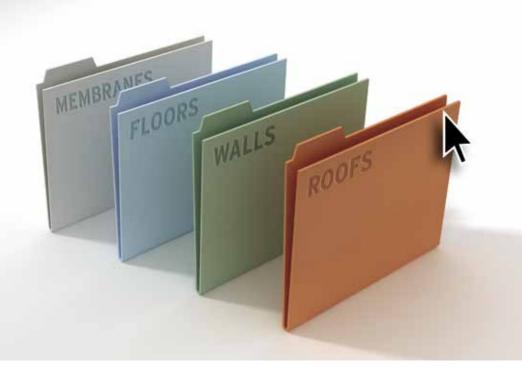


CI/SfB (2-) Rn7 M2
Eleventh Issue October 2019

Product Selector

INSULATION FOR ROOFS, WALLS & FLOORS



Visit our website: www.kingspaninsulation.co.uk



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Kingspan Insulation Ltd reserves the right to amend product specifications without prior notice. The information contained in the document is given in good faith and applies to the uses described. Recommendations for use should be verified as to the suitability and compliance with actual requirements, specifications and any applicable laws and regulations. Kingspan Insulation recommend using the Technical Advice service (see back cover).

Product Selector

Roof Insulation	OPTIM-R [®] Balcony & Terrace System	OPTIM-R® Roofing System & OPTIM-R® E	Kooltherm® K7 Pitched Roof Board	QuadCore® 426 Roofboard	Thermapitch® TP10	Thermaroof® TR24	Thermaroof® TR26 LPC/FM	Thermaroof® TR27 LPC/FM	Thermataper® TT44	Thermataper® TT46 LPC/FM	Thermataper® TT47 LPC/FM	Kingspan GreenGuard®	nilvent®	Aquazone®
Pitched Roof Insulation														
Over / between / under rafter sarking			/		~									
Dormer roof			/		~									
Breathable membrane													~	
Flat Roof Insulation														
Tapered roofing system	~	~							~	~	~			
Water infiltration reduction membrane														~
Under partially bonded built-up felt	~	'						~			~			
Under cold liquid applied waterproofing	~	~						~			~			
Under mastic asphalt						~		~	~		~			
Directly over timber joists														
Under torch-on felt waterproofing	~	V				~			~					
Under mechanically-fixed, single-ply non-bituminous membranes				•			•	~		~	~			
Under fully adhered singly-ply membranes	~	•						~			~			
In LPCB/FM approved constructions														
Protected Membrane Roofs														
Traditionally protected membrane / Roof gardens												~		
Car park decks												~		
Lightweight protected membrane / maintenance access												~		
Green Roofs														
Insulation suitable for use under Green Roofs	~	•		~		~	~	~	~	~	~	~		

Product Selector

Wall Insulation														
	OPTIM-R® External Wall System	OPTIM-R® Rainscreen System	Kooltherm® K5 External wall Board	Kooltherm® K106 Cavity Board	Kooltherm® K108 Cavity Board	Kooltherm® K12 Framing Board	Kooltherm® K15 Rainscreen Board	Kooltherm® K118 Insulated Plasterboard	Thermawall® TW50	Thermawall® TW55	Kingspan GreenGuard®	nilvent®	Kooltherm® Cavity Closer & Kooltherm® Cavity Closer PLUS	Thermabate® & Thermabate® PLUS
Cavity walls				~	~				~				~	~
Internal dry-lining								~						
Insulated render systems	~		~											
Rainscreen cladding systems	~	V	V				V							
•	✓	V	V			✓	V			✓		V		
Rainscreen cladding systems	✓	✓	✓			✓ ✓	✓			✓ ✓		✓		
Rainscreen cladding systems Timber frame	✓	✓	✓			-	✓			•		✓		
Rainscreen cladding systems Timber frame Steel frame		✓	<i>'</i>			~	✓			~	✓	V		
Rainscreen cladding systems Timber frame Steel frame Dormer cheek		✓				~	✓			~	V	V	·	·

Floor Insulation						
	OPTIM-R® Flooring System	Kooltherm® K103 Floorboard	Kooltherm® K110 FM Soffit Board	Kooltherm® K110 PLUS Soffit Board	Thermafloor® TF70	Kingspan GreenGuard®
Solid ground floors	~	~			~	
Suspended ground floors		~			~	
Floating ground floors	~				~	
Soffit lining			~	~		
Heavy–duty / industrial / cold store floors						~

U-value Time Saver

Help us to help you when requesting U-values from Kingspan Insulation's Technical Advice Service. Please provide the following information for all building elements:

- What U-value is required?
- · Project address and postcode
- Type of building eq. Offices.



Flat Roof

- · What is the type of waterproofing being used?
- · What is the roof substrate timber, concrete or profiled metal deck?
- Is there a ceiling if yes then is it plasterboard or suspended tile?
- If mechanical fixings are being used what are they (carbon steel, galvanised steel, stainless steel or telescopic fixings)?



Pitched Roof

- What are the size and centres of the rafters or ceiling joists?
- · Is the insulation at ceiling or rafter level?
- If at rafter level, is there a 50 mm ventilated airspace between the rafters above the insulation?
- If no 50 mm ventilated airspace, is there a breathable membrane above the rafters?
- If a breathable membrane is being used is it above or below the counter batten or draped into the rafter void?



Wall Construction

- · What is the wall construction cavity, solid wall, rendered?
- If cavity wall construction, what is the manufacturer and type of block being used for inner
- (and outer if applicable) leaf or its thermal conductivity (may also be known as λ -value)? • What is the internal wall finish?
- Is the wall above or below ground?



Ground Floor

- What is the perimeter / area ratio? (This is the length of the externally exposed floor slab perimeter measured on the inside wall, not including internal or separating walls, divided by the floor area.)
- Is the floor a solid ground bearing slab, suspended beam & block or suspended timber or concrete floor (if suspended timber the joist size and centres are required)?



Floor Other Than Ground

- Is soffit insulation required?
- If the insulation is to be fitted between joists what are the joist size and centres?

Technical Advice

Telephone: 01544 387 382 Email: technical@kingspaninsulation.co.uk

Try the Kingspan Insulation U–value Calculator, available for free online at www.uvalue-calculator.co.uk, or as an App on your tablet or mobile device.



Building Regulations and Standards

England & Wales

The 2013 Editions of Approved Documents L to the Building Regulations 2010 for England came into effect on April 6, 2014 and all plans submitted for Building Control approval need to comply with these new requirements.

The 2014 Editions of Approved Documents L to the Building Regulations 2010 for Wales came into effect on July 31, 2014 and all plans submitted for Building Control approval need to comply with these new requirements.

New Buildings (ADL1A & ADL2A)

The main requirement of Approved Documents L1A and L2A, for both England & Wales, is that buildings meet defined CO₂ emissions targets. For England only, there is also a requirement to meet a fabric energy efficiency requirement for ADL1A. For Wales, more stringent limiting fabric targets are instead set. The roof, wall and floor U-values required will depend on the design of the building, orientation, heating system etc. To ease the process, Kingspan Insulation has undertaken analysis to give the 'best starting point' U-values, for specifiers to work from in getting their designs to comply. They will be almost exactly what is required for some buildings and short of what is required for others. These 'best starting point' U-values are shown below.

Existing Buildings (ADL1B & ADL2B)

Approved Documents L1B and L2B, for both England & Wales, give specific U-value requirements for newly constructed elements and retained / refurbished elements. They apply to all works, regardless of whether the works relate to an extension, conversion or renovation. These suggested U-values are shown below.

Suggested	/ Required U-va	lues (W/m²·K) for Diffe	erent Elemer	its in Various S	cenarios	
Element		Buildings tarting Point	Existing Buildings Extension, Conversion & Renovation Of All Buildings			
	Dwellings	Buildings Other Than Dwellings	New E England	lements Wales	Refurbishment / Retained Elements	
Lofts	0.11	0.14	0.16	$0.15^1 / 0.15^2$	0.16	
All other roofs	0.11	0.14	0.18	$0.15^1 / 0.18^2$	0.18	
Walls	0.16	0.22	0.28	$0.21^{1} / 0.26^{2}$	0.553 / 0.304	
Floors	0.11	0.18	0.22	$0.18^{1} / 0.22^{2}$	0.25	

- 1 Buildings essentially domestic in character e.g. student accommodation, care homes, and similar uses where occupancy levels and internal gains are essentially domestic in character
- 2 All other non-domestic buildings
- 3 Cavity insulation
- 4 External / internal insulation

Scotland

The new 2015 Editions of Technical Handbooks: Section 6 to the Building (Scotland) Regulations 2011 came into effect on October 1, 2015.

New Buildings

The main requirement of Technical Handbooks: Section 6 is that buildings meet a defined CO₂ emissions target. For domestic, this target is generated by a set of notional buildings, which also offer a simplified elemental approach to compliance. If a building is constructed in accordance with the parameter values that define the notional building, then it will automatically comply with the CO₂ emissions target. 'Best starting point' U-values for roofs, walls and floors are shown below. For non-domestic, the approach is the same as that described above for ADL2A and 'best starting point' U-values are shown below.

Existing Buildings

Technical Handbooks Section 6 gives specific area—weighted average U–value requirements for newly constructed elements and altered / refurbished elements. They apply to most works*, regardless of whether the works relate to an extension, renovation, or conversion e.g. of a whole unheated building, loft or garage. For existing dwellings, there are differing requirements for newly constructed elements, depending upon the thermal efficiency of the existing building*. The required U–value sare shown below.

Suggested / Required U-values (W/m²-K) for Different Elements in Various Scenarios								
New Buildings Element Best Starting Point			Existing Buildings					
	Domestic Non-Domestic		Refurb	ishment & Ex	tensions	Conversion		
			Don	nestic*	Non-Domestic	of Heated		
			Α	В	Non-Domestic	Buildings		
Lofts	0.10	0.14	0.11	0.15	0.15	0.25		
All other roofs	0.10	0.14	0.13	0.18	0.15	0.25		
Walls	0.15	0.18	0.17	0.22	0.25	0.30		
Floors	0.13	0.15	0.15	0.18	0.20	0.25		

"Column A is for extensions where the existing dwelling's walls and roof U-values are worse than 0.70 W/m².K in the walls and worse than 0.25 W/m².K in the ceiling. Column B is for other extensions, upgraded existing thermal elements, non-exempt conservatories and conversion of unheated buildings.



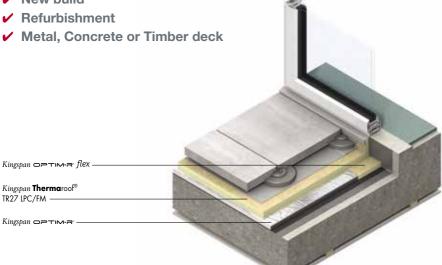
Roof Insulation

○> TIM-> Balcony & Terrace System

NEXT GENERATION INSULATION SOLUTION FOR BALCONIES AND TERRACES

Recommended for:





Product Data

Thermal Conductivity	0.007 W/m·K (declared value)
Core	Optimum performance rigid vacuum insulation panel with a microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope.
Product Width	300 – 600 mm*
Product Length	300 – 1200 mm*
Thicknesses Available	20 – 60 mm
Complementary Products	■ Thermaroof® TR27 LPC/FM (page 17) ■ Thermataper® TT47 LPC/FM (page 20)

Available in a variety of thicknesses.

^{*}Other sizes may be available dependent on order quantity. Please contact Kingspan Insulation for more details.

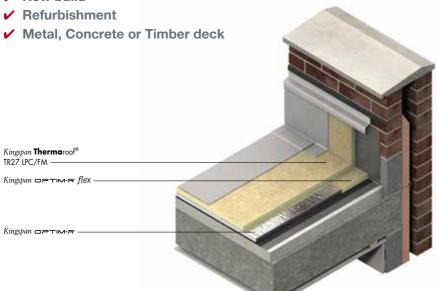


○> TIM-> Roofing System

NEXT GENERATION INSULATION SOLUTION FOR ROOFS

Recommended for:





Product Data

Thermal Conductivity	0.007 W/m·K (declared value)
Core	Optimum performance rigid vacuum insulation panel with a microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope.
Product Width	300 – 600 mm*
Product Length	300 – 1200 mm*
Thicknesses Available	20 – 60 mm
Complementary Products	■ Thermaroof® TR27 LPC/FM (page 17) ■ Thermataper® TT47 LPC/FM (page 20)

Available in a variety of thicknesses.

*Other sizes may be available dependent on order quantity. Please contact Kingspan Insulation for more details.





INSULATION FOR FLAT ROOFS AND BALCONY AND TERRACES WATERPROOFED WITH FULLY ADHERED SINGLE-PLY AND COLD LIQUID APPLIED WATERPROOFING



Thermal Conductivity	0.009 W/m·K
Facing	Coated glass tissue
Board	Rigid vacuum insulation panel encapsulated with high performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Core	Optimum performance rigid vacuum insulation panel with a microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope.
Product Width	600 mm
Product Length	1200 mm
Thicknesses Available	80 mm
Complementary Products	■ Thermaroof® TR27 LPC/FM (page 17) ■ Thermataper® TT47 LPC/FM (page 20)



Kooltherm® K7 Pitched Roof Board

INSULATION FOR TILED OR SLATED PITCHED WARM ROOF SPACES

Recommended for:

- New build
- ✓ Re-roofing
- ✓ Loft conversion

Unventilated pitched roofs – between rafters

 ✓ Unventilated pitched roofs – between and over rafters
 ✓ Ventilated pitched roofs –

Ventilated pitched roofs – between rafters

Kingspan nilvent® -

Kingspan **Kool**therm® K7 · Pitched Roof Board

Kingspan **Kool**therm® K118 Insulated Plasterboard

Product Data

Thermal Conductivity	0.023 W/m.K (insulant thickness 15–24 mm) 0.021 W/m.K (insulant thickness 25–44 mm) 0.020 W/m.K (insulant thickness ≥ 45 mm)	
Facings	Composite foil	
Core	Premium performance rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)	Fibre-free Core
Board Size	1.2 x 2.4 m	
Thicknesses Available	25 – 150 mm	
Green Guide Rating	A+	
Complementary Products	■ Kooltherm® K118 Insulated Plasterboard (page 32) ■ nilvent® (page 51)	



QuadCore 426 Roofboard

INSULATION FOR FLAT ROOFS WATERPROOFED WITH MECHANICALLY FIXED SINGLE-PLY WATERPROOFING

Recommended for:





✓ New build

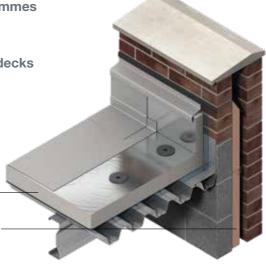
✓ Refurbishment

✓ Metal, concrete or timber decks



Kingspan QuadCore 426

Kingspan Kooltherm® K106 or K108 Cavity Board



Thermal Conductivity	0.021 W/m·K	
Facings	Composite foil	
Core	High performance rigid neo-thermoset insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)	Fibre-free Core
Board Size	1.2 x 2.4 m	
Thicknesses Available	100 – 150 mm	
Complementary Products		

Thermapitch TP10

INSULATION FOR TILED OR SLATED PITCHED WARM ROOF SPACES

Recommended for:

- New build
- ✓ Re-roofing
- ✓ Loft conversion





Kingspan **nil**vent® -

Kingspan Thermapitch® TP10

Kingspan **Kool**therm® K118 Insulated Plasterboard

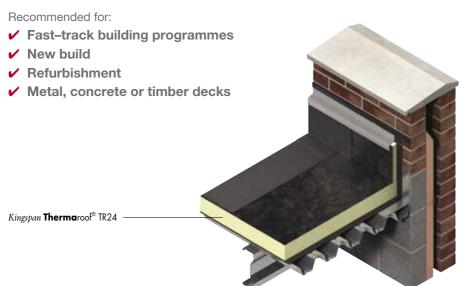
Product Data

Thermal Conductivity	0.022 W/m·K
Facings	Composite foil
Core	High performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Board Size	1.2 x 2.4 m
Thicknesses Available	20 – 165 mm
Green Guide Rating	A+
Complementary Products	■ Kooltherm® K118 Insulated Plasterboard (page 32) ■ nilvent® (page 51)



Thermaroof® TR24

INSULATION FOR FLAT ROOFS WATERPROOFED WITH FULLY BONDED TORCH APPLIED MULTI-LAYER BITUMINOUS WATERPROOFING



Thermal Conductivity	0.026 W/m·K (insulant thickness < 80 mm) 0.025 W/m·K (insulant thickness 80 –119 mm) 0.024 W/m·K (insulant thickness > 120 mm)	
Upper Facing	Coated glass tissue finished with a thermofusible polypropylene fleece	
Core	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)	Fibre-free Core
Lower Facing	Mineralised glass tissue	
Board Size	1.2 x 0.6 m	
Thicknesses Available	30 – 150 mm	
Green Guide Rating	A	
Complementary Products	■ Thermataper® TT44 (page 18)	

Thermaroof® TR26 LPC/FM

INSULATION FOR FLAT ROOFS WATERPROOFED WITH MECHANICALLY FIXED SINGLE-PLY WATERPROOFING

Recommended for:



Thermal Conductivity	0.022 W/m·K
Facings	Composite foil
Core	High performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Board Size	1.2 x 2.4 m
Thicknesses Available	25 – 160 mm
Green Guide Rating	A+
Complementary Products	■ Thermataper® TT46 LPC/FM (page 19)





Thermaroof® TR27 LPC/FM

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

Recommended for:



Thermal Conductivity	0.026 W/m·K (insulant thickness < 80 mm) 0.025 W/m·K (insulant thickness 80 – 119 mm) 0.024 W/m·K (insulant thickness ≥ 120mm)
Facings	Coated glass tissue
Core	High performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Board Size	1.2 x 0.6 m and 1.2 x 2.4 m
Thicknesses Available	25 - 140 mm (1.2 x 0.6 m boards) and 50 - 160 mm (1.2 x 2.4 m boards)
Green Guide Rating	A
Complementary Products	■ Thermataper® TT47 LPC/FM (page 20)



Thermataper® TT44

TAPERED INSULATION FOR FLAT ROOFS WATERPROOFED WITH FULLY BONDED TORCH APPLIED MULTI-LAYER BITUMINOUS WATERPROOFING





for new or existing structures

✓ Fast-track building programmes

✓ New build

✓ Refurbishment

✓ Metal, concrete or timber decks

Kingspan Thermataper® TT44

Product Data

Thermal Conductivity	0.026 W/m·K (insulant thickness < 80 mm) 0.025 W/m·K (insulant thickness 80 –119 mm) 0.024 W/m·K (insulant thickness > 120 mm)	
Upper Facing	Coated glass tissue finished with a thermofusible polypropylene fleece	
Core	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)	Fibre-free Core
Lower Facing	Mineralised glass tissue	
Board Size	1.2 x 0.6 m	
Manufactured Rate of Fall	1:60	
Green Guide Rating	A	
Complementary Products	■ Thermaroof® TR24 (page 15)	

Thermataper® TT46 LPC/FM

TAPERED INSULATION FOR FLAT ROOFS WATERPROOFED WITH MECHANICALLY FIXED SINGLE-PLY WATERPROOFING

Recommended for:

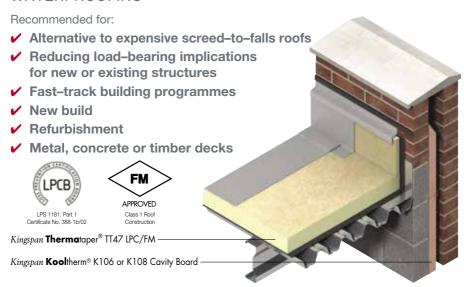


Thermal Conductivity	0.022 W/m·K
Facings	Composite foil
Core	High performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Board Size	1.2 x 1.2 m
Manufactured Rate of Fall	1:30; 1:40; 1:60; 1:80
Green Guide Rating	A+
Complementary Products	■ Thermaroof® TR26 LPC/FM (page 16)

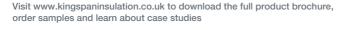


Thermataper® TT47 LPC/FM

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



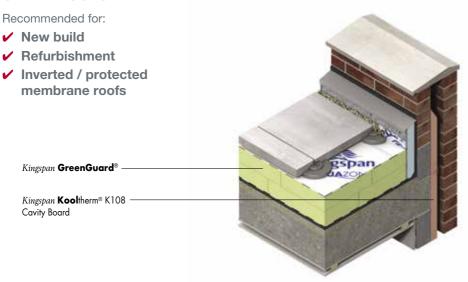
Thermal Conductivity	0.026 W/m·K (insulant thickness < 80 mm) 0.025 W/m·K (insulant thickness 80 – 119 mm) 0.024 W/m·K (insulant thickness ≥ 120 mm)	
Facings	Coated glass tissue	
Core	High performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)	Fibre-free Core
Board Size	1.2 x 1.2 m	
Manufactured Rate of Fall	1:30; 1:40; 1:60; 1:80	
Green Guide Rating	A	
Complementary Products	■ Thermaroof® TR27 LPC/FM (page 17)	





Kingspan GreenGuard Inverted Roofs

INSULATION FOR PROTECTED MEMBRANE FLAT ROOFS AND GREEN ROOFS



	Product		
	Kingspan GreenGuard® GG300	Kingspan GreenGuard® GG500	Kingspan GreenGuard® GG700
Thermal Conductivity	0.038 W/m·K (insulant thickness 50 – 60 mm) 0.040 W/m·K (insulant thickness > 60 mm).		
Core	High performance rigid extruded polystyrene insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)		
Compressive Strength	300 kPa (at 10% compression)	500 kPa (at 10% compression)	700 kPa (at 10% compression)
Board Size	1.25 x 0.6 m		
Thicknesses Available	30 – 140 mm	50 – 100 mm	60 – 100 mm
Complementary Products	■ Aquazone (page 52)		

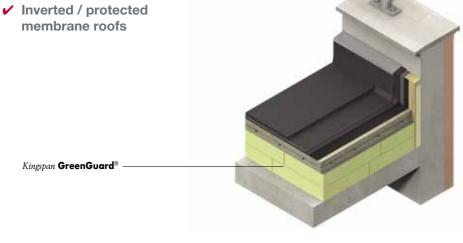
Higher thicknesses are available as a double layer of those options stated above.

Kingspan GreenGuard Car Park Decks

INSULATION FOR CAR PARK DECKS

Recommended for:

- ✓ New build
- Refurbishment
- membrane roofs



Product Data

	Product		
	Kingspan GreenGuard® GG300	Kingspan GreenGuard® GG500	Kingspan GreenGuard® GG700
Thermal Conductivity		38 W/m·K (insulant thickness 50 – 60 m 040 W/m·K (insulant thickness > 60 mn	**
Core	High performance rigid extruded polystyrene insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)		
Compressive Strength	300 kPa (at 10% compression)	500 kPa (at 10% compression)	700 kPa (at 10% compression)
Board Size		1.25 x 0.6 m	
Thicknesses Available	30 – 140 mm	50 – 100 mm	60 – 100 mm
Complementary Products			

Higher thicknesses are available as a double layer of those options stated above.



Wall Insulation

○>TIM-> Rainscreen System

NEXT GENERATION INSULATION SOLUTION FOR RAINSCREEN CLADDING

Recommended for:

✔ Proprietary and non-proprietary external finishes

 Insulated rainscreen cladding systems on both masonry and steel frames

- ✓ New build
- ✓ Refurbishment

Kingspan o⇒⊤ıм-≈ flex -

Kingspan OPTIM-R' -



Product Data

Thermal Conductivity	0.007 W/m·K (declared value)
Core	Optimum performance rigid vacuum insulation panel with a microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope.
Product Width	300 – 600 mm*
Product Length	300 – 1200 mm*
Thicknesses Available	20 – 60 mm
Complementary Products	

Available in a variety of thicknesses.

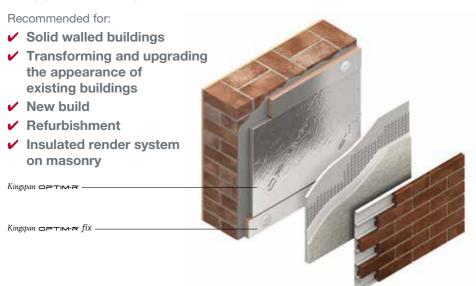
*Other sizes may be available dependent on order quantity. Please contact Kingspan Insulation for more details.

The Kingspan CPTIM-R Rainscreen System can be used in multi storey buildings up to 18 metres in height. For buildings over 18 metres in height Kingspan Kooltherm® K15 Rainscreen Board can be used.



○> TIM-> External Wall System

NEXT GENERATION INSULATION SOLUTION FOR EXTERNAL MASONRY WALLS



Product Data

Thermal Conductivity	0.007 W/m·K (declared value)
Core	Optimum performance rigid vacuum insulation panel with a microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope.
Product Width	300 – 600 mm*
Product Length	300 – 1200 mm*
Thicknesses Available	20 – 60 mm
Complementary Products	

Available in a variety of thicknesses.

*Other sizes may be available dependent on order quantity. Please contact Kingspan Insulation for more details.





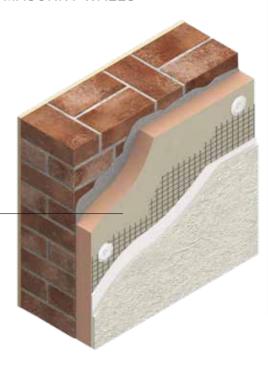
Kooltherm® K5 External Wall Board

EXTERNAL INSULATION FOR MASONRY WALLS

Recommended for:

- ✓ Solid walled buildings
- Transforming and upgrading the appearance of existing buildings
- ✓ New build
- ✓ Refurbishment
- Insulated render system on masonry

Kingspan Kooltherm® K5 External Wall Board -



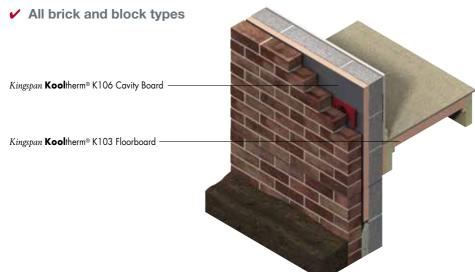
Thermal Conductivity	0.023 W/m·K (insulant thickness < 25 mm) 0.021 W/m·K (insulant thickness 25 – 44 mm) 0.020 W/m·K (insulant thickness ≥ 45 mm)	
Facings	Glass tissue based	
Core	Premium performance rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)	Fibre-free Core
Board Size	1.2 x 0.6 m	
Thicknesses Available	20 – 120 mm	
Green Guide Rating	A+	
Complementary Products		

Kooltherm® K106 Cavity Board

CAVITY WALL INSULATION

Recommended for:

- ✓ Traditional cavity wall construction methods
- ✓ New build



Product Data

Thermal Conductivity	0.018 W/m·K
Outer Facing	Polypropylene fleece
Core	Premium performance fibre–free rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Inner Facing	Composite foil
Board Size	1.2 x 0.45 m
Thicknesses Available	90 mm
Green Guide Rating	A+
Complementary Products	■ Kooltherm® Cavity Closer and Kooltherm® Cavity Closer PLUS (page 33) ■ Thermabate® and Thermabate® PLUS Cavity Closer (page 37)

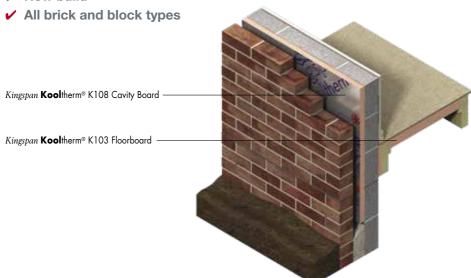


Kooltherm® K108 Cavity Board

PARTIAL FILL CAVITY WALL INSULATION

Recommended for:

- ✓ Traditional cavity wall construction methods
- ✓ New build



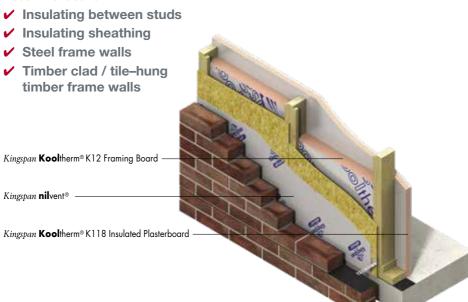
Thermal Conductivity	0.018 W/m·K
Facings	Composite foil
Core	Premium performance fibre–free rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Board Size	1.2 x 0.45 m
Thicknesses Available	20 – 150 mm
Green Guide Rating	A+
Complementary Products	■ Kooltherm® Cavity Closer and Kooltherm® Cavity Closer PLUS (page 33) ■ Thermabate® and Thermabate® PLUS Cavity Closer (page 37)



Kooltherm^e K12 Framing Board

INSULATION FOR TIMBER AND STEEL FRAMING SYSTEMS

Recommended for:



Product Data

Thermal Conductivity	0.023 W/m.K (insulant thickness 15-24 mm)	
	0.021 W/m.K (insulant thickness 25-44 mm)	
	0.020 W/m.K (insulant thickness ≥ 45 mm)	
Facings	Composite foil	
		E-11 (
Core	Premium performance rigid thermoset phenolic insulant	Fibre-free
	manufactured with a blowing agent that has zero Ozone Depletion	© Core
	Potential (ODP) and low Global Warming Potential (GWP)	AB COIC
Board Size	1.2 x 2.4 m	
Thicknesses Available	25 – 150 mm	
Green Guide Rating	A+	
Complementary Products	■ Kooltherm® K118 Insulated Plasterboard (page 32)	
	■ nilvent® (page 51)	
	= Illiverit (page 51)	



Kooltherm^e K15 Rainscreen Board

INSULATION FOR USE BEHIND RAINSCREEN FACADES

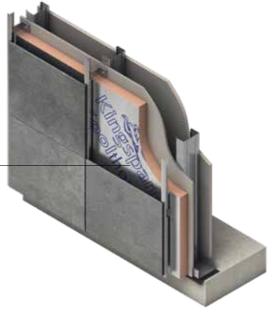
Recommended for:

 Proprietary and non-proprietary external finishes

 Insulated rainscreen cladding systems on both masonry and steel frames

- ✓ New build
- ✓ Refurbishment

Kingspan Kooltherm® K15 Rainscreen Board-



Product Data

Thermal Conductivity	0.023 W/m·K (insulant thickness 15 – 24 mm) 0.021 W/m·K (insulant thickness 25 – 44 mm) 0.020 W/m·K (insulant thickness ≥ 45 mm)	
Facings	Composite foil	
Core	Premium performance rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)	Fibre-free Core
Board Size	1.2 x 2.4 m	
Thicknesses Available	25 – 150 mm	
Green Guide Rating	A+	
Complementary Products		

Kingspan Kooltherm® K15 Rainscreen Board is also available with a black foil face.



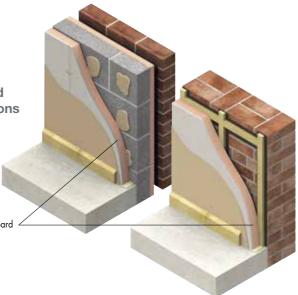
Kooltherm® K118 Insulated Plasterboard

INSULATED PLASTERBOARD FOR MECHANICALLY FIXED & ADHESIVELY BONDED DRY LINING

Recommended for:

- ✓ Solid walls
- ✓ Timber frame walls
- ✓ Timber rafters
- ✓ Metal furring systems
- Insulation, dry-lining and vapour control applications
- New build
- ✓ Refurbishment
- ✓ Loft conversions

Kingspan **Kool**therm® K118 Insulated Plasterboard



Product Data

Thermal Conductivity	0.018 W/m·K
Front Facing	12.5 mm plasterboard
Core	Premium performance fibre–free rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Reverse Facing	Composite foil
Board Size	1.2 x 2.4 m
Thicknesses Available	20 – 80 mm (Insulation thickness only)
Green Guide Rating	A+
Complementary Products	■ Kooltherm® K7 Pitched Roofing Board (page 12) ■ Kooltherm® K12 Framing Board (page 30)

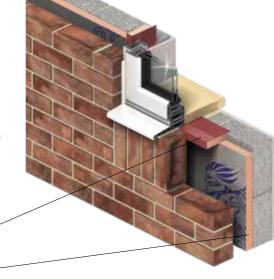


Kooltherm® Cavity Closer

INSULATED CAVITY CLOSERS FOR CLOSING CAVITIES AROUND WALL OPENINGS

Recommended for:

- ✓ Traditional cavity wall construction
- ✓ Window and door cavities
- ✓ Single sections fully filling cavities up to and including 150 mm can achieve 30 minutes fire resistance*
- Use with PVC, timber and metal frames
- ✓ Simplified construction
- ✓ Cavity widths up to 300 mm
- ✓ Use as a frame former (Kooltherm® Cavity Closer PLUS only)



Kingspan Kooltherm® Cavity Closer

Kingspan Kooltherm® K108 Cavity Board

Product Data

Thermal Conductivity	0.021 W/m·K	
Sheathing	PVC-U extrusion	
Core	Premium performance fibre-free rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)	Fibre-free Core
Length	2.4 m	
Widths Available	50 – 150 mm**	
Green Guide Rating	A+	
Complementary Products	■ Kooltherm® K106 Cavity Board (page 28) ■ Kooltherm® K108 Cavity Board (page 29) ■ Kooltherm® K12 Framing Board (page 30) ■ Kooltherm® K118 Insulated Plasterboard (page 32) ■ Thermawall® TW50 (page 35) ■ Thermawall® TW55 (page 36)	

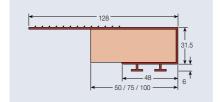
^{*} A single section of 150 mm Kingspan **Kool**therm® Cavity Closer installed in a 150 mm wide cavity, with a uPVC window frame overlapping the cavity by 30 mm and with a 12.5 mm plasterboard finish on the reveal achieved 30 minutes integrity and insulation performance.

Visit www.kingspaninsulation.co.ul/visitdowww.kiangspaninsulation.co.ul/visitdoww.kiangspaninsulation.co.ul/visitdoww.kiangspaninsulation.co.ul/visitdowww.kiangspaninsulation.co.ul/visitdowww.kiangspaninsulation.co.ul/visitdowww.kiangspaninsulation.co.ul/visitdowww.kian

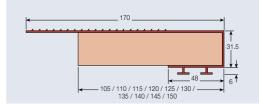
^{**} Sections can be joined together to suit cavity widths up to 300 mm.

Standard Dimensions

Kingspan Kooltherm® Cavity Closer 50, 75 & 100



Kingspan Kooltherm® Cavity Closer 105, 110, 115, 120, 125, 130, 135, 140, 145 & 150



Kooltherm® Cavity Closer PLUS

PRE-FORMED INSULATED CAVITY CLOSER FOR CLOSING CAVITIES AROUND WALL OPENINGS



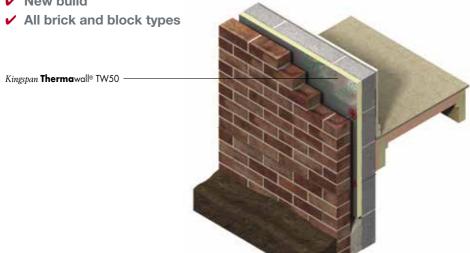
- ✓ Kingspan Kooltherm® Cavity Closer PLUS can be used with PVC, timber or metal window frames and an insulated lintel.
- A window and door schedule is required. Contact us for more information.

Thermawall TW50

PARTIAL FILL CAVITY WALL INSULATION

Recommended for:

- ✓ Traditional cavity wall construction methods
- ✓ New build



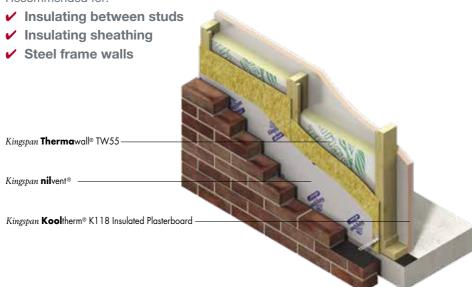
Thermal Conductivity	0.022 W/m·K
Facings	Composite foil
Core	High performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Board Size	1.2 x 0.45 m
Thicknesses Available	25 – 100 mm
Green Guide Rating	A
Complementary Products	■ Kooltherm® Cavity Closer and Kooltherm® Cavity Closer PLUS (page 33) ■ Thermabate® and Thermabate® PLUS Cavity Closer (page 37)



Thermawall TW55

INSULATION FOR TIMBER AND STEEL FRAMING SYSTEMS

Recommended for:



Product Data

Thermal Conductivity	0.022 W/m·K
Facings	Composite foil
Core	High performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Board Size	1.2 x 2.4 m
Thicknesses Available	20 – 165 mm
Green Guide Rating	A+
Complementary Products	■ Kooltherm® K12 Framing Board (page 30) ■ Kooltherm® K118 Insulated Plasterboard (page 32) ■ nilvent® (page 51)

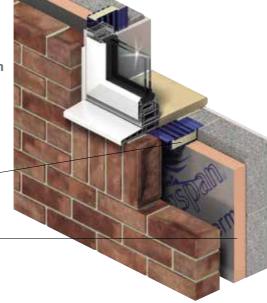




INSULATED CAVITY CLOSERS FOR CLOSING CAVITIES AROUND WALL OPENINGS

Recommended for:

- ✓ Traditional cavity wall construction
- ✓ Window and door cavities
- ✓ Use with composite, timber and metal frames
- ✓ Simplified construction
- ✓ Cavity widths up to 300 mm
- Use as a frame former (Thermabate PLUS only)



Kingspan Thermabate®

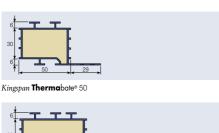
Kingspan Kooltherm® K108 Cavity Board

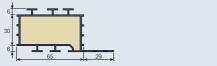
Thermal Conductivity	0.034 W/m·K	
Sheathing	PVC-U extrusion	
Core	High performance fibre-free rigid thermoset urethane (PUR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)	Fibre-free Core
Length	3.0 m	
Widths Available	50 – 150 mm*	
Complementary Products	 ■ Kooltherm® K106 Cavity Board (page 28) ■ Kooltherm® K108 Cavity Board (page 29) ■ Kooltherm® K12 Framing Board (page 30) ■ Kooltherm® K118 Insulated Plasterboard (page 32) ■ Thermawall® TW50 (page 35) ■ Thermawall® TW55 (page 36) 	

^{*}Sections can be joined together to suit cavity widths up to 300 mm.

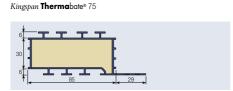


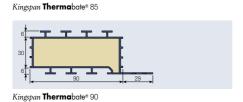
Standard Dimensions

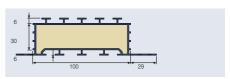




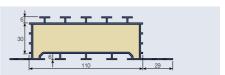




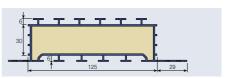




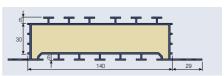




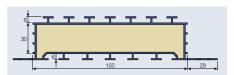
Kingspan Thermabate® 110



Kingspan Thermabate® 125



Kingspan Thermabate® 140



Kingspan Thermabate® 150



PRE-FORMED INSULATED CAVITY CLOSER FOR CLOSING CAVITIES AROUND WALL OPENINGS



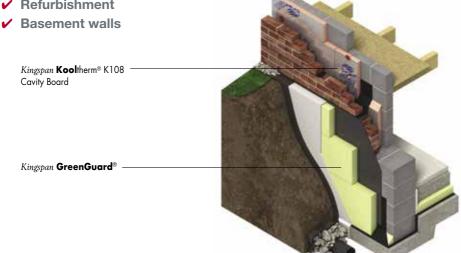
- ✓ Kingspan Thermabate[®] PLUS can be used with composite, timber or metal window frames and as an insulated lintel.
- A window and door schedule is required. Contact us for more information.

Kingspan GreenGuard Basements

INSULATION FOR BASEMENTS

Recommended for:

- New build
- ✓ Refurbishment



Product Data

		Product	
	Kingspan GreenGuard® GG300	Kingspan GreenGuard® GG500	Kingspan GreenGuard® GG700
Thermal Conductivity	0.034 W/m-K (insulant thickness $50-60 mm$); $0.036 W/m-K$ (insulant thickness $>60 mm$).		
Core	High performance rigid extruded polystyrene insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)		
Compressive Strength	300 kPa (at 10% compression)	500 kPa (at 10% compression)	700 kPa (at 10% compression)
Board Size		1.25 x 0.6 m	
Thicknesses Available	30 – 140 mm	50 – 100 mm	60 – 100 mm
Complementary Products			

Higher thicknesses are available as a double layer of those options stated above.



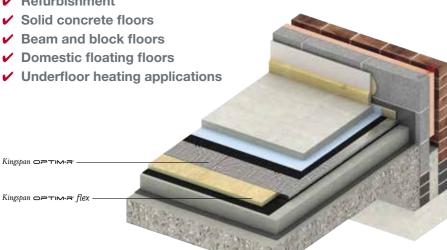
Floor Insulation

○> TIM-> Flooring System

NEXT GENERATION INSULATION SOLUTION FOR FLOORS

Recommended for:

- ✓ New build
- Refurbishment



Product Data

Thermal Conductivity	0.007 W/m·K (declared value)	
Core	Optimum performance rigid vacuum insulation panel with a microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope.	
Product Width	300 – 600 mm*	
Product Length	300 – 1200 mm*	
Thicknesses Available	20 – 60 mm	
Complementary Products		

Available in a variety of thicknesses.

*Other sizes may be available dependent on order quantity. Please contact Kingspan Insulation for more details.



Kooltherm® K103 Floorboard

INSULATION FOR FLOORS

Recommended for:

✓ Below the floor slab / screed.

✓ Beam and block floors

✓ Suspended timber floors

Underfloor heating applications

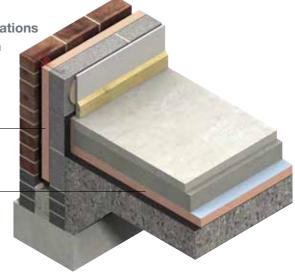
✓ Floor perimeter insulation

✓ New build

✓ Refurbishment

Kingspan **Kool**therm® K106 or K108 - Cavity Board

Kingspan Kooltherm® K103 Floorboard



Product Data

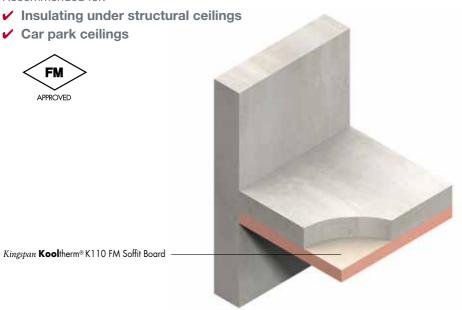
Thermal Conductivity	0.018 W/m·K
Facings	Glass tissue
Core	Premium performance fibre–free rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Board Size	1.2 x 2.4 m
Thicknesses Available	20 – 150 mm
Green Guide Rating	A+
Complementary Products	



Kooltherm® K110 FM Soffit Board

INSULATION FOR STRUCTURAL CEILINGS (SOFFITS)

Recommended for:



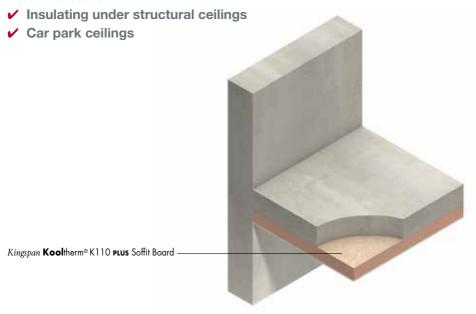
Thermal Conductivity	0.018 W/m·K
Inner Facing	Glass tissue based
Core	Premium performance fibre–free rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Outer Facing	Composite foil
Board Size	1.2 x 2.4 m
Thicknesses Available	25 – 120 mm
Green Guide Rating	A+
Complementary Products	



Kooltherm[®] K110 Pus Soffit Board

INSULATION FOR STRUCTURAL CEILINGS (SOFFITS)

Recommended for:



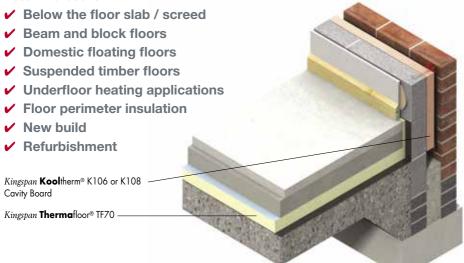
Product Data

Thermal Conductivity	0.018 W/m·K
Inner Facing	Glass tissue based
Core	Premium performance fibre–free rigid thermoset phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)
Outer Facing	6 mm non-combustible building board
Sizes	1.2 x 2.4 m
Thicknesses Available	30 – 120 mm
Green Guide Rating	A+
Complementary Products	

Thermafloor TF70

INSULATION FOR SOLID CONCRETE AND SUSPENDED GROUND FLOORS

Recommended for:

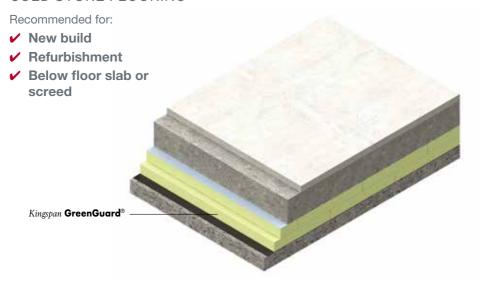


Thermal Conductivity	0.022 W/m·K	
Facings	Composite foil	
Core	High performance rigid thermoset polyisocyanurate (PIR) insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)	ree ore
Board Size	1.2 x 2.4 m	
Thicknesses Available	20 – 165 mm	
Green Guide Rating	A+	
Complementary Products		



Kingspan GreenGuard Heavy Duty Floors

INSULATION FOR HEAVY DUTY COMMERCIAL, INDUSTRIAL AND COLD STORE FLOORING



Product Data

	Product		
	Kingspan GreenGuard® GG300	Kingspan GreenGuard® GG500	Kingspan GreenGuard® GG700
Thermal Conductivity	0.034 W/m·K (insulant thickness 50 – 60 mm); 0.036 W/m·K (insulant thickness > 60 mm).		
Core	High performance rigid extruded polystyrene insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP)		
Compressive Strength	300 kPa (at 10% compression)	500 kPa (at 10% compression)	700 kPa (at 10% compression)
Board Size		1.25 x 0.6 m	
Thicknesses Available	30 – 140 mm	50 – 100 mm	60 – 100 mm
Complementary Products			

Higher thicknesses are available as a double layer of those options stated above.



Membranes

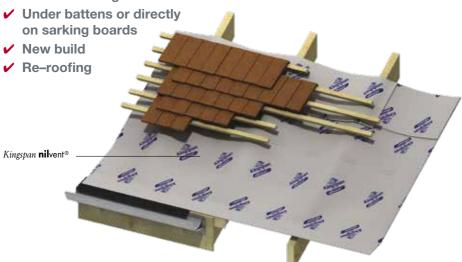




BREATHABLE MEMBRANE FOR UNVENTILATED PITCHED ROOFS AND TIMBER FRAME WALLS

Recommended for:

- ✓ All types of pitched roofing
- ✓ Timber framing



Water Vapour Resistance	0.10 MN·s/g
Water Vapour Transmission	0.02 m
Liquid Water Penetration	> 2 m
Tensile Strength	240 N longitudinal 180 N transverse
Roll Length	50 m
Roll Width	1.5 m
Thickness	0.4 mm
Area Per Roll	75 m ²
Complementary Products	■ Kooltherm® K7 Pitched Roof Board (page 12) ■ Thermapitch® TP10 (page 14) ■ Kooltherm® K12 Framing Board (page 30) ■ Thermawall® TW55 (page 36)





WATER INFILTRATION REDUCTION MEMBRANE FOR INVERTED ROOFS

Recommended for:

- ✓ New Build
- ✓ Re-roofing

Kingspan Aquazone®-

✓ Inverted Roofs

 Under gravel ballast, green roofs or concrete pavers

Kings

Water Vapour Transmission	0.01 S _d
Roll length	100 m
Roll width	3 m
Thickness	0.17 mm
Weight	0.06 Kg/m ²
Weight per roll	20 Kg
Complementary Products	■ Kingspan GreenGuard® Inverted Roofs (page 21)



General Enquiries

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Tapered Roofing

Tel: +44 (0) 1544 387 383 email: tapered@kingspaninsulation.co.uk

Literature and Samples

Tel: +44 (0) 1544 387 384 email: literature@kingspaninsulation.co.uk Downloads: www.kingspaninsulation.co.uk/literature

Customer Service

Tel: +44 (0) 1544 388 601 email: customerservice@kingspaninsulation.co.uk



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