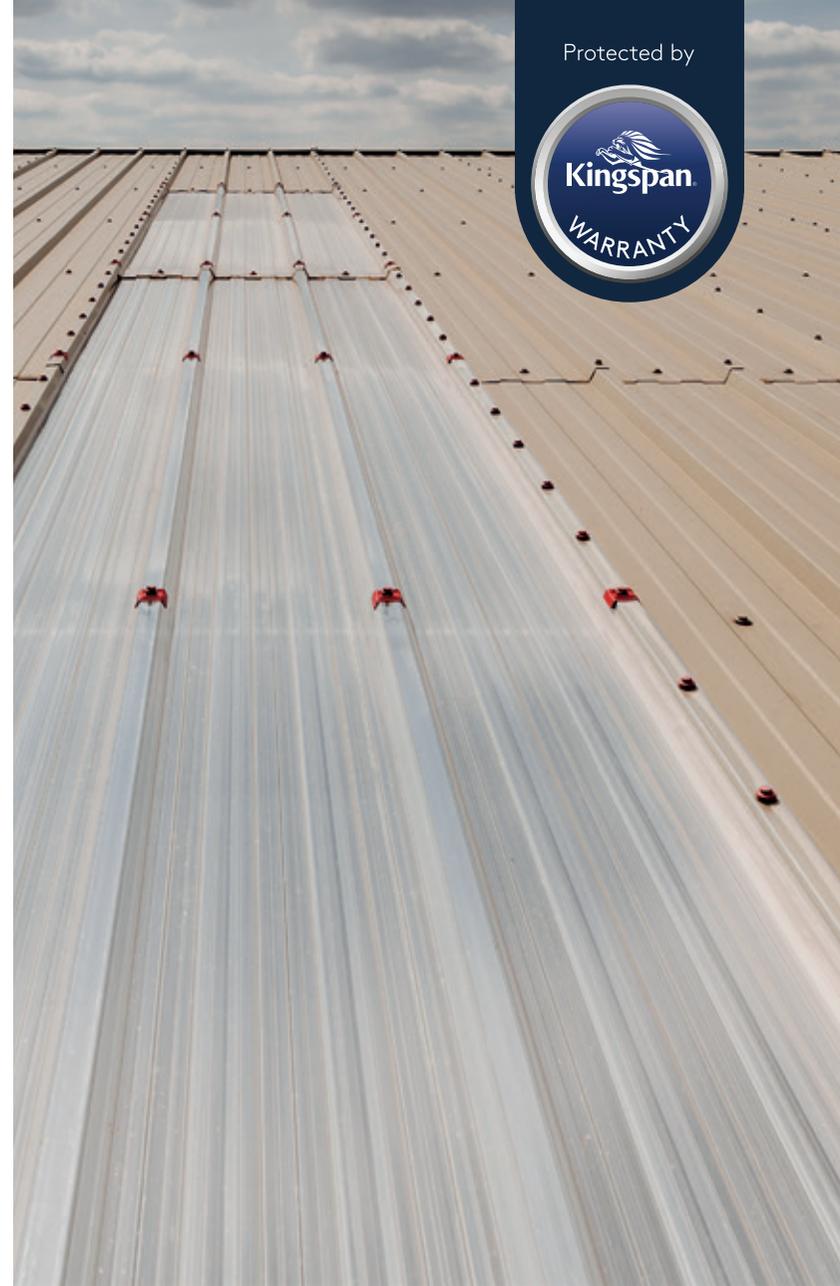


Insulated Panels  
United Kingdom

# Insulated Roof Panel Systems

RW / Topdek



Protected by



Aldi, Goldthorpe, UK



# Insulated Roof Panel Systems

## Introduction

Kingspan's range of insulated roof panels systems comprises of a wide variety of easy-to-fit, low maintenance roofing options with superior fire ratings, thermal performance and comprising the full product selection for a complete Kingspan roof.

Our roof panel products are complemented by complete range of cold-rolled structural steel products; beam, channel and rails as well as our comprehensive range of high performance, quality fabrications products. The Kingspan range of fabrications include LPCB membrane-lined insulated gutters, louvres, soakers, bullnoses, soffits, fascias, flashings and trims and bespoke architectural features as well as high-performance polycarbonate roof lighting solutions provide superior resistance to UV degradation, resulting in excellent long-term light transmission, thermal and structural performance. Kingspan's Fall Protection Systems provide proven and discreet personal and collective fall protection systems for working at height, designed to minimise the dynamic load applied to the roof in a fall arrest event.

Kingspan's commitment to the long-term performance of your insulated roof panel system include the integration of 'plug and play' low-energy building package tailored per building application. Our combination of energy-saving and energy-generating building technologies can create 100% sustainable buildings, designed to meet your energy needs now and into the future, all from one supplier. Additionally with the added protection of the Kingspan Warranty packages your roof system, or complete building envelope system, can be protected for up to 40 years.

Kingspan Technical and Design Services teams are also on hand to provide general and specific project support, with our Field Services team delivering complimentary, and NFRC-endorsed CITB\* Panel Installation training on a scheduled and ad-hoc basis.

### Available cores:



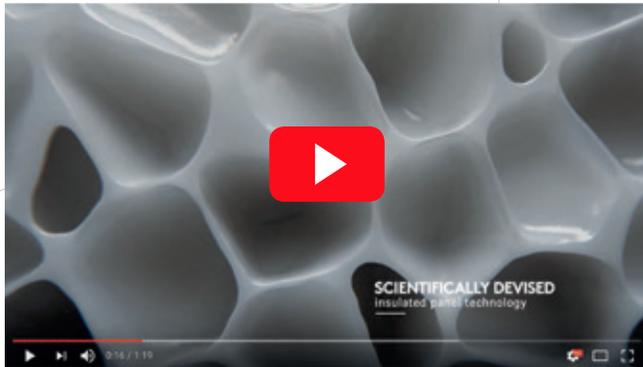
\*NFRC National Federation of Roofing Contractors Ltd (UK) CITB Construction Industry Training Board (UK).

# Higher performance powered by QuadCore™ Technology

## Now available across Kingspan insulated roof panels systems

Kingspan's new QuadCore™ panel insulation core brings you all the advantages of a Kingspan factory engineered system (significantly faster build speed, reduced time working at height, lifetime insulation continuity, consistent build quality) plus the additional performance of QuadCore™ Technology.

QuadCore™ Technology is Kingspan's next generation of self-blended insulation core with distinctive grey microcells, powering the highest insulated panel performance in the world today.



Find out more, watch our Introduction to QuadCore™ video here.

1

### Unrivalled Thermal Performance

Class-leading aged lambda value of 0.018 W/m.K.

2

### Superior Fire Protection

QuadCore™ Technology is a low smoke emissions solution. It is the only closed-cell insulation core to achieve FM 4882 certification (the FM Global insurance standard for smoke sensitive occupancies).

3

### Enhanced Environmental Credentials

QuadCore™ Technology is 100% recyclable and is CFC, HCFC, HFC free while improved resource-efficiency means less truck movements to site.

4

### Longest Performance Guarantee

QuadCore™ Technology carries a unique up to 40-year thermal and structural performance warranty. This provides guaranteed 'built-in' continuous insulation, lowering building lifetime heating and cooling costs.

# 1 Unrivalled Thermal Efficiency

QuadCore™ Technology is certified as the most thermally efficient closed-cell insulation core on the market.

## Lifetime performance and value benefits

1. The class-leading aged lambda value of 0.018 W/m.K has the potential to reduce HVAC size, and lower both energy consumption and carbon emissions.
2. QuadCore™ Technology is a more streamlined solution relative to other insulation materials with associated benefits in interior space optimisation, transport, and ease of handling during construction.

# 2 Superior Fire Protection

The hybrid nature of QuadCore™ Technology delivers a range of unique improvements in fire performance.

## Lifetime performance and value benefits

- QuadCore™ Technology is the only closed-cell insulation core to achieve FM 4882 certification (the FM Global insurance standard for smoke sensitive occupancies).
- QuadCore™ Technology also delivers improved fire resistance ratings leading to more cost-effective installations due to economies in steelwork and fixing, also improved spans, in certain applications.

# 3 Enhanced Environmental Credentials

The improved thermal performance of QuadCore™ Technology helps optimise resource efficiency. It is also 100% recyclable and is CFC, HCFC, HFC free and has a very low Global Warming Potential.

## Lifetime Performance and Value Benefits

- QuadCore™ Technology, together with whole building design support from Kingspan's technical team, can help optimise performance in 'green building' ratings systems.
- The improved resource efficiency delivers better transport utilisation which means less truck movements to site.

# 4 40 Year Thermal & Structural Panel Guarantee

Complete QuadCore™ roof, wall or façade systems – where Kingspan has supplied the panel and all system ancillaries – have the additional security of a single-source system warranty from Kingspan.

Images shown are from an EN 11925-3 comparative test using a roofer's torch fire source.



Non-insurer approved PIR



QuadCore™ Technology



Project Thunderbird, Kettering

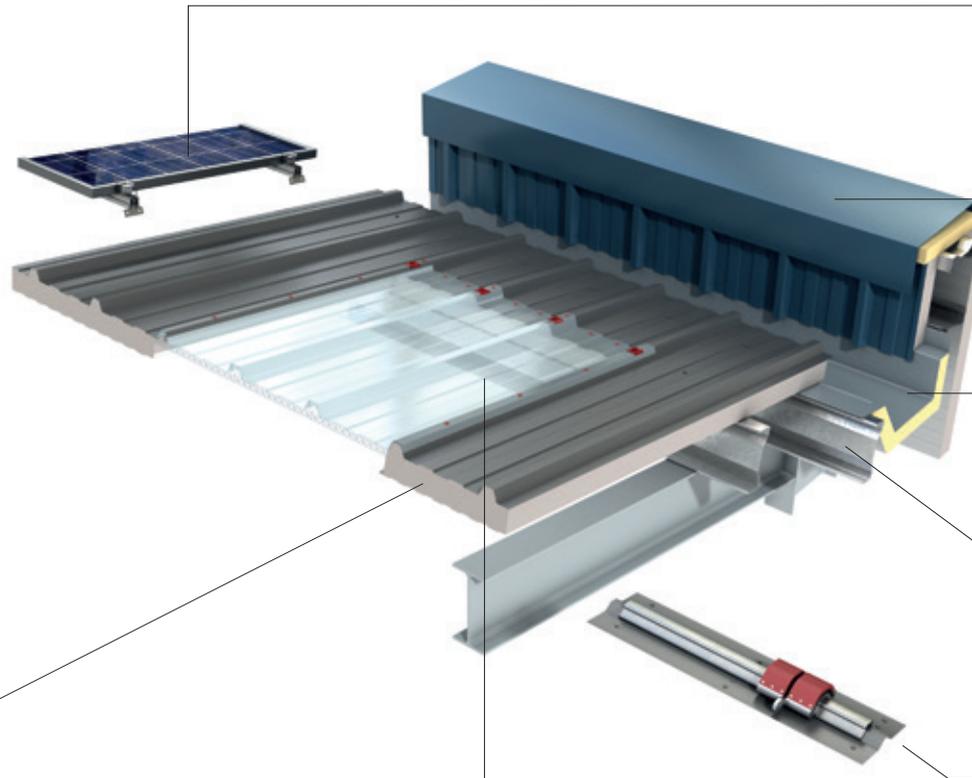


# RW Pitched Roof System

Our popular RW Trapezoidal panel shows its true versatility in that it can be used for both pitched roof and wall applications and in both vertical and horizontal applications. In roof applications the RW Trapezoidal panel can be installed on Kingspan's Structural Steel Products, fitted with Kingspan's LPBC-approved insulated gutter and detailed with our own flashings, corners, bullnoses, drip, ridge, verge and parapet profiles.

As part of the RW Pitched Roof System the panel integrates with Kingspan Day-Lite Trapezoidal and Upstand daylighting, Kingspan Fall Protection solutions and Kingspan Roof Mounted PV System. The RW Pitched Roof System is fully supported by our expert Technical Support team.

Available cores:



## Rooftop Solar PV

Add exceptional energy efficiency to your building envelope with our customised rooftop solar PV solution.

## Flashings

From simple to bespoke flashings, we can help provide the finishing touch to any building envelope.

## Membrane Lined Insulated Gutters

Our 8m length gutters are the only LPBC certified insulated gutter available on the market.

## Structural Steel

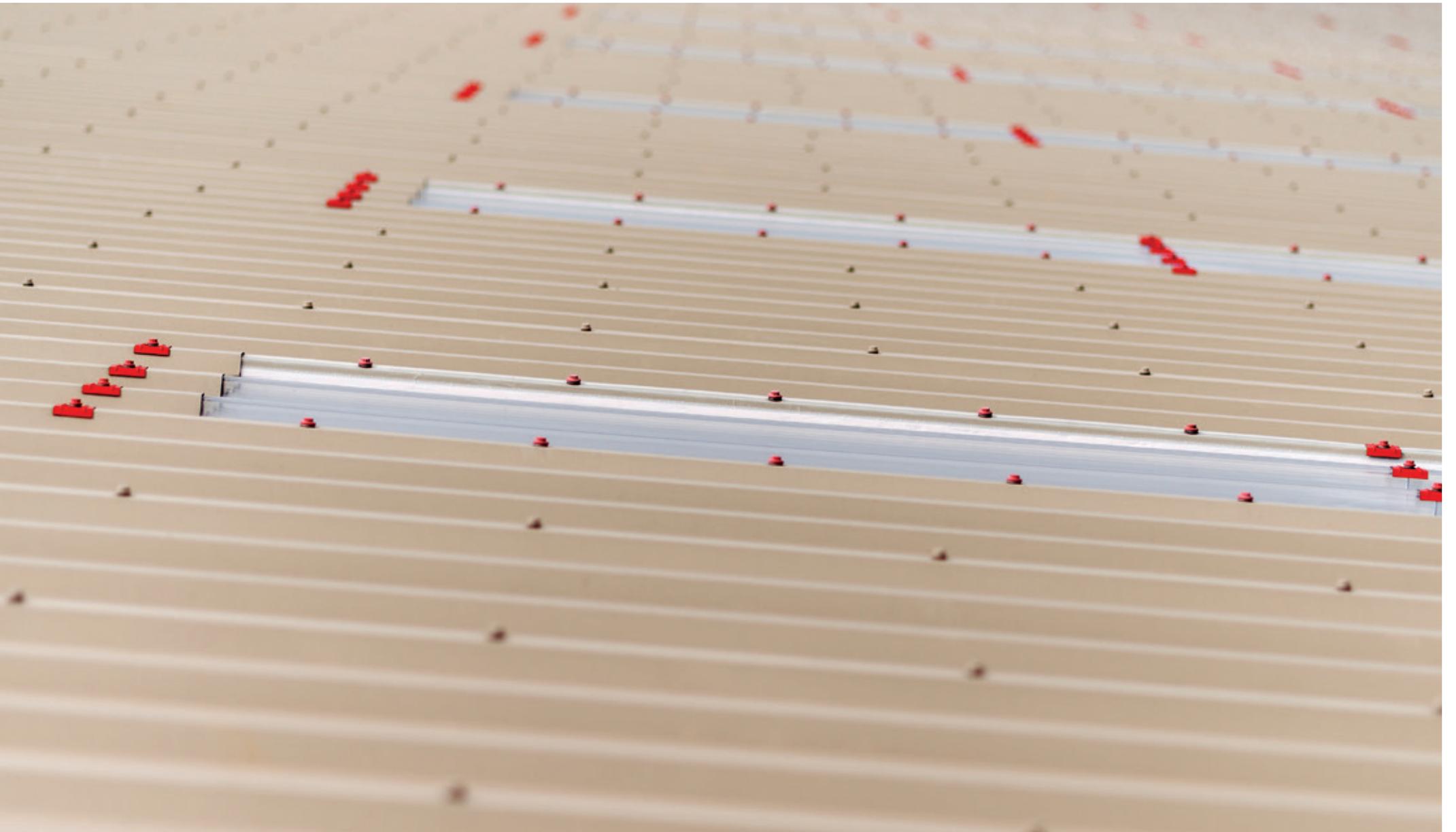
A range of cold roll-formed structural products including purlins, rails and steel floor decking.

## Fall Protection Systems

A range of safety systems providing discreet personal and collective fall protection when working at height.

## Kingspan Day-Lite Trapezoidal

Precision extruded polycarbonate for easy integration with Kingspan Trapezoidal Roof Panels.





- Kingspan is a single-source supplier for a complete insulated roof panel system
- Suitable for Pitched roof application of 4° or more after deflection
- Available in lengths from 1.8m to 29m, KS2000 RW: Lengths up to 20m
- Available with cover widths of 1000mm or 2000mm
- An air leakage rate of  $3\text{m}^3/\text{hr}/\text{m}^2$  at 50Pa or less can be achieved when using Kingspan insulated roof and wall panels
- Coatings available: Kingspan XL Forté: Consists of a multi-layer organic coating, embossed with a traditional leather-grain finish and Kingspan Spectrum: Consists of a coated semi-gloss finish with slight granular effect

The iHub at Infinity Park, UK  
Architect: Franklin Ellis



# Topdek Flat Roof Panel System

Kingspan's Topdek Flat Roof Panel System is suitable for a wide range of roofing projects and offers you unbeatable speed, simplicity and performance. Topdek systems reduces costly roofing delays by installing your steel deck, insulation core and weather membrane in a single operation which means buildings become weathertight faster and installers spend less time on the roof helping improve safety and manage project costs.

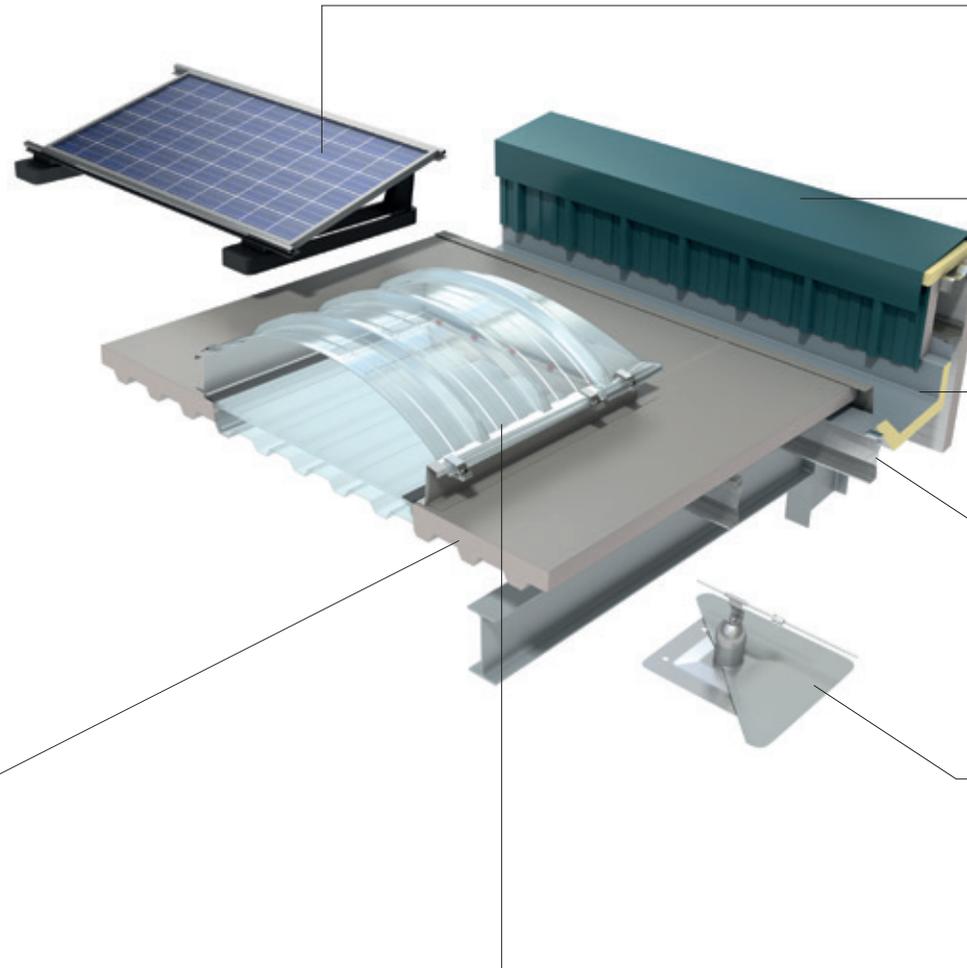
The Topdek panel is a single component, factory pre-engineered roof deck, comprising a high performance single-ply PVC / TPE membrane with insulation and a trapezoidal steel deck.

The Topdek system - which is available with compatible Kingspan structural steel, rooflights, gutters, flashings and solar PV panels - is supported by our expert Technical Support team.

## Available cores:

PIR  
FIREsafe  
ECOsafE

POWERED BY  
**QuadCore™**  
TECHNOLOGY



## Rooftop Solar PV

Add exceptional energy efficiency to your building envelope with our customised rooftop solar PV solution.

## Flashings

From simple to bespoke flashings, we can help provide the finishing touch to any building envelope.

## Membrane Lined Insulated Gutters

Our 8m length gutters are the only LPCB certified insulated gutter available on the market.

## Structural Steel

A range of cold roll-formed structural products including purlins, rails and steel floor decking.

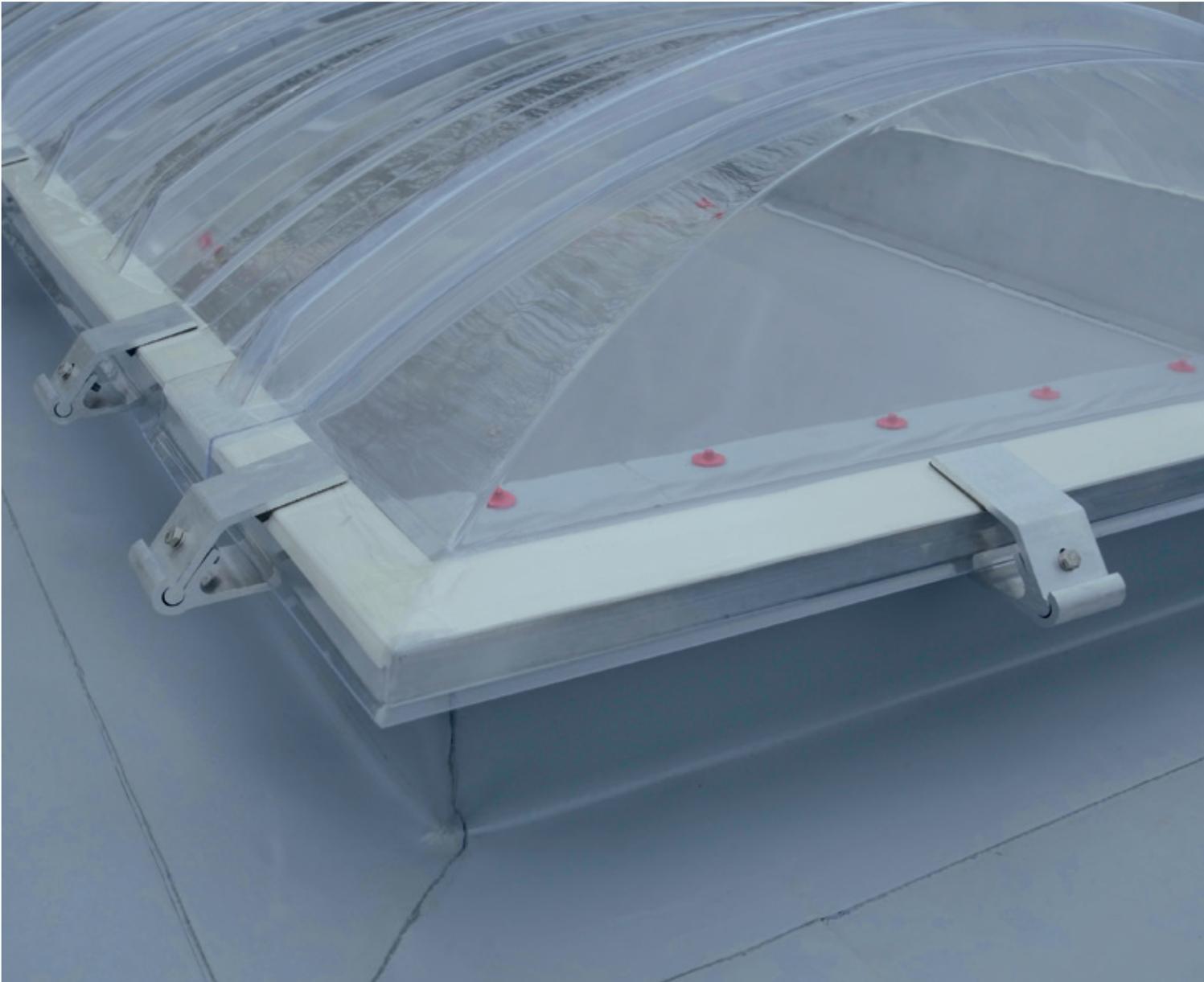
## Fall Protection Systems

A range of safety systems providing discreet personal and collective fall protection when working at height.

## Kingspan Day-Lite Barrel Vault

A factory-assembled unit for ease of installation designed specifically to integrate with Kingspan Topdek Roof Panels.





- 
- Single Component
  - Factory pre-engineered roofdeck
  - Fully compliant with all relevant building regulations
  - High-performance PVC or TPE membrane
  - Closed-cell structure – no risk of interstitial moisture
  - ‘One step fix’ fastener for easy installation
  - Foamcore technology with U-values as low as  $0.15\text{W/m}^2\text{K}$

# Fire Performance of Kingspan Insulated Panel Systems

Protection of people, buildings and contents is of paramount importance.

Kingspan FIREsafe® and ECOsafe® Insurer Certified insulated panel systems can achieve high levels of reaction to fire performance in tests specified for regulatory purposes, large scale tests developed by the insurance industry and large scale tests developed by other organisations including ISO, British Standards Institute (BSI) and the National Fire Protection Agency (NFPA).

Kingspan FIREsafe® and ECOsafe® Insurer-Certified insulated panel systems are extensively tested for fire resistance in a variety of test methods that include LPS 1208, ASTM E119, EN 1364 Parts 2 & 3, EN 1365 Part 2 and EN 1366 Part 3, achieving up to 3 hours fire integrity and 1 hour fire insulation.

QuadCore™ Technology is Kingspan's new bespoke hybrid insulation core, featuring a distinctive grey microcell structure. Self-blended by Kingspan, QuadCore™ Technology can deliver improved fire resistance performance as a result of the increased stability of the insulation when exposed to fire. For specific situations this can result in improved performance, greater spans and /or a reduction in fixings.

For more information, project and product support, contact our Fire Engineering Services Team on, [fireinfo@kingspan.com](mailto:fireinfo@kingspan.com) and **+44 (0) 1352 716100**.

## Real Fire Case Study — RA Wood Adhesives



The PIR core had charred to form a stable and effective seal between the steel skins of the sandwich panel to prevent fire transmission to the protected side of the wall.

# One System One Manufacturer One Warranty

Complete high-performance roof systems, supplied by one manufacturer, supported by one warranty.



up to  
**40** years  
Panel  
Protection

up to  
**40** years  
Coating  
Protection

up to  
**25** years  
System  
Component  
Protection

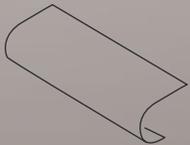
Secondary Steel



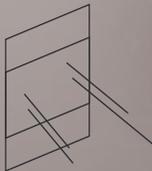
Insulated Panels



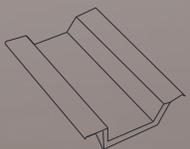
Specialist Fabrications



Daylighting



Insulated Gutters



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## UK

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Kingspan Insulated Panels

For the product offering in other markets  
please contact your local sales representative  
or visit [www.kingspanpanels.com](http://www.kingspanpanels.com)

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