Insulated Panels
Australia

K-PIR™ Roof Panel

Product Data Sheet

- Industry-Leading Thermal Performance*
- High Environmental Performance
- Industry-Leading Fire Performance*
- Structural and Thermal Performance Warranty

K-PIR™

Formerly known as KS1000RW Trapezoidal Roof Panel

Why the change? As part of our new K-PIR™ product branding, this product has been renamed. Performance claims have improved via expanded testing, the product remains the same.

* Industry-leading thermal and fire performance claims are based on comparisons with other PIR foam-cored insulated panels. Performance varies by product, application and system configuration.

Kingspan®

Product Data

OVERVIEW

K-PIR™ Roof Panels present a superior single component roofing solution compared to conventional multi-part site assembled systems.

They are quicker to install, require less manual labour and are designed to meet thermal building regulations compliance.



APPLICATIONS

K-PIR™ Roof Panels are through-fix, trapezoidal profiled, insulated roof panels which can be used for building applications with roof pitches of 3° or more after deflection. Specifications are available for roof slopes less than 3° on request from Technical Services.

- Mid-rise office and residential
- Commercial and logistics
- Healthcare
- Data centres
- Industrial and manufacturing
- Hotel and leisure

DIMENSIONS, THERMAL PERFORMANCE & WEIGHT

A - Core Thickness (mm)	B - Overall Thickness (mm)	Declared R-Value (m^2K/W) at 23°C	Product R-Value (m^2K/W) at 23°C	Product U-Value (W/m^2K) at 23°C	Total R-Value (m^2K/W)		Weight* (kg/m^2)
					Heat Flow Out (Winter)	Heat Flow In (Summer)	1,000 mm cover width
30	65	1.35	1.39	0.721	1.60	1.53	8.0
40	75	1.85	1.88	0.532	2.12	2.01	8.5
60	95	2.85	2.89	0.347	3.17	2.97	9.3
70	105	3.35	3.39	0.295	3.70	3.46	9.8
80	115	3.90	3.91	0.256	4.24	3.96	10.0
100	135	4.90	4.95	0.203	5.32	4.96	11.0
120	155	5.95	6.00	0.167	6.42	5.97	11.8
140	175	7.05	7.06	0.142	7.53	6.99	12.5

Declared Thermal Conductivity (λ Value) 0.023 W/mK @23°C (insulant thickness ≤ 40 mm).
Declared Thermal Conductivity (λ Value) 0.022 W/mK @23°C (insulant thickness 60 mm to 80 mm).
Declared Thermal Conductivity (λ Value) 0.021 W/mK @23°C (insulant thickness ≥100 mm).
Declared Product R-Value is calculated in accordance with AS/NZS 4859.1: 2018 as required for compliance to the National Construction Code. The R-Values shown above are the total R-Values for the building element as required by the Energy Provisions of the National Construction Code, calculated in accordance with AS/NZS 4859.2: 2018. K-PIR™ Roof Panels are manufactured, tested and packaged in conformance with AS/NZS 4859.1: 2018.
* Actual weight subject to vary ±10% due to manufacturing and raw material tolerances. Values for standard skin thicknesses shown, for alternative skin thicknesses contact Kingspan.

COVER WIDTHS & AVAILABLE LENGTHS

K-PIR™ Roof Panels are available in a choice of standard and non-standard cover widths.

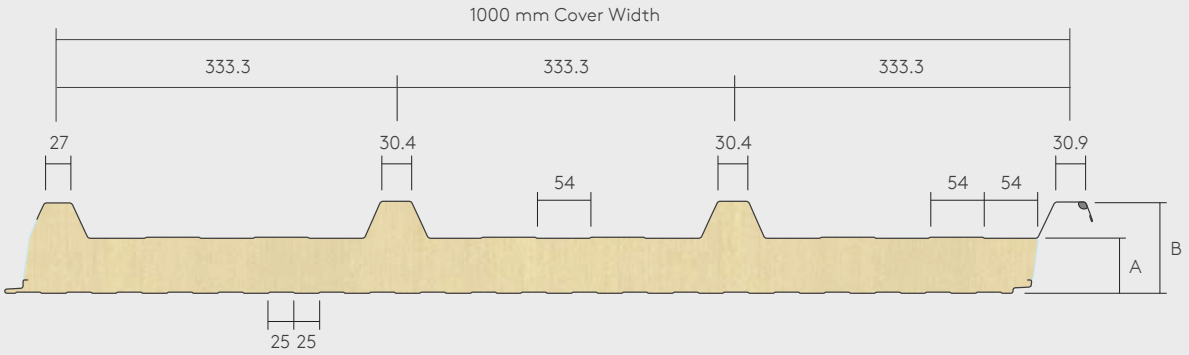
Standard lengths	2.0 m - 13.7 m
Longer lengths (non-standard)	13.7 m - 16.2 m*
Export of Australia / Sea freight to WA	11.8 m

Note: Additional costs and transport restrictions may apply for non-standard lengths.

* For 40 mm panels the maximum length is 15 m.

Product Data

PROFILES



Note: Dimensions are nominal. Actual dimensions will vary due to manufacturing tolerances. Precise dimensions must always be measured from actual samples. All measurements in mm.



Product Data

PRODUCT TOLERANCES

Length < 3 m	± 5 mm
Length > 3 m	± 10 mm
Cover Width	± 2 mm
Thickness < 100 mm	± 2 mm
Thickness > 100 mm	± 2%
Squareness	≤ 0.6% of width

FIXING METHOD

K-PIR™ Roof Panels are through-fix.

INSULATION CORE

K-PIR™ Roof Panels are manufactured with a polyisocyanurate (PIR) core.

K-PIR™

STRUCTURAL PERFORMANCE

Please contact Technical Services for project specific support on the spanning performance of the K-PIR™ Roof Panels.



CERTIFICATION & TESTING

Fire Performance

Reaction to Fire

Test	Test Method	Result
Ignitability	AS/NZS: 1530.3: 1999	Ignitability Index: 0
Flame Spread		Spread of Flame Index: 0
Heat Release		Heat Evolved Index: 0
Smoke Release		Smoke Developed Index: 3

Test	Test Method	Result
NCC Group Number in accordance with AS 5637.1: 2015	AS 5637.1: 2015 / ISO 9705 2003	Group 1*
Smoke Growth Rate Index (SMOGRA$_{RC}$) (m^2/S^2 x 1000)		< 100

*Group 1 applies where the panel's internal skin is 0.38 BMT or higher; otherwise Group 2

Insurer Approvals

K-PIR™ Roof Panels are tested to:

- FM 4471 approval standard for class 1 roof panels under the certified name KS1000 RW for thicknesses 40 mm to 120 mm.

Insurer approvals are large scale testing regimes that provide objective third-party testing, which is underpinned by quarterly, half-yearly and yearly factory surveillance audits (depending on the region) to verify compliance. Insurer method of assembly, steel coating and manufacturing facility. Please contact Technical Services for project specific details.

FM APPROVED

CodeMark Certification Scheme

K-PIR™ Roof Panels hold a CodeMark Certificate of Conformity stating the provisions of the Building Code of Australia and States or Territory Variation(s) the product conforms to.

CodeMark Certificate of Conformity is certified under the name KS1000 RW – Trapezoidal Roof & Wall Panels for thickness:

- 40 mm to 140 mm with a standard endlap solution (200 mm). Certificate number: CM20103.
- 40 mm to 140 mm with a prime endlap solution (75 mm) or 150 mm endlap solution. Certificate number: CM20346.

Product Data

For further details please contact the Kingspan Technical Service Department or alternatively refer to JAS-ANZ CodeMark Register of Certificates of Conformity directory and each for Kingspan Insulated Panels Pty Limited.

CodeMark Australia Certificate CM20103

CodeMark Australia Certificate CM20346

Bushfire Applications

K-PIR™ Roof Panels tested in accordance with AS1530.8.1 2007 for full scale bushfire roofs and is suitable for use in Bushfire locations up to BAL-40 (AS 3959-2018) with a core thickness of ≥ 100 mm when installed with a roof pitch up to 18 degrees. For further details please contact the Kingspan Technical Services.

ACOUSTIC PERFORMANCE

For a sound transmission reduction, K-PIR™ Roof Panels have a weighted sound reduction index (SRI) of R_W = 24 - 26dB*.

Results are based on panels with a similar profile and core material.

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	R_W
SRI (dB)	20	18	20	24	20	29	39	46	**24**

* Please contact Technical Services for project specific support and product specification where R_W = 26dB is required.

MATERIALS

External Weather Sheet

- G300S steel with AM100 or AM150 metallic coating in accordance with AS 1397: 2021.
- Paint Coating in accordance with AS / NZS 2728: 2013.

Internal Liner

- G300S steel with AM100 metallic coating in accordance with AS 1397: 2021.
- Paint Coating in accordance with AS / NZS 2728: 2013.

COATINGS

External Weather Sheet

- Colours as per the Kingspan Australia colour range, please contact your local area sales manager for further information.

Internal Liner

- Kingspan CLEANsafe 15: The coating has been developed for use as the internal lining of insulated panels. Standard colour is “bright white” with an easily cleaned surface.

Other Internal Coating Options*

- Kingspan AQUAsafe: The coating has been developed for use as the internal lining of insulated panels to suit high humidity internal environments.
- Kingspan AQUAsafe 25 and Kingspan AQUAsafe 55: The coating has been developed for use as the internal lining of insulated panels to swimming pool internal environments.

* Please contact Technical Services for further information regarding substrates and coatings. Internal coatings subject to availability and panel cover width.

SEALS

All panel joints have a factory applied weather seal fitted on the underside of the sidelap to automatically seal the joint between panels.

PANEL END CUT BACK

Minimum Cut Back	50 mm
End Lap Horizontally or Vertically Laid	75 mm
Standard End Lap	200 mm
Optional End Lap	150 mm
Eaves Cut Back	75 mm
Maximum Cut Back*	300 mm

* For cut backs larger than 200 mm, the core material and the steel at the cut back will not be removed and will have to be carried out by the installer.

Product Data



QUALITY & DURABILITY

K-PIR™ Roof Panels are manufactured from high quality materials using state-of-the-art production equipment to rigorous quality control standards, complying with ISO 9001 standard, ensuring long-term reliability and service life.

The panels are also being manufactured under Environmental Management System Certification ISO 14001 and Occupational Health, Safety Certification ISO 45001 and Compliance Management Systems ISO 37301.

PACKAGING

K-PIR™ Roof Panels are stacked weather sheet to weather sheet (to minimise pack height).

The bottom panel is protected by cardboard. All packs are wrapped with spiral wrap stretch polyfilm. The number of panels in a pack will vary depending on panel thickness, steel configuration and length required. Please contact Kingspan Customer Services for further information.

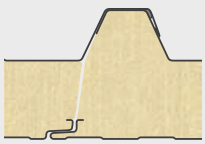
CYCLONIC APPLICATIONS

A significant part of the Australian coastline is deemed to be in cyclonic regions. As a result of this, Kingspan have carried out testing on the K-PIR™ Roof Panels certified under the name KS1000RW in accordance with the requirements of the NCC low-high-low performance requirements.

For further information, please contact Technical Services for project specific support and product specification of the K-PIR™ Roof Panels in cyclonic applications.

PANEL JOINT

The tongue and groove joint achieves high thermal performance. The panel side joint can accommodate vapour or hygiene safe seals.



Product Data

DELIVERY

All deliveries (unless indicated otherwise) are by flatbed road transport to project site. Off loading is the responsibility of the client. Export orders are transported in shipping containers. WA orders are transported in shipping containers, unless road freight is opted for.

HANDLING

K-PIR™ Roof Panels can be manufactured in both left to right handed (LH) and right to left handed (RH).

SITE INSTALLATION PROCEDURE

Site assembly instructions are available from Technical Services. Kingspan recommend that the appointed contractor attend the product installation training course prior to installation, which is provided by Kingspan Field Services.

ENVIRONMENTAL

Kingspan Insulated Panels manufacturing facility in Australia sources 100% certified renewable electricity and procures steel that is made from 15-25% recycled content.

K-PIR™ Roof Panels have Environmental Product Declarations in accordance with the requirements of ISO 14025 and EN 15804: 2012 + A2: 2019 for 40 mm to 120 mm thickness.

K-PIR™ Roof Panels is certified with a Global GreenTag GreenRate™ Level A certification to Version 4.1 of the Global GreenTag International Product Certification Standard, under the certified name K-PIR™ Roof Panel.

A GreenRate Level A license is the highest-ranking level in GreenTag's GreenRate program. As a result, K-PIR™ Roof Panels receives the maximum recognition by the Green Building Council of Australia's Green Star® building rating tools scheme. The recognition provides assurance to green building projects that the product has demonstrated low toxicity, compliance to relevant social and environmental laws in the country of operation, fit for purpose certification, availability of replacement parts, a design for recycling and/or reuse and healthy VOC levels.

BIOLOGICAL

Kingspan PIR foam core used in the manufacture of K-PIR™ Roof Panels are free from urea formaldehyde.

ACCREDITATIONS

FM APPROVED

GLOBAL GREENTAG CERTIFIED
GreenRate | Level A
trust brands

FPA AUSTRALIA GOLD MEMBER
Fire Protection Association Australia

Green Building Council Australia
Member 2025-2026

100% We buy GreenPower®

AUSTRALASIA EPD®
ENVIRONMENTAL PRODUCT DECLARATION

CODEMARK Australia
Certificate CM20103

CODEMARK Australia
Certificate CM20346

British Assessment Bureau UKAS MANAGEMENT SYSTEMS 8289
ISO 9001
QUALITY MANAGEMENT

British Assessment Bureau UKAS MANAGEMENT SYSTEMS 8289
ISO 14001
ENVIRONMENTAL MANAGEMENT

British Assessment Bureau UKAS MANAGEMENT SYSTEMS 8289
ISO 45001
HEALTH & SAFETY MANAGEMENT

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For the product offering in other markets please contact your local sales representative or visit www.kingspanpanels.com

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Tenth Issue | 06/11/2026