Insulated Panels
Australia

K-PIR™ Architectural 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 Architectural Wall 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.

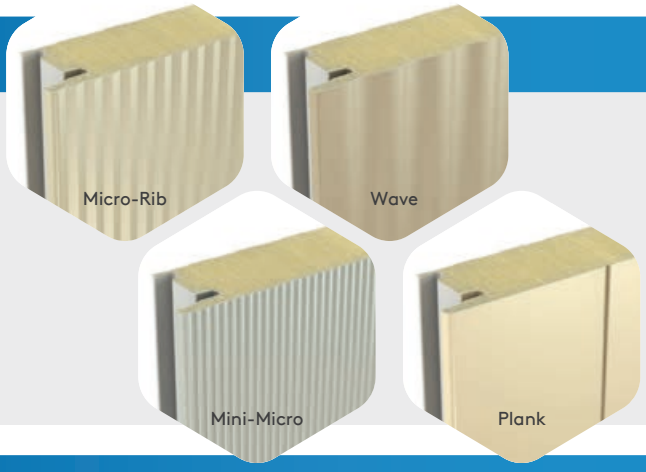
Kingspan®

Product Data

OVERVIEW

Kingspan's K-PIR™ Architectural Panel is a range of secret-fix external wall panels combining aesthetic appeal with performance.

Available in four different profile options and a variety of panel widths, these versatile panels provide a weather tight building envelope solution.



APPLICATIONS

K-PIR™ Architectural Panels are suitable for most building applications as an external façade element in either horizontal or vertical applications.

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

DIMENSIONS, THERMAL PERFORMANCE & WEIGHT

Panel Nominal 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)	900 mm cover width	1,000 mm cover width
50	2.20	2.23	0.449	2.49	2.30	10.3	10.0
80	3.70	3.72	0.268	4.05	3.74	11.5	11.3
100	4.75	4.75	0.210	5.13	4.73	12.3	12.3
140	6.85	6.85	0.146	7.32	6.75	14.0	13.8

Declared Thermal Conductivity (λ Value) 0.023 W/mK @23°C (thickness 50mm)
Declared Thermal Conductivity (λ Value) 0.022 W/mK @23°C (thickness 80mm)
Declared Thermal Conductivity (λ Value) 0.021 W/mK @23°C (thickness 100-140mm)

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™ Architectural 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™ Architectural Panels are available in a choice of standard and non-standard cover widths.

Standard cover width	1,000 mm
Non-standard cover widths	900 mm

Standard lengths	2.0 m - 13.7 m
Longer lengths (non-standard)	13.7 m - 16.1 m
Export of Australia / Sea freight to WA	11.8 m

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

Product Data

PRODUCT TOLERANCES

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

Flatness

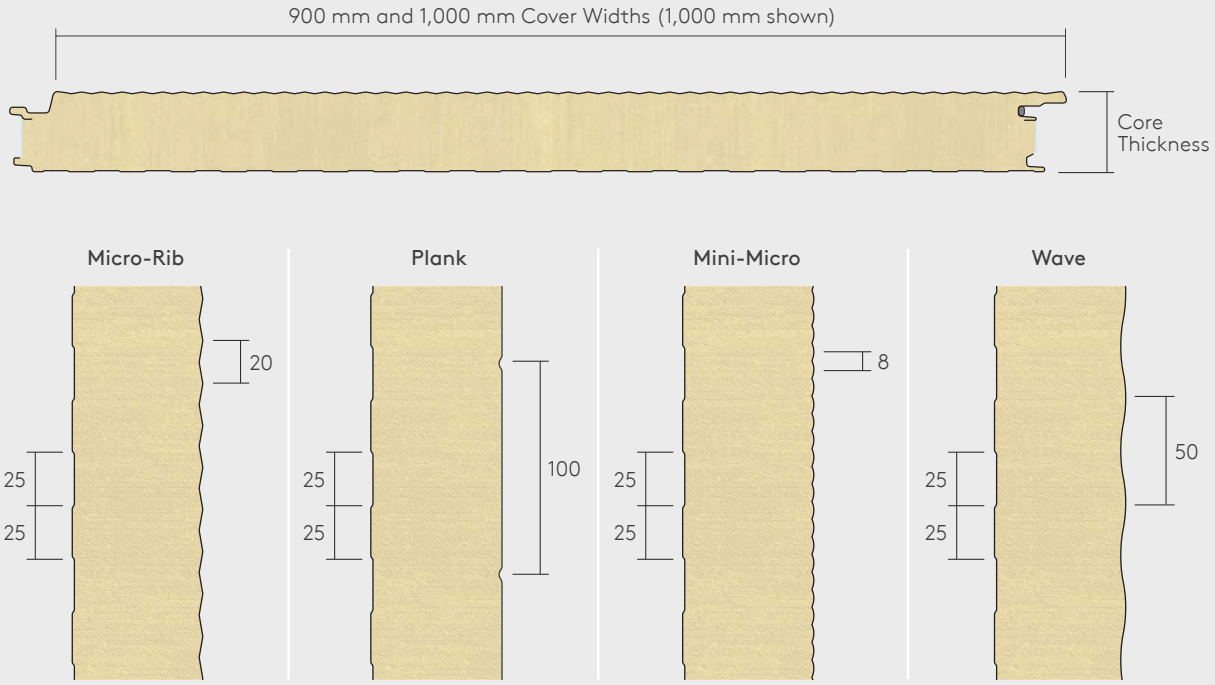
Flatness shall be measured at least 100 mm from the edge of panel and 200 mm from the end of panel.

L = 200 mm	0.6 mm
L = 400 mm	1.0 mm
L = 700 mm	1.5 mm
Bowing	2 mm per metre length up to maximum 20 mm



Product Data

PROFILES



The table below provides clarification as to the availability of specific K-PIR™ Architectural Panel profiles depending on panel cover width.

Profile		Micro-Rib (MR)	Mini-Micro (MM)	Plank (PL)	Wave (WV)
Cover width (mm)	900	✓	✓	–	✓
	1,000	✓	✓	✓	✓

Notes:

Dimensions are nominal.

Actual dimensions will vary due to manufacturing tolerances.

Precise dimensions must always be measured from actual samples.

All measurements in mm.

FIXING METHOD

K-PIR™ Architectural Panels are secret-fix.

STRUCTURAL PERFORMANCE

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

INSULATION CORE

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

K-PIR™

Product Data

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* - 1,000 mm Group 2 - 900 mm
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

Large Scale Façade Testing

K-PIR™ Architectural Panels are tested to BS 8414-2: 2005 + A1: 2017 under the name KS1000AWP.

Tested Build-up

- 140 mm thick KS1000AWP vertically orientated wall panel
- Light weight steel frame
- No lining / no cavity barriers used

Test Report: BS 8414-2:2015 – P109234-1000. Classification Report: JV18-00218.

The test was carried out in accordance with BS 8414-2:2015 + A1:2017 extra data was recorded, and observations made to facilitate classification to AS 5113:2016[2]

Please contact Technical Services for project specific details.

Insurer Approvals

K-PIR™ Architectural Panels are tested to:

- FM 4880 Class 1 fire rating of building panels or interior finish materials, unlimited height for thicknesses 50 mm to 140 mm and panel width of 1,000 mm only.
- FM 4881 Class 1 exterior wall systems, unlimited height for thicknesses 50 mm to 140 mm and panel width of 1,000 mm only.

FM approvals are subject to the following certified name

- For 1,000 mm widths: KS1000AWP.

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 approvals are subject to panel thickness, width, orientation, method of assembly, steel coating and manufacturing facility.

Please contact Technical Services for project specific details.

FM APPROVED



Product Data

ACOUSTIC PERFORMANCE

For a sound transmission reduction, K-PIR™ Architectural 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 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 into the panel groove to automatically seal the joint between panels.

QUALITY & DURABILITY

K-PIR™ Architectural 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 and Safety Certification ISO 45001.

CYCLONIC APPLICATIONS

A significant part of the Australian coastline is deemed to be in a cyclonic region. As a result of this Kingspan have carried testing out on the K-PIR™ Architectural Panels, in accordance with the National Construction Code low-high-low performance requirements.

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

Product Data

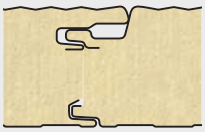
PACKAGING

K-PIR™ Architectural Panels are stacked horizontally. The entire pack is shrink wrapped. The number of panels in each pack depends on panel length, weight, and thickness. Typical pack height is 1,200 mm.

Other types of packaging are available upon request, please contact Kingspan Customer Service team for further information.

PANEL JOINT

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



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.

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™ Architectural Panels have Environmental Product Declarations in accordance with the requirements of ISO 14025 and EN 15804: 2012 + A2: 2019 for 50 mm to 140 mm thickness.

K-PIR™ Architectural 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™ Architectural Panel.

A GreenRate Level A license is the highest-ranking level in GreenTag's GreenRate program. As a result, K-PIR™ Architectural Panels receive 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™ Architectural Panels are free from urea formaldehyde.

ACCREDITATIONS

FM APPROVED

GLOBAL GREEN TAG 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

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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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