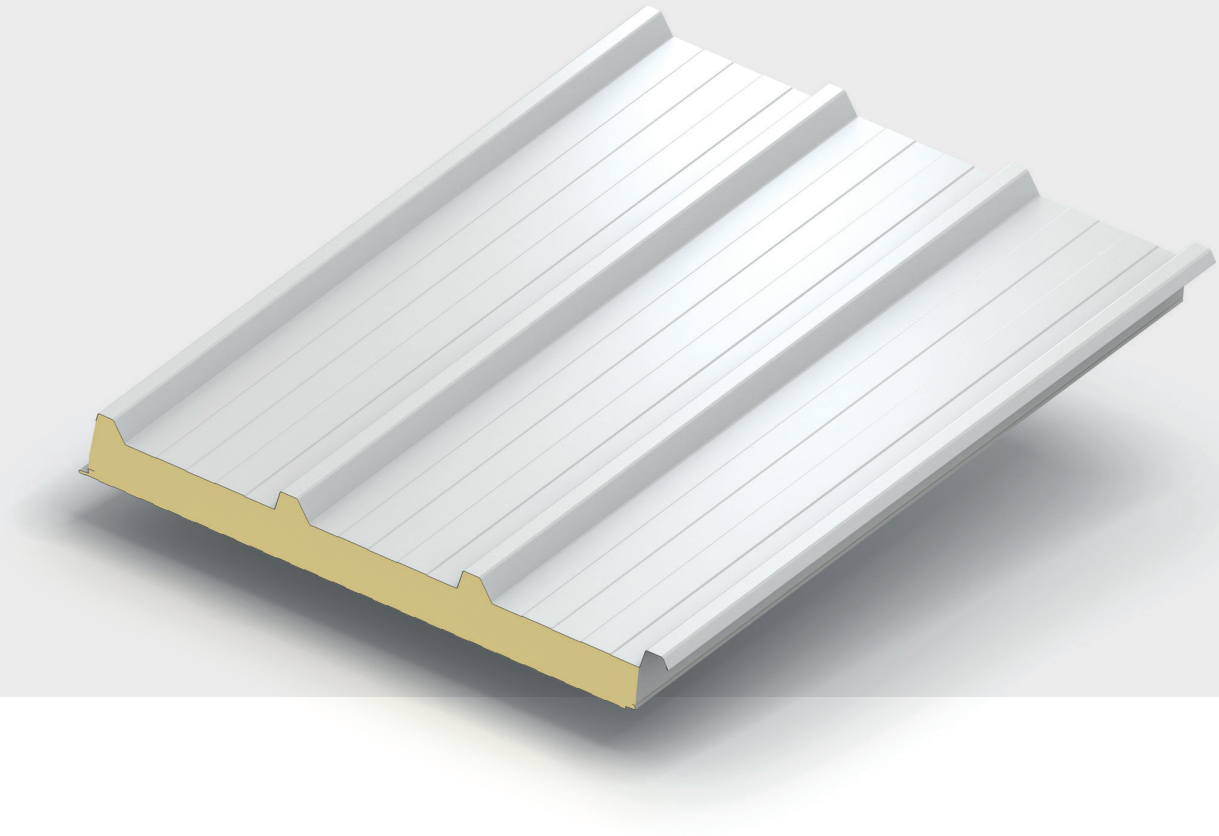
Insulated Panels
Australia

KS1000RW Trapezoidal Roof Panel

Product Data Sheet

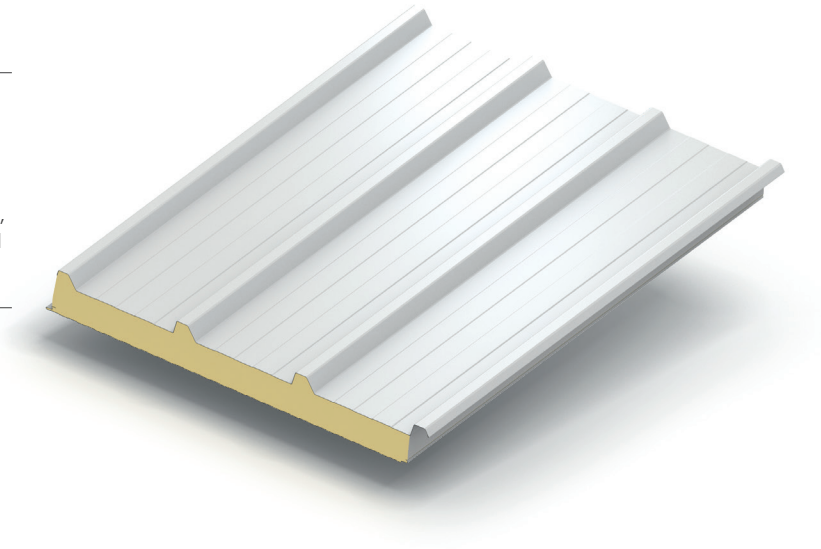


Kingspan®

Product Data

Product Overview

KS1000RW Trapezoidal 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.



Application

KS1000RW Trapezoidal 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.

Dimensions, Thermal Performance & Weight

A - Core Thickness (mm)	B - Overall Thickness (mm)	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)	
40	75	1.91	0.52	2.15	2.03	8.5
60	95	2.87	0.34	3.15	2.96	9.1
70	105	3.36	0.29	3.67	3.43	9.2
100	135	4.79	0.20	5.16	4.81	10.4
120	155	5.73	0.17	6.13	5.71	10.9
140	175	6.66	0.15	7.11	6.61	12.7

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).

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. KS1000RW Trapezoidal 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.

Available Lengths

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.

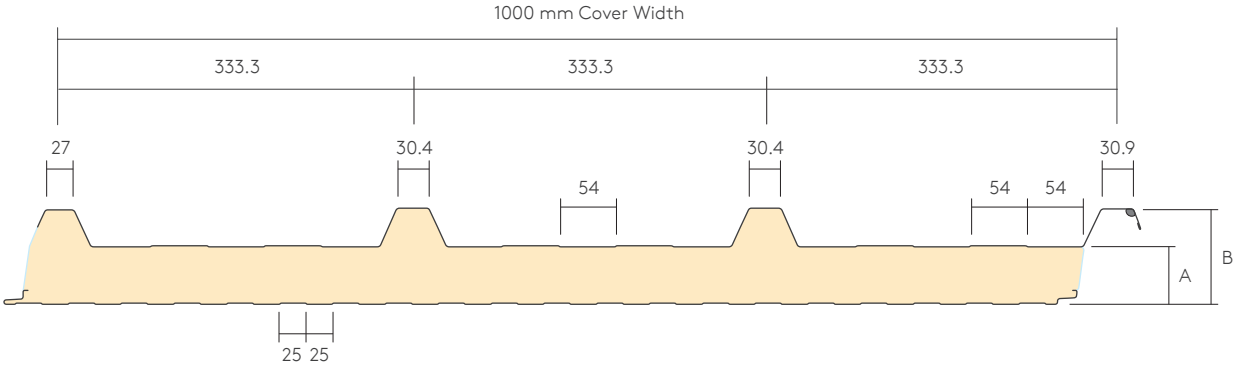
Fixing Method

Through-fix.

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

Profile



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.

Insulation Core

KS1000RW Trapezoidal Roof Panels are manufactured with a polyisocyanurate (PIR) core.

Structural Performance

Please contact Technical Services for project specific support on the spanning performance of the KS1000RW Trapezoidal Roof Panels.

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

Insurer Approvals

KS1000RW Trapezoidal Roof Panels are tested to:

- FM 4471 approval standard for class 1 roof panels under the certified name KS1000RW for thicknesses 40 mm to 120 mm.
- FM 4880 Class 1 fire rating of building panels or interior finish materials, unlimited height 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

Acoustic Performance

For a sound transmission reduction, KS1000RW Trapezoidal Roof Panels have a weighted sound reduction index (SRI) of R_W = 24 - 26*dB. Results are based on panels with a similar profile and core material.

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	Rw
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.

Product Data

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 color range, please contact your local area sales manager for further information.

Internal Liner

- Kingspan CLEAN*safe* 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 AQUA*safe*: The coating has been developed for use as the internal lining of insulated panels to suit high humidity internal environments.
- Kingspan AQUA*safe* 25 and Kingspan AQUA*safe* 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
Prime End Lap	75 mm
Standard End Lap	150 mm
Eaves Cut Back	75 mm
Maximum Cut Back*	200 mm

* For panels that exceed 13.7 m and / or for cut backs larger than 150 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.

Handing

KS1000RW Trapezoidal Roof Panels can be manufactured in both left to right handed (LH) and right to left handed (RH).

Quality and Durability

KS1000RW Trapezoidal Roof Panels are manufactured from the highest 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 cyclonic regions. As a result of this, Kingspan have carried out testing on the KS1000RW Trapezoidal Roof Panels certified under the name KS1000RW in accordance with the requirements of the NCC Specification B1.2 low-high-low performance requirements.

For further information, please contact Technical Services for project specific support and product specification of the KS1000RW Trapezoidal Roof Panels in cyclonic applications.

Packaging

KS1000RW Trapezoidal Roof Panels are stacked weather sheet to weather sheet (to minimise pack height). The bottom panel is protected by either cardboard or MDF boards, depending on the type of packaging chosen. 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.

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.

KS1000RW Trapezoidal 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.

KS1000RW Trapezoidal Roof Panels is certified with a Global GreenTag GreenRate™ Level A certification to Version 4.0 of the Global GreenTag International Product Certification Standard, under the certified name Kingspan Roof Panels.

A GreenRate Level A license is the highest-ranking level in GreenTag's GreenRate program. As a result, KS1000RW Trapezoidal 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 a maximum commitment to 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 KS1000RW Trapezoidal 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 2023–2024

100% We buy GreenPower®

AUSTRALASIA EPD®
ENVIRONMENTAL PRODUCT DECLARATION

Contact Details

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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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