

K-Roc™ Firemaster Wall Panel Product Data Sheet

Building smarter with K-Roc™



Product Data Sheet

K-Roc™ Firemaster Wall Panel

K-Roc™ Firemaster Wall Panels are ideally suited for the construction of non-load bearing internal partition walls with non-combustible performance requirements.

An ideal insulated panel to use in storage applications, along with data centres, microelectronics and pharmaceutical facilities, where protected zones or clean rooms are often required.

The K-Roc™ Firemaster panel is an insulated panel comprising of a mineral wool core sandwiched between adhered external and internal steel coil skins. The external and internal coils are available in a number of combinations of coil coatings, thicknesses and profiles to meet specific project requirements. The panel is 1100mm wide with thicknesses from 75mm to 200mm designed to meet the project specific fire, thermal, acoustic and or structural (panel span) requirements.



Applications

The K-Roc™ Firemaster Wall Panel may be used on the internal walls of all types of buildings. If a FRR is needed, please refer to K-Roc™ Firemaster Ultima Wall Panel data sheet. The panel may be installed vertically or horizontally.

Manufacture

Panels are manufactured in a Kingspan-owned facility in Sydney, Australia. Lead time can vary depending on the product and specification, please contact Kingspan for further information.

Available Lengths

Standard lengths are from 2m to 11.8m.

Core thickness (mm)	Minimum length (m)	Maximum length* (m)
75	2.0	8.5
100	2.0	10.0
120	2.0	11.8
150		
175		
200		

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

* Maximum length is based on safe handling of the panel.

Cover Widths

Standard cover width	1100 mm
----------------------	---------

Fixing Method

Through-fix.

The panel is mechanically fixed via Tek screws to the supporting structure which can be heavy steel, light steel or timber framing.

Product Tolerances

Product tolerances in accordance with EN 14509:2013.

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
Flatness*	
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

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

Panel Performance

A - Core Thickness (mm)	75	100	120	150	175	200
Material R value (m².K/W)*	2.20	2.90	3.50	4.40	5.15	5.85
Installed R value (m².K/W)**	2.32	3.02	3.62	4.52	5.27	5.97
Weight kg/m² ***	16.50	19.25	21.50	25.00	28.00	30.75

* Material R value = the aged thermal value @ 15°C, as independently tested and calculated to AS/NZS4859 parts 1&2: 2018. Note this is for the product only before installation.
** Installed R value = the thermal resistance of the installed product and includes air films as per NZS 4214
*** Actual weight subject to vary ± 10% due to manufacturing and raw material tolerances.

Profiles

External Profiles: Flat.

Internal Profiles: Flat.



Materials

Exterior Weather Sheet:

- Substrate is G300S steel with Z275 metallic coating in accordance with AS 1397:2021.
- Paint coating in accordance with AS/NZS 2728:2013.

Internal Liner:

- Standard substrate is G300S steel with Z275 metallic coating in accordance with AS 1397:2021.
- Paint coating in accordance with AS/NZS 2728:2013.

Coatings

Exterior Weather Sheet and Internal Liner:

- Standard: Coolroom White. Other colours are available on request. Please contact your local area sales manager for further information.

Please contact Kingspan Technical Services for further information regarding substrates and coatings.

Insulation Core

K-Roc™ Firemaster Wall Panels are manufactured with a 115 kg/m³ density mineral wool insulation core with a tolerance of ± 10%.



Load/Span

Specific span performance information can be provided by Kingspan Technical Services on a project-by-project basis.

The information required to calculate spans includes:

- Panel thickness.
- Building use.
- Internal pressure loads.
- Is the wall required to achieve a specific FRR?

Product Selection Assistance

Sales representatives are available nationwide to answer queries on product options, assist with detailing, spans, colour swatches and other queries. They can also provide early stage budget estimates and co-ordinate the provision of project specifications.

Technical Assistance

Our technical team is available to provide specific advice on panel spans, product specifications, standard and bespoke detailing, panel optimisation, fire wall options, project specific acoustic solutions, panel guarantees, thermal condensation risk calculation along with general building science cladding advice.

Kingspan Technical Services can provide 'side by side' assistance with regard to project detailing, attending design meetings, providing training and undertaking site visits when required.

Quality and Durability

K-Roc™ Firemaster Wall 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.

Delivery & Packing

Standard Packing

Protective film is applied to the external face.

Kingspan wall panels are stacked horizontally.

The number of panels in each pack depends on panel thickness.

Delivery

All deliveries (unless indicated otherwise) are by road transport to project site by flat bed truck for off-loading by crane or fork hoist.

Off-loading is the responsibility of the installer.

Handling guidelines are available from Kingspan Technical Services.

Guarantees

Kingspan will provide product guarantees on an individual project basis.

Guarantees are typically up to 15 years in a non marine/ geothermal environment. All guarantees are subject to a maintenance regime. Specialist coatings are available for marine and other more corrosive areas.

Building Product Information Requirements

Based on the requirements of *Building (Building Product Information Requirements) Regulations 2022* this product is designated **Class 2**. All of the required product information is contained within this document.

NZBC Compliance

When designed, used, installed and maintained in accordance with Kingspan standard details, the K-Roc™ Firemaster Wall Panel is compliant with the following clauses on the NZBC:

B1 Structure — B1.3.1; B1.3.2; B1.3.3 (a, c, f, h, i); B1.3.4

B2 Durability — B2.3.1(b)

C3 Fire Affecting Areas Beyond the Fire Source — C3.4(a)

E3 Internal Moisture — E3.3.5

F2 Hazardous Building Materials — F2.3.1

H1 Energy Efficiency — (contributes to) H1.3.1

Contribution to Compliance

- **B1.3.1; B1.3.2; B1.3.3 (a, c, f, h, i); B1.3.4** — by testing and comparison with the provisions of Verification Method B1/VM1. Panel span tables are calculated on the requirements of BS EN 14059 ‘Self-supporting double skin metal faced insulated panels – Factory made products’ which include the effects of live and permanent actions including temperature and long-term performance.
- **B2.3.1(b)** — by coil manufacturer testing (Bluescope Steel) and comparison with the provisions of Verification Method B2/VM1, E2 AS1. Panel durability is a function of the panels steel coil skins. The coil is coated to the requirements of AS2728 (Z275) and is classified as a corrosion resistance category Type 4 (Standard) product, reference to table 20 of E2/AS1 Factory coated steel coil and ‘Hidden’ (internal applications).
- **C3.4(a)** — by testing and comparison with the provisions of Verification Method C/VM2 and Acceptable solutions C/AS1 and C/AS2. For use on external facades the panel core has been tested to the fire requirements of AS 1530.1 and is non-combustible. For internal Spread of Flame the panel achieves Group 1S based on testing to ISO9705-1.
- **E3.3.5** — by comparison with Acceptable solution E3/AS1.
- **F2.3.1** — by testing and comparison with the performance requirements of F2.3.1
- **H1.3.1** — by testing and comparison with Verification Methods H1/VM1 and H1/VM2. The panel has been evaluated to the requirements of AS/NZS 4859-1 with 3rd party professional opinion.

Relevant Standards:

- AS/NZS 1170 (series)
- BS EN 14509
- AS 2728
- AS/NZS 4859-1,2
- AS1530.1 — for Non-combustibility
- AS/NZ 4600 — for the supporting structure
- AS/NZ 3604 — for the supporting structure
- NASH — for the supporting structure

Fire Performance

The K-Roc™ Firemaster Wall Panel has been rigorously tested to both NZ and international building standards and the standards expected of the insurance industry.

Internal Surface Finish (NZBC C.4.17.1) (to ISO 9705)	
Group 1S	
External Radiation (NZBC C.5.8) (to ISO 5660-1)	
Building Code Document	Cladding Material Type
NZBC Acceptable Solutions C/AS1 Table 5.1	Non-combustible
NZBC Acceptable Solutions C/AS2 Table C1.3	Non-combustible
Non-combustible	AS1530.1

Limitations of Use

- If a FRR is needed, please refer to K-Roc™ Firemaster Ultima Wall Panel data sheet.
- Internal building environments exceeding ISO9223 classification C3 require specific steel coil selections. Refer to Kingspan for the appropriate material.
- The panel is a cladding element only and does not provide additional bracing capacity.
- Direct fixing to concrete elements is problematic. Kingspan recommends timber or steel supports are connected to the concrete.

Design Requirements

- The building is designed to the requirements of AS/NZ 1170, AS/NZS 4600, NZS3604 or NASH standards.
- The building structural frame is designed to the applicable steel standards and is designed to resist all loads that will be transferred through the panel to the structural elements.
- Designer has provided the project internal wall loads to Kingspan to calculate the panel capacity spans and minimum fixing requirements.
- Any penetration greater than 300mm through the panel must be structurally supported.

Manufacture

Legal and Trading Name of the Manufacturing Facility	Kingspan Insulated Panels (Pty) Ltd, 38-52 Dunheved Circuit, St Marys, Sydney, NSW 2760, Australia
--	--

Installation Requirements

- The panel is to be installed by persons appropriately skilled in insulated panel construction. Training is available from Kingspan.
- The structure is to be complete and true before installation. For very large buildings then the area to be clad is to be complete.
- Install the panel as per the consented construction drawings. Should the drawings deviate from the Kingspan standard details then advise the Main Contractor. Do not proceed with the installation without specific instruction.
- The panel may be vertically laid in either direction (right to left or left to right) but cannot be back laid. Horizontal panels are installed from bottom to top.
- Where required, ensure that all gaps are filled with mineral wool insulation.
- Connect all seals to achieve the required vapour control layer.

Maintenance Requirements

- For external maintenance refer to the Kingspan Maintenance Guide
- For standard internal environments no additional maintenance should be required. If the panel is exposed in food preparation or corrosive environments, then the internal panel joints are to be sealed and any cleaning products used should be checked for compatibility with the steel coil.

Warnings or Bans

The K-Roc Firemaster Wall Panel is not subject to any warning or ban under section 26 of the Regulations.

Contact Details

New Zealand

Kingspan Limited

97 Montreal Street | Christchurch 8023

T: 0800 12 12 80 or +64 (0) 3 260 5530

E: info@kingspanpanels.co.nz

www.kingspanpanels.co.nz

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

Care has been taken to ensure that the contents of this publication are accurate, but Kingspan Limited and its subsidiary companies do not accept responsibility for errors or for information that is found to be misleading. Suggestions for, or description of, the end use or application of products or methods of working are for information only and Kingspan Limited and its subsidiaries accept no liability in respect thereof.

To ensure you are viewing the most recent and accurate product information, please visit:
<https://www.kingspan.com/content/dam/kingspan/kip-west/wall-panels/k-roc-firemaster-wall-panel/kingspan-k-roc-firemaster-wall-panel-data-sheet-en-nz.pdf>

© Kingspan and the Lion Device are Registered Trademarks of the Kingspan Group plc in the UK, Ireland and other countries. All rights reserved.

