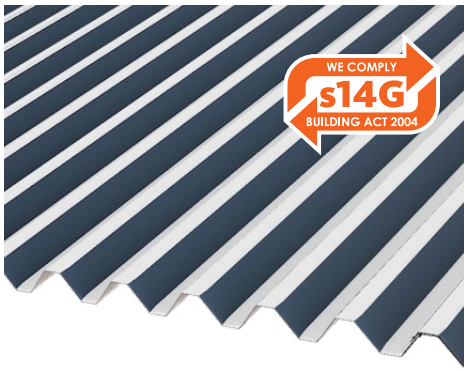
PRODUCT ASSURANCE SUPPLIER STATEMENT
pass™ no: 19090 | Expires: 02/2024

Metalcraft Roofing

# METALCRAFT KAHU®




19
32

**Figure 1:** Profile Dimensions (nominal)

## PURPOSE

Metalcraft Roofing supplies Metalcraft Kahu® for use as a roofing, and horizontally and vertically laid wall cladding.

## EXPLANATION

Metalcraft Kahu® is a symmetrical, trapezoidal, long-run steel roof and wall cladding manufactured from NZ Steel products. It is supplied in a range of protective coatings to meet NZ's exposure zones and are available in the full Colorsteel® range.

Metalcraft Kāhu® sheets are available in the following NZ Steel branded products:

- Colorsteel® Endura®
- Colorsteel® Maxx®
- Galvsteel®
- Zincalume®.

Metalcraft Kahu® sheets are available in the following sizes:

- Thickness (mm): 0.40 and 0.55
- Width (mm): Cover – 875, Sheet – 950

## SCOPE AND LIMITATIONS OF USE

| Scope | Limitations |
|---|---|
| **Location** | |
| In all wind zones as defined in NZS 3604:2011 and in all calculated design loads. | ❯ Metalcraft Kahu® load spans apply in wind zones up to and including extra high.<br>❯ Where the calculated design loads exceed 2.5kPa the engineer must satisfy themselves that the product, pitch and fixings will meet the conditions. |
| In all exposure zones as defined by NZS 3604:2011. | ❯ In exposure Zone D only Colorsteel® Endura® or Colorsteel® Maxx® may be used.<br>❯ For use in microclimatic considerations (as defined in paragraph 4.2.4) refer to Metalcraft Roofing for technical advice.<br>❯ For more information on the specific exposure zones refer to www.colorsteel.co.nz. |
| On buildings located any proximity to a relevant boundary. | ❯ Metalcraft Kahu® is non-combustible |
| **Building** | |
| On timber or steel structural framing. | ❯ Where Metalcraft Kahu® is used in an insulated building and in conjunction with steel framing, a thermal break is required. |
| In conjunction with a primary structure that complies with the NZ Building Code or where the designer has established that the existing structure is suitable for the intended building work. | ❯ Building height is limited by the Metalcraft Kāhu® design load span tables (refer to: www.metalcraftgroup.co.nz) or specific engineering, where applicable.. |
| As a wall cladding. | ❯ When installed vertically, Metalcraft Kahu® may be direct-fixed up to a risk score of 6 and above that on a drained and ventilated cavity, where the risk score calculation relies on the E2/AS1 risk matrix methodology.<br>❯ When installed horizontally, Metalcraft Kahu® must always be installed over a drained and ventilated cavity unless the building is unlined or the building has an importance level 1, in which case it may be direct-fixed.<br>❯ Flashings, flexible and rigid building underlays and Metalcraft Kahu® fixings must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0)..<br>❯ Contact with other materials must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0). |
| As a roof cladding. | ❯ Metalcraft Kāhu® lengths ≤40 m must be installed on a roof with a minimum pitch of 3°.<br>❯ Metalcraft Kāhu® lengths >40 m and <60 m must be installed on a roof with a minimum pitch of 4°.<br>❯ A potable water collection system may be installed.<br>❯ Flashings, flexible and rigid building underlays and fixings must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0).<br>❯ Contact with other materials must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0). |

## NZ STEEL ASSURANCE

- Australasian registered Environmental Protection Declaration (EPD); compliant with EN 15804.
- ISO 9001:2015. Telarc No.82
- ISO 14001:2015. Telarc No. 63.

## PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Metalcraft Roofing requirements, Metalcraft Kāhu® will comply with or contribute to compliance with the following performance claims:

## PERFORMANCE CLAIMS CONTINUED

| NZ Building Code clauses | BASIS OF COMPLIANCE<br>Compliance pathway | <br>Demonstrated by |
|---|---|---|
| **B1 Structure**<br>B1.3.1, B1.3.2, B1.3.3 (a, b, c, d, g, i) | ACCEPTABLE SOLUTION<br>B1/AS1 | ❯ Steel in accordance with AS 1397:2021, which is equivalent to AS 1397:2011 for the NZ Steel steel. AS 1397 is cited in NASH Standard Part 1:2016 and NASH Standard Part 2:2019 (BlueScope, 2016).<br>❯ Metalcraft span tables in accordance with AS/NZS 1170. |
| **B2 Durability**<br>B2.3.1 (b), B2.3.2 (b) | VERIFICATION METHOD<br>B2/VM1 | ❯ Steel in accordance with AS 1397:2021, which is equivalent to AS 1397:2011 for the NZ Steel steel. AS 1397 is cited in NASH Standard Part 1:2016 and NASH Standard Part 2:2019 (BlueScope, 2016).<br>❯ Coating to AS 2728, which is cited in E2/AS1. (BlueScope, 2013)<br>❯ NZ Steel and their parent company BlueScope provides assurance that when correctly installed and maintained, their products will meet or exceed NZ Building Code B2: Durability. |
| **C3 Fire Affecting Areas Beyond the Fire Source**<br>C3.4 (a), C3.7 (a) | ACCEPTABLE SOLUTION<br>C/AS1<br>C/AS2 | ❯ Steel is defined in C/AS1 and C/AS2 as non-combustible.<br>❯ Non-combustible products achieve a material group number 1. |
| **E2 External Moisture**<br>E2.3.1, E2.3.2, E2.3.7 (a, b, c) | ACCEPTABLE SOLUTION<br>E2/AS1<br>ALTERNATIVE SOLUTION<br>in respect of direct-fixed wall cladding for risk score 6 - 12. | ❯ NZMRM Code of Practice (V3.0).<br>❯ BRANZ notes that profiled metal claddings may be installed direct fixed where laid vertically and where the profile facilitates gravity based drainage and air circulation.<br>❯ E2 comparison (TBB, 2022). |
| **F2 Hazardous Building Materials**<br>F2.3.1 | ALTERNATIVE SOLUTION | ❯ Steel in accordance with AS 1397:2021, which is equivalent to AS 1397:2011 for the NZ Steel steel. (BlueScope, 2016).<br>❯ Use in accordance with manufacturer's safety requirements. |

| Other performance statement | BASIS OF STATEMENT<br>Performance statement | <br>Demonstrated by |
|---|---|---|
| Metalcraft Kāhu® will not contaminate potable water. | AS/NZS 4020:2005 | ❯ Claimed by manufacturer: NZ Steel.<br>❯ BRANZ statement that metal roof suitable refer to www.level.org.nz/water/water-supply/mains-or-rainwater/harvesting-rainwater. |

## SOURCES OF INFORMATION


- BlueScope (2016). *Specification clauses for steel to ensure compliance with relevant Australian standards/regulations.* Refer http://www.steel.com.au/library. [Accessed 27/02/2022].
- BlueScope (2013). *New Colorbond® steel.* Refer http://www.steel.com.au/articles/article-44--new-colorbond-steel. [Accessed 27/02/2022].
- BRANZ. (20/05/2020). *Harvesting rainwater.* Refer https://www.level.org.nz/water/water-supply/mains-or-rainwater/harvesting-rainwater/. [Accessed 27/02/2022].
- EPD Australasia. (23/10/2018). *Colorsteel®, Endure®, Colorsteel Maxx® Environmental Product Declaration.* Refer https://epd-australasia.com/epd/colorsteel-endura-and-colorsteel-maxx/. [Accessed 27/02/2022].
- NZ Steel. (10/2018). *Maintenance recommendations brochure V4.0.* Refer https://www.colorsteel.co.nz/resources/downloads-and-brochures/. [Accessed 27/02/2022].
- NZ Steel. (2022). *Zincalume® steel features.* Refer https://www.nzsteel.co.nz/products/zincalume/features/. [Accessed 27/02/2022].
- NZ Metal Roof Manufacturer's (NZMRM) (06/2018, Amend 12/2021). *Code of Practice V3.0.* Refer https://www.metalroofing.org.nz/codeonline. [Accessed 27/02/2022].
- Telarc (14/08/2019). *ISO 9001:2015 The design, manufacture and supply of hot and cold rolled steel plate, sheet and strip, and coated, steel coil and flat sheet. No 82.* Refer https://www.nzsteel.co.nz/new-zealand-steel/responsibilities/certificates-and-memberships/ [Accessed 28/02/2022].
- Telarc (24/07/2003). *ISO 14001:2015 The management of environmental aspects associated with the operation of:the Glenbrook Mill Site; the Waikato North Head Iron Sand Quarry; Pacific Steel NZ Ltd – Wire Mill; Pacific Steel NZ Ltd – Rolling Mill. No. 63.* Refer https://www.nzsteel.co.nz/new-zealand-steel/responsibilities/certificates-and-memberships/ [Accessed 28/02/2022].
- TBB (02/2022). *E2 comparison V1.0.*
- BRANZ [2018]. *Wall Cladding Selection. Profiled Metal.* Retrieved from https://www.weathertight.org.nz/new-buildings/detail-solutions/wall-cladding-selection/profiled-metal/. [Accessed 27/02/2022]


1. Where a standard is referenced it is to be read as amended by the acceptable solution or verification method as applicable.
2. Sources of information also include the Building Act 2004 and its regulations, including the Building Code (Schedule 1 of the Building Regulations 1992), Acceptable Solutions and Verification Methods, and relevant cited standards.
3. The quality and assurance that the supplied products meet the performance claims stated in this pass™ are the responsibility of the company that is the holder of this pass™
4. Where E2/AS1 is referenced it is to be read as including E2/AS4.

**Scan or click this QR code for a full download of Compliance Documentation for this pass™.**
**www.metalcraftgroup.co.nz**

Metalcraft Roofing confirms that if Metalcraft Kāhu is used in accordance with the requirements of this pass™ the product will comply with the NZ Building Code and other performance claims set out in this pass™ and the company has met all of its obligations under s14 G of the Building Act.

| | |
|---|---|
| **Date of first issue:** | 29/11/2019 |
| **Date of current issue:** | 08/02/2023 |
| **NZBN:** | 9429032461152 |

Kevin Brunton

Kevin Brunton, Technical Director, TBB confirms that this pass has been prepared on behalf of Metalcraft Roofing and in accordance with MBIE PTS guidelines and in accordance with the TBB pass™ process which is within the scope of TBB's ISO 9001 certification.

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