

## METALCRAFT METCLAD 850

### PURPOSE

Metalcraft Roofing supplies Metalcraft Metclad 850 for use as a horizontally and vertically laid wall cladding.

### EXPLANATION

Metalcraft Metclad 850 is a trapezoidal profiled, long-run steel sheet. Fabricated from New Zealand (NZ) Steel product and supplied with different protective coatings, it is designed to withstand NZ's exposure zones. The sheets are available in the full Colorsteel® colour range.

Metalcraft Metclad 850 sheets are available in the following NZ Steel branded products:

- Colorsteel® Endura®
- Colorsteel® Maxx®
- Galvsteel®
- Zinalume®.

The sheets are available in the following sizes:

- Thicknesses (mm): 0.40 and 0.55
- Width (mm): Cover – 850, Sheet – 885



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

### SCOPE AND LIMITATIONS OF USE

Scope	Limitations
<b>Location</b>	
In all wind zones as defined in NZS 3604:2011 and in all calculated design loads.	<ul style="list-style-type: none"> <li>➤ Metalcraft Metclad 850 load spans apply in wind zones up to and including extra high.</li> <li>➤ Where the calculated design loads exceed 2.5kPa the engineer must satisfy themselves that the product, pitch and fixings will meet the conditions.</li> </ul>
In all exposure zones as defined by NZS 3604:2011.	<ul style="list-style-type: none"> <li>➤ In exposure Zone D only Colorsteel® Endura® or Colorsteel® Maxx® may be used.</li> <li>➤ For use in microclimatic considerations (as defined in paragraph 4.2.4) refer to Metalcraft Roofing for technical advice.</li> <li>➤ For more information on the specific exposure zones refer to <a href="http://www.colorsteel.co.nz">www.colorsteel.co.nz</a>.</li> </ul>
On buildings located any proximity to a relevant boundary.	<ul style="list-style-type: none"> <li>➤ Fixings to be in accordance with E2/AS1 or specific engineering, where applicable.</li> </ul>
<b>Building</b>	
On timber or steel structural framing.	<ul style="list-style-type: none"> <li>➤ Where Metalcraft Metclad 850 is used in an insulated building and in conjunction with steel framing, a thermal break is required.</li> </ul>
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.	<ul style="list-style-type: none"> <li>➤ Building height is limited by the Metalcraft Metclad 850 design load span tables (refer to: <a href="http://www.metalcraftgroup.co.nz">www.metalcraftgroup.co.nz</a>) or specific engineering, where applicable.</li> </ul>
As a wall cladding.	<ul style="list-style-type: none"> <li>➤ A drained and ventilated cavity is always required unless the building is unlined or importance level 1, in which case the Metalcraft Metclad 850 may be direct fixed.</li> <li>➤ Flashings, flexible and rigid building underlays and fixings must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0).</li> <li>➤ Contact with other materials must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0).</li> </ul>

### 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 Metclad 850 will comply with or contribute to compliance with the following performance claims:

## PERFORMANCE CLAIMS CONTINUED

NZ Building Code clauses	Compliance pathway	BASIS OF COMPLIANCE Demonstrated by
<b>B1 Structure</b> B1.3.1, B1.3.2, B1.3.3 (a, b, c, d, g, i)	ACCEPTABLE SOLUTION B1/AS1	<ul style="list-style-type: none"> <li>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).</li> <li>Metalcraft span tables in accordance with AS/NZS 1170.</li> </ul>
<b>B2 Durability</b> B2.3.1 (b), B2.3.2 (b)	VERIFICATION METHOD B2/VM1	<ul style="list-style-type: none"> <li>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).</li> <li>Coating to AS 2728, which is cited in E2/AS1. (BlueScope, 2013)</li> <li>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.</li> </ul>
<b>C3 Fire Affecting Areas Beyond the Fire Source</b> C3.4 (a), C3.7 (a)	ACCEPTABLE SOLUTION C/AS1 C/AS2	<ul style="list-style-type: none"> <li>Steel is defined in C/AS1 and C/AS2 as non-combustible.</li> <li>Non-combustible products achieve a material group number 1.</li> </ul>
<b>E2 External Moisture</b> E2.3.1, E2.3.2, E2.3.7 (a, b, c)	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> <li>E2 comparison (TBB, 2022).</li> <li>Largely in accordance with E2/AS1</li> </ul>
<b>F2 Hazardous Building Materials</b> F2.3.1	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> <li>Steel in accordance with AS 1397:2021, which is equivalent to AS 1397:2011 for the NZ Steel steel. (BlueScope, 2016).</li> <li>Use in accordance with manufacturer's safety requirements.</li> </ul>

## 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*.

- Where a standard is referenced it is to be read as amended by the acceptable solution or verification method as applicable.
- 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.
- 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™
- Where E2/AS1 is referenced it is to be read as including E2/AS4.

Metalcraft Roofing confirms that if Metalcraft Metclad 850 are 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:** 07/02/2023

**NZBN:** 9429032461152

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[www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)



*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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For more information visit [www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz).

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