

METALCRAFT CORRUGATE

PURPOSE

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

EXPLANATION

Metalcraft Corrugate is a corrugated long-run wall and roof cladding manufactured from New Zealand (NZ) Steel product. Available in a range of protective coatings and the full range of Colorsteel® colours to withstand NZ's exposure zones.

Metalcraft Corrugate is available in the following NZ Steel branded products:

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

Sheets are available in the following sizes:

- Thickness (mm): 0.40, 0.55
- Width (mm): Cover – 760, Sheet – 851.



Figure 1: Profile Dimension (nominal)



SCOPE AND LIMITATIONS OF USE

Scope	Limitations
Location	
In all wind zones as defined in NZS 3604:2011 and in all calculated design loads.	<ul style="list-style-type: none"> ➤ Metalcraft Corrugate load spans apply in wind zones up to and including extra high. ➤ 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.	<ul style="list-style-type: none"> ➤ In exposure Zone D only Colorsteel® Endura® or Colorsteel® Maxx® may be used. ➤ For use in "Microclimatic considerations," (as defined in Sec 4.2.4) refer to Metalcraft Roofing. ➤ For more information on the specific exposure zones refer to www.colorsteel.co.nz.
On buildings located any proximity to a relevant boundary.	<ul style="list-style-type: none"> ➤ Metalcraft Corrugate is non-combustible.
Building	
On timber or steel structural framing.	<ul style="list-style-type: none"> ➤ Where Metalcraft Corrugate 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.	<ul style="list-style-type: none"> ➤ Building height is limited by the Metalcraft Corrugate design load span tables (refer to: www.metalcraftgroup.co.nz) or specific engineering, where applicable. ➤ Fixings to be in accordance with E2/AS1 or specific engineering, where applicable.
As a wall cladding.	<ul style="list-style-type: none"> ➤ When installed vertically, Metalcraft Corrugate may be direct-fixed up to a risk score of 20, where the risk score calculation relies on the E2/AS1 risk matrix methodology. ➤ When installed horizontally, Metalcraft Corrugate must always be installed over a drained and ventilated cavity unless the building is unlined or a building, importance level 1, in which case it may be direct-fixed. ➤ Flashings, flexible and rigid building underlays and Metalcraft Corrugate fixings must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0). ➤ Contact with other materials must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0).
As a roof cladding	<ul style="list-style-type: none"> ➤ Metalcraft Corrugate lengths ≤40m must be installed on a roof with a minimum pitch of 8°. ➤ Metalcraft Corrugate lengths >40m but less than <60m must be installed on a roof with a minimum pitch of 9°. ➤ A potable water collection system may be installed. ➤ Flashings, flexible and rigid building underlays and Metalcraft Corrugate fixings must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0). ➤ 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 Corrugate will comply with or contribute to compliance with the following performance claims:

PERFORMANCE CLAIMS CONTINUED

NZ Building Code clauses		BASIS OF COMPLIANCE	
	Compliance statement	Demonstrated by	
B1 Structure 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"> ➤ 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). ➤ Metalcraft span tables in accordance with AS/NZS 1170. 	
B2 Durability B2.3.1 (b) B2.3.2 (b)	VERIFICATION METHOD B2/VM1	<ul style="list-style-type: none"> ➤ 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). ➤ Coating to AS 2728, which is cited in E2/AS1. (BlueScope, 2013) ➤ 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 C3.4 (a), C3.7 (a)	ACCEPTABLE SOLUTION C/AS1 C/AS2	<ul style="list-style-type: none"> ➤ Steel is defined in C/AS1 and C/AS2 as non-combustible. ➤ Non-combustible products achieve a material group number 1. 	
E2 External Moisture E2.3.1, E2.3.2, E2.3.7 (a, b, c)	ACCEPTABLE SOLUTION E2/AS1	<ul style="list-style-type: none"> ➤ In accordance with E2/AS1 or E2/AS4 ➤ In accordance with NZMRM Code Of Practice V3.0. 	
F2 Hazardous Building Materials F2.3.1	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> ➤ Steel in accordance with AS 1397:2021, which is equivalent to AS 1397:2011 for the NZ Steel steel. (BlueScope, 2016). ➤ Use in accordance with manufacturer's safety requirements. 	
Other performance statement		BASIS OF STATEMENT	
	Performance statement	Demonstrated by	
Metalcraft Corrugate will not contaminate potable water.	AS/NZS 4020:2005	<ul style="list-style-type: none"> ➤ Claimed by manufacturer: NZ Steel. ➤ BRANZ statement of metal roof suitability, 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].

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 Corrugate 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

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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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For more information visit www.metalcraftgroup.co.nz.

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