

METALCRAFT METAL TILES

PURPOSE

Metalcraft Roofing supplies Metalcraft Metal Tiles, flashings and trims for use as roof tiles on lightweight roofs.

EXPLANATION

Metalcraft Metal Tiles are fabricated from Colorsteel® Endura® in 0.39 G300 and 0.55 G300 gauge.

The tiles are fabricated from pre-coated steel supplied by NZ Steel. Design and installation information is supplied by Metalcraft Roofing.

They are available as pressed Colorsteel or stone chip coated and weigh:

- 2.1 kg (without chip coating)
- 3 kg (chip coated), available only in the Chateau profile
- 3.3 kg (chip coated), available in the Shake and Modena profiles.

Metalcraft Metal Tiles come in the following dimensions:

Profile	Tiles per m ²	Overall length mm	Effective cover mm	Width of cover m
Modena Metal Tile	2.26	1300	1210	370
Chateau Metal Tile	2.1	1371	1300	370
Shake Metal Tile	2.1	1360	1295	368

Metalcraft Roofing supplies the following flashings and trims:

- Angle ridge trim
- Barrel trim
- Folded flashings – ridge/hip, ridge, barrel cap, valley, barge and gable, “Z” flashing.

SCOPE AND LIMITATIONS OF USE

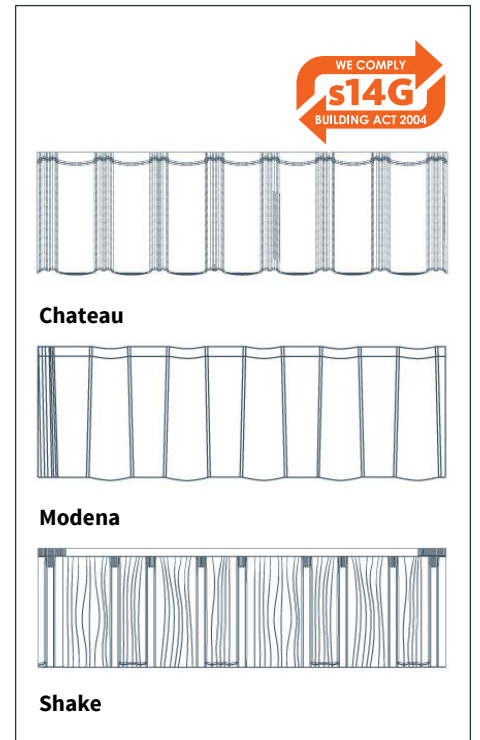
Scope	Limitations
Location In any wind zone or calculated design load.	<ul style="list-style-type: none"> ➤ Above extra high wind zone, or if the ULS is greater than 2.5kPa, the use is subject to specific engineering with the engineer having satisfied themselves that the product, pitch and fixings will meet the conditions.
In all exposure zones as defined by NZS 3604:2011.	<ul style="list-style-type: none"> ➤ For use in “Microclimatic considerations,” (as defined in paragraph 4.2.4) refer to Metalcraft Roofing for technical advice. ➤ For more information on the specific exposure zones refer to www.colorsteel.co.nz.
On buildings any proximity to a relevant boundary.	
Building On timber or steel structural framing.	
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"> ➤ Joist spacings must be in accordance with NZS 3604:2011. ➤ Tiles must be fixed in accordance with Metalcraft Roofing fixing tables for the tile profile.
On a pitched roof.	<ul style="list-style-type: none"> ➤ Minimum pitch of 12° – Modena or Chateau tile profiles. ➤ Minimum pitch of 15° – Shake tile profile. ➤ The above pitches are restricted to a maximum rafter length of 12m. ➤ Where the rafter length exceeds 12m, increase minimum pitch by 1° per additional 0.5m.
In conjunction with a roof underlay that meets the performance requirements of Table 23 and paragraph 8.1.5 of E2/AS1.	
In conjunction with flashings to E2/AS1 (para 8.3.8).	

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, the Metalcraft Metal Tiles will comply with or contribute to compliance with the following performance claims:



PERFORMANCE CLAIMS CONTINUED

NZ Building Code clauses		BASIS OF COMPLIANCE	
	Compliance pathway	Demonstrated by	
B1 Structure B1.3.1 B1.3.2 B1.3.3 (a, b, c, d, g, i)	ACCEPTABLE SOLUTION 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).	➤ Metalcraft span tables in accordance with AS/NZS 1170.
B2 Durability B2.3.1 (b), B2.3.2 (b)	VERIFICATION METHOD 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).	➤ 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	➤ 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	➤ In accordance with paragraph 8.3 E2/AS1 and NZMRM Code of Practice (v3.0).	
F2 Hazardous Building Materials 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).	➤ Use in accordance with manufacturer's safety requirements.
Other Performance Statements		BASIS OF STATEMENT	
	Performance statement	Demonstrated by	
Metalcraft Metal Tiles, without chip, will not contaminate potable water	AS/NZS 4020:2005	➤ Claimed by NZ Steel. ➤ BRANZ statement refer: http://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.

Metalcraft Roofing confirms that if Metalcraft Metal Tiles 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.

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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.

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