

BUILDING PRODUCTS INFORMATION SHEET (BPIS) CORRUGATE



CLASS 1

VERSION 1.0 ISSUE DATE: DECEMBER 2023

PRODUCT NAME

Metalcraft Roofing - **Corrugate**

PRODUCT LINE

N/A

PRODUCT DESCRIPTION AND ITS INTENDED USE

Metalcraft Roofing's Corrugate profile is a roofing and wall cladding profile manufactured using steel sourced from New Zealand Steel which is roll formed and then installed with screw fasteners fixed into structural supports. It can be formed from a variety of substrates to meet durability, formability, and aesthetic requirements.

INTENDED USE

Metalcraft Roofing's Corrugate profile can be used as a roofing or cladding component for residential and commercial applications only. Installation is suitable for timber and or steel structures.

Metalcraft Roofing's Corrugate profile can be used with various Metalcraft COLORSTEEL® flashings, gutters and fascias. They are ordered typically along with the required fixings, underlay and sealants.

MATERIAL OPTIONS:

COLORSTEEL® ENDURA® (Also available with COLORSTEEL® ENDURA® DRIDEX®)
0.40mm and 0.55mm BMT G550.
0.55mm BMT or 0.75mm BMT G300 for flashings.

COLORSTEEL® MAXX® (Also available with COLORSTEEL® ENDURA® DRIDEX®)
0.40mm and 0.55mm BMT G550.
0.55mm BMT or 0.75mm BMT G300 for flashings.

COLORSTEEL® ALTIMATE®
0.90mm Aluminium 5052 H36 for roll-forming.
0.90mm Aluminium 5005 H34 for flashings.

ZINCALUME®
0.40mm and 0.55mm BMT G550.
0.55mm BMT or 0.75mm BMT G300 for flashings.

GALVSTEEL®
0.40mm and 0.55mm BMT Z450.
0.55mm BMT G300 for flashings.

For more information on COLORSTEEL®
refer www.colorsteel.co.nz

For more information GALVSTEEL® & ZINCALUME®
refer www.nzsteel.co.nz

Above thicknesses are the nominal base metal thickness rather than the total coated thickness.

BPIS INCLUSION / EXCLUSION

This BPIS includes Metalcraft Roofing's Corrugate profile and associated flashings and other items manufactured by Metalcraft Roofing. Metalcraft Roofing do supply fasteners, underlay and other products as part of the roofing supply, however demonstration of compliance of these items are not the responsibility of Metalcraft Roofing. Please refer to: Other products supplied by Metalcraft roofing for a list of those items and links to manufacturers.

PRODUCT IDENTIFIER

CORRUGATE

Minimum Pitch: 8 degrees.
Width: Cover = 760mm Sheet = 851mm.
Applications: Commercial and residential.
Orientation: Roofs and horizontal and vertical wall cladding.



All dimensions are nominal.

RELEVANT BUILDING CODE CLAUSES:

B1 STRUCTURE

B1.3.3 (a, b, c, g, h,j)

B2 DURABILITY

B2.3.1 (b)(i)

C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE

C3.4 (a), C3.7 (a)

E2 EXTERNAL MOISTURE

E2.3.1, E2.3.2

F2 HAZARDOUS BUILDING MATERIALS

F2.3.1

G12 WATER SUPPLIES

G12.3.1

STATEMENT ON HOW THE BUILDING PRODUCT IS EXPECTED TO CONTRIBUTE TO
COMPLIANCE:

Metalcraft Roofing's Corrugate profile and associated flashings used in combination with fasteners, underlays and translucent sheeting accredited by NZMRM as complying to their products performance standards, will contribute to meeting the following performance requirements of the NZ Building Code.

B1.3.3 (a, b,c, g,h,j)

The NZMRM has on behalf of its industry members conducted testing and analysis on the Corrugate profile, in accordance with procedures described in NZMRM -Metal Roofing and Wall Cladding Code of Practice.

Fixing patterns and spans of Metalcraft Corrugate can be in accordance with E2/AS1 or the NZMRM Code of Practice.

Loadspan and fixing patterns are available for download from either: NZMRM Code of Practice: www.metalroofing.org.nz or www.metalcraftgroup.co.nz

B2.3.1 (b)(i)

Metalcraft Corrugate and associated flashings are manufactured from steel from NZ Steel:

COLORSTEEL® ENDURA® (Also available with COLORSTEEL® ENDURA® DRIDEX®)

Steel substrate may be either G300 or G550 consistent with AS 1397. Metallic coating is AZ 150 consistent with AS 1397:2021
COLORSTEEL® ENDURA® is Product Type 4 consistent with AS/NZS 2728:2013 and therefore is consistent with the NZ Building Code for use in environments as described in Acceptable Solution E2/AS1 Table 20. Tolerances are consistent with the requirements of AS/NZS 1365:1996.

COLORSTEEL® ENDURA DRIDEX® is a Type 4 product in accordance with AS/NZS 2728:2013 and therefore is consistent with the NZ Building Code for use in environments as described in Acceptable Solution E2/AS1 Table 20.

COLORSTEEL® MAXX® (Also available with COLORSTEEL® MAXX® DRIDEX®)

Steel substrate may be either G300 or G550 consistent with AS 1397. Metallic coating is AZ 200 consistent with AS 1397.
MAXX® is Product Type 6 consistent with AS/NZS 2728:2013 and therefore is consistent with the NZ Building Code for use in environments as described in Acceptable Solution E2/AS1 Table 20. Tolerances are consistent with the requirements of AS/NZS 1365:1996.

COLORSTEEL® MAXX DRIDEX® is a Type 6 product in accordance with AS/NZS 2728:2013 and therefore is consistent with the NZ Building Code for use in environments as described in Acceptable Solution E2/AS1 Table 20.

COLORSTEEL® ALTIMATE®

Aluminium substrate is in accordance with AS/NZS 1734:1997 covering chemical composition, mechanical properties, and allowable tolerances on dimensions. Altimate® is a Type 6 product in accordance with AS/NZS 2728:2013 and therefore is consistent with the NZ Building Code for use in environments as described in Acceptable Solution E2/AS1 Table 20.

Above information as cited by COLORSTEEL® www.colorsteel.co.nz

ZINCALUME®

Non-factory painted steel substrate may be either G300 or G550 consistent with AZ150 consistent with E2/AS1 Table 20.

GALVSTEEL®

Non-factory painted Galvanised steel Z450 to AS 1397 consistent with E2/AS1 Table 20.

Selection of correct product must be suitable for their end-use, location and environment as per Acceptable Solution E2/AS1 Table 20.

Refer also to COLORSTEEL® Environmental Categories, Warranty & Product Maintenance recommendations.

Contact with corrosive and incompatible materials, prolonged exposure to damp or corrosive internal environments, or excessive periods of wet stacking must be avoided as per table 20 E2/AS1.

Fixings of Corrugate to be in accordance with E2/AS1 and NZMRM Code of Practice and be compatible with the base material of the Corrugate profile.

C3.4 (a), C3.7 (a)

Metalcraft Roofing's Corrugate profile is manufactured from COLORSTEEL®

COLORSTEEL® is rated as a Group 1-S material and has an average specific extinction area of 38.2m²/kg, a peak heat release rate of 3.3 kW/m² and total heat released of 0.2 MJ/m² when tested in accordance with ISO 5660:2002 Part 1 and Part 2.

Above information as cited by COLORSTEEL® www.colorsteel.co.nz

E2.3.1, E2.3.2

Flashing details should be in accordance with Metalcraft Roofing's Corrugate installation details, NZMRM Code of Practice, E2/AS1.

Metalcraft Roofing's Corrugate profile can be laid on pitches equal to or greater than those cited in E2/AS1 and the NZMRM Code of practice.

Alternative details complying with the "4 D's" (Deflection, Draining Drying and Durability) will also comply with the performance requirements of NZ Building Code.

Metalcraft Roofing's Corrugate profile laid to a minimum pitch of 8° as per E2/AS1 and NZMRM Code of Practice.

When used with an absorbent underlay complying with NZS 2295:2006, Metalcraft Roofing's Corrugate profile will contribute to compliance with the NZ Building Code.

F2.3.1

COLORSTEEL® ENDURA®, COLORSTEEL® MAXX®, ZINCALUME® and GALVSTEEL® will meet the performance requirements of F2, 2.3.1.

G12.3.1

COLORSTEEL® and ZINCALUME® Rainwater collected from roofs clad with products made from ZINCALUME® coated steel and COLORSTEEL® prepainted steel, will comply with the provisions of NZBC G12.3.1, provided the water is not contaminated from other sources.

Claimed by NZ Steel -Source:

<https://www.nzsteel.co.nz/products/zincalume/features/#:~:text=Rainwater%20collected%20from%20roofs%20clad,not%20contaminated%20from%20other%20sources.>

LIMITATIONS ON THE USE OF THE BUILDING PRODUCT:

- Metalcraft Roofing's Corrugate profile can be used on SED projects if within the scope of NZMRM Code of Practice for flashing cover dimensions and suitability of use and where the design loads are within the products performance. Refer to Metalcraft Roofing's Installation Details and Loadspan and Fixing tables for product limitations. Fixings of Corrugate into SED projects outside the scope of NZMRM Code of Practice will require sign off from a professional engineer.
- Thermal breaks required when steel framed structures are used on insulated and lined buildings.
- Direct fixed limitation of use as per E2/AS1. Vertically laid Corrugate up to a risk matrix score of 20.
- When installed as vertical cladding over a cavity then alternative details complying with the "4 D's" (Deflection, Draining, Drying and Durability) will also comply with the performance requirements of NZ Building Code.
- To be used in situations where there are no dissimilar metals or compatibility issues as per NZMRM Code of Practice and Table 20 E2/AS1.
- When installed as a roof cladding, laid to a minimum pitch of profile.
- The use of DRIDEX® is permitted and compliance is as per Codemark Certificate, available to download on: www.colorsteel.co.nz

DESIGN REQUIREMENTS THAT WOULD SUPPORT THE APPROPRIATE USE OF THE BUILDING PRODUCT

- Buildings that comply with NZS 3604:2011 and building height up to three storeys or 10 m.
- For SED building height may go above 10m, to max performance of the Corrugate profile and in design wind speeds as covered by NZMRM Code of Practice.
- Buildings designed in accordance with NSZ 1170:2:2002.
- Timber framed construction in accordance with NZS 3604:2011.
- Steel framed structures in accordance with NASH Standard Part 1:2016 Design Criteria - Alternative Solution and NASH Standard Part 2:2019 Light Steel Framed Buildings.
- Design and installation as per E2/AS1, NZS 3604:2011 and NZMRM Code of Practice.
- Alternative details complying with the "4 D's" (Deflection, Draining, Drying and Durability) will also comply with the performance requirements of NZ Building Code.
- Designer or Architect must evaluate the requirement of internal moisture and if roof ventilation is required.
- Design and installation is as per the relevant NZ Building Code Clauses, NZS 3604:2011, NZMRM Code of Practice and alternative details complying with the "4 D's" (Deflection, Draining, Drying and Durability) will also comply with the performance requirements of NZ Building Code. Bevelback profile is outside the scope of E2/AS1, however this document can still be referenced and used when evaluating compliance with NZ Building Code.
- The risk matrix in E2/AS1 only addresses direct fixed vertically laid cladding. E2/AS1 states a drained cavity assists drying by allowing water which occasionally penetrates the wall cladding system to drain to the exterior of the building, and any remaining moisture to dry by evaporation. Table 3- Note 6 of E2/AS1 also states direct fix vertical corrugated steel is included as cavity construction. Even though E2/AS1 Table 3 Note 6 states that the corrugate profile is included as a cavity construction and can be used up to a risk matrix of 20, Metalcraft Roofing recommends all its cladding profiles are installed over a drained and vented cavity as it further assists in creating better air circulation than that achieved by direct fixed alone and also provides an additional layer of defence. Compliance of the cavity battens are by others. If treated timber battens are used then Metalcraft require a DPC separation layer.

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INSTALLATION REQUIREMENTS

Installation should be carried out by a suitably qualified practitioner. Installation of Corrugate should be in accordance with NZMRM Code of Practice. www.metalroofing.org.nz

MAINTENANCE REQUIREMENTS

Maintenance must be carried out in accordance with the COLORSTEEL® Environmental Categories, Warranty & Product Maintenance recommendations brochure. This can be downloaded from:

www.colorsteel.co.nz

www.metalcraftgroup.co.nz

IS THE BUILDING PRODUCT/BUILDING PRODUCT LINE SUBJECT TO A WARNING OR BAN UNDER SECTION 26 OF THE BUILDING ACT 2004:

NO

Metalcraft Roofing's Corrugate profile is not subject to a warning or ban under the Building Act 2004.

SUPPORTING INFORMATION

The following documents can support demonstration of compliance of Metalcraft Roofing's Corrugate profile with the NZ Building Code.

Building Act 2004

www.legislation.govt.nz

NZBC relevant clauses and acceptable solutions

NZS 3604:2011

www.building.govt.nz

Cited standards

www.standards.govt.nz

NZMRM Code of Practice

www.metalroofing.org.nz

Metalcraft Roofing's Corrugate Information Brochure

Metalcraft Roofing's Corrugate Installation Details.

COLORSTEEL® Environmental Categories, Warranty & Product Maintenance recommendations brochure.

NZMRM Installation Guide.

Metalcraft Roofing's Corrugate Loadspan and Fixing Tables.

Metalcraft Eco Choice Certification

Download from:

www.metalcraftgroup.co.nz

COLORSTEEL® Product and Technical Information.

www.colorsteel.co.nz

New Zealand Steel's Quality management system conforming to ISO 9001:2015 and assessed by Telarc.

New Zealand's Steel's Environmental Management system conforming to ISO 14001:2015

www.nzsteel.co.nz

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PLACE OF METALCRAFT CORRUGATE MANUFACTURE

NEW ZEALAND

Metalcraft Corrugate is manufactured from the following Metalcraft Roofing branches and available nationwide from all Metalcraft Roofing branches.

METALCRAFT ROOFING -AUCKLAND EAST TAMAKI
24-26 Trugood Drive East Tamaki, Auckland
09 273 2820
orders.akl@metalcraftroofing.co.nz

METALCRAFT ROOFING - AUCKLAND HOBSONVILLE
25 -27 Westpoint Drive, Hobsonville, Auckland
09 444 1813
orders.ns@metalcraftroofing.co.nz

METALCRAFT ROOFING -WHANGAREI
42-44 Rewa Rewa Road, Whangarei
09 470 0870
sales.whangarei@metalcraftroofing.co.nz

METALCRAFT ROOFING -HAMILTON
9 Earthmover Cres, Burbush, Hamilton
07 849 3807
sales.hamilton@metalcraftroofing.co.nz

METALCRAFT ROOFING -TAURANGA
42 Poturi St, Tauriko, Tauranga
07 575 7032
sales.tauranga@metalcraftroofing.co.nz

METALCRAFT ROOFING -PALMERSTON NORTH
76 Malden Street, Palmerston North
06 358 9149
sales.palmerston@metalcraftroofing.co.nz

METALCRAFT ROOFING -NEW PLYMOUTH
218 De Havilland Drive, Bell Block, New Plymouth
06 755 2113
sales.newplymouth@metalcraftroofing.co.nz

METALCRAFT ROOFING -HASTINGS
1454A Omaha Road, Hastings
06 873 9020
sales.hastings@metalcraftroofing.co.nz

METALCRAFT ROOFING -WELLINGTON
201 Gracefield Rd, Seaview, Lower Hutt
04 566 2253
orders.wgtn@metalcraftroofing.co.nz

METALCRAFT ROOFING -CHRISTCHURCH
85 Columbia Ave, Hornby, Christchurch
03 349 7350
sales.christchurch@metalcraftroofing.co.nz

METALCRAFT ROOFING -CROMWELL
20 McNulty Road, Cromwell
03 445 4180
sales.cromwell@metalcraftroofing.co.nz

OTHER METALCRAFT BRANCHES THAT CAN SUPPLY CORRUGATE

METALCRAFT ROOFING -ROTORUA
15 Monokia Street, Rotorua
07 350 1138
sales.rotorua@metalcraftroofing.co.nz

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LEGAL ENTITIES:

STEEL BUILDING PRODUCTS CENTRAL LIMITED

NZBN: 9429032296389

Level 1, 30 Highbrook Drive, East Tamaki Auckland

TRADING NAME / ADDRESS FOR SERVICE:

Metalcraft Roofing - Hamilton

Metalcraft Roofing - New Plymouth

STEEL BUILDING PRODUCTS NORTHERN LIMITED

NZBN: 9429032461398

Level 1, 30 Highbrook Drive, East Tamaki Auckland

TRADING NAME / ADDRESS FOR SERVICE:

Metalcraft Roofing - East Tamaki

STEEL BUILDING PRODUCTS SOUTHERN LIMITED

NZBN: 9429036306183

Level 1, 30 Highbrook Drive, East Tamaki Auckland

TRADING NAME / ADDRESS FOR SERVICE:

Metalcraft Roofing - Hastings

Metalcraft Roofing - Palmerston North

Metalcraft Roofing - Wellington

STEEL BUILDING PRODUCTS SOUTH ISLAND LIMITED

NZBN: 9429032296303

Level 1, 30 Highbrook Drive, East Tamaki Auckland

TRADING NAME / ADDRESS FOR SERVICE:

Metalcraft Roofing - Hastings

Metalcraft Roofing - Palmerston North

Metalcraft Roofing - Wellington

METAL LINE ROOFING LIMITED

NZBN: 9429031709583

Level 1, 30 Highbrook Drive, East Tamaki Auckland

TRADING NAME / ADDRESS FOR SERVICE:

Metalcraft Roofing - Hobsonville

Metalcraft Roofing - Rotorua

Metalcraft Roofing - Tauranga

DISCLAIMER

This Building Product Information Sheet must be read in conjunction with all cited documents.

Metalcraft Roofing states that the product will, if installed in accordance with the technical data, specifications, and advice prescribed by Metalcraft Roofing comply with the relevant provisions of the building code and satisfy our obligation to meet S14G of the Building Act 2004.

It remains the responsibility of all other professional parties to ensure they satisfy their own obligation of the Building Act 2004.

As part of Metalcraft Roofing's policy of continued improvement, final specifications may vary from those contained in this publication. The company reserves the right at any time and without notice to change the design, materials or features and withdraw products from the market without incurring any liability whatsoever.



CORRUGATE STEEL SOURCED FROM

COLORSTEEL® GALVSTEEL® ZINCALUME®

Metalcraft Roofing's Corrugate is manufactured from steel from New Zealand Steel:

New Zealand steel Ltd, 131 Mission Bush Road Glenbrook 2681, Auckland New Zealand
www.nzsteel.co.nz

OTHER PRODUCTS SUPPLIED BY METALCRAFT ROOFING

Metalcraft Roofing also sell other products to complement the installation of Corrugate.

Please note the correct selection of these products for the project application is the responsibility of the architect/ designer.

All products where demonstration of performance is required to satisfy the NZ Building Code is the responsibility of the product manufacturer or importer of the following items: Metalcraft take on no responsibility whatsoever

Please liaise with the following companies for information:

SEALANTS, WASHERS, AQUASEALS, AQUADAPT, RIVETS, FASTENERS, TOUCH UP PAINTS, LITTLE GRIPPERS.

Key Supplier:

Konnect Fastening Systems®

www.konnectfasteningsystems.co.nz

UNDERLAY

Metalcraft Roofing can supply various underlays, please note Key Suppliers include:

Thermakraft - www.thermakraft.co.nz

DriSpace - www.drinspace.co.nz

ProClima - www.proclima.co.nz

MILL FINISH ALUMINIUM

Wakefield Metals - www.wakefieldmetals.co.nz

TRANSLUCENT SHEETING

Key Supplier:

Alsynite - www.alsynite.co.nz

Other supplier:

Ampelite - www.ampelite.co.nz

Metalcraft Roofing are members of the Roofing Association, New Zealand and the New Zealand Metal Roofing Manufacturers Incorporated.